THE TREATMENT OF HIGHWAY INJURY

An International Bibliography

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PREFACE

The effectiveness of an emergency medical system must depend upon both the timeliness of response within the system, and the adequacy of professional care offered by the system. The relationship between these two factors is a function of many things, such as the environment, the type and severity of injury, and the condition of the victim prior to injury.

The Highway Safety Research Institute has developed a mathematical model of a recovery system relating these various factors. The present bibliography was prepared in order to provide real data to this model. Literature was sought which reported on multiple cases of trauma from either the field treatment (ambulance) or hospital point of view. In addition, numerous summary reports of autopsy findings in cases of traumatic injury were received. Sources for this literature are world-wide. Although many indexes were used, we should mention particularly Index Medicus. The cut-off date for materials in this bibliography was December 1968.

Erik Hanitzsch, who prepared this work, was trained as an engineer. His interest in emergency medical care came primarily from the point of view of a system designer. During his tenure at this institute he was concerned with a series of programs involving the study and design of ambulance operations. It is our hope that his collection of reports from over 500 sources, in several languages, carefully read and annotated by a single individual, will provide a ready reference to the world’s literature in the field. We expect that it will prove useful to physicians and other professionals concerned with emergency services, to researchers in trauma, and to library personnel who provide support to these people.

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This Bibliography of emergency medical care contains approximately 650 annotated references, grouped according to subject into four major categories and 18 subclasses. Within each category, the references are arranged by accession number. References that fall into more than one category are cross-referenced.

English annotations were prepared by the HSRI Systems Analysis Group from the original documents in English, French, German, Spanish, and Italian, and from translations of documents in the Japanese, Romanian, and Scandinavian languages. In case of difficulty locating any of the references, the complete file of originals is available at HSRIC.

English translations of some of the foreign language documents were obtained from the Scientific Translation Service (S.T.S.). For these references an S.T.S. number appears with the bibliographic information of the reference.

There are three indexes to the Bibliography: (1) a personal author index; (2) a permuted title index; and (3) a detailed subject index based on a structured thesaurus of subject descriptors.

1. The personal author index references all authors by surname and initials (p. 103).
2. In the permuted title or KWIC (Key-Word-In-Context) index, significant words from the title are displayed alphabetically (p. 111).
3. The subject index uses the simple coding scheme that precedes the index itself (p. 131). Specific topics are listed under the more general ones. The contents of each document are described by as many descriptors as are needed.*

The indexes are linked to the bibliography annotations by the reference numbers assigned to each document. Each number is made up of a 2-digit prefix indicating the subject category and a 4-digit accession number, followed by the suffix S or N, where S indicates significant statistics or data content, and N indicates the reference is not statistical in content. Thus, the sample reference number 01-3726 S gives the following information:

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Reference number: where to find the annotation.

Citations in the Bibliography include the subject descriptors used for each document to permit the user to locate other items on the same subject through the subject index.

Any comments on or additions to this Bibliography may be referred to:

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Ann Arbor, Michigan 48105

*Subjects can be combined (or coordinated) to find more specific references. For instance, areas of the body (OA) are separate from kinds of injuries (JN) but used in combination to describe a particular injury. Thus a leg fracture is indexed and retrieved by OADE (body area, leg) and JNH (kind of injury, fracture).
01-2592 S

Jamieson, K. G./ Tait, I. A.


**DEC** Passenger Cars, Passenger Motor Vehicles, Vehicle
**EN** Passengers, People
**EO** Driver
**JKB** Ejection, Accident Hazards, Accident
**JLR** Accident Records, Accident Investigation, Accident
**JN** Injury
**KN** Brisbane, Australia, Space
**NLE** Impact, Phenomena, Physical Aspect
**YCD** Survey, Nature of Study, Study—Report Type
**YEG** Tables/Graphs, Contents

During a 16-month period in 1962–63, 1000 consecutive hospital admissions (including 188 deaths) resulting from traffic injuries were investigated. Full details of the injuries were obtained by a medical research fellow, and every death was studied by detailed autopsy.

Age, driver—passenger involvement, type of accident, and type of vehicle are tabulated. Type and classification of injuries and mortality and its relationship to the complexity of injuries are discussed. Ejection, use of safety belts, and types of vehicles are correlated with injury patterns, position of victim in car, and mortality. Distance from accident site to the Hospital, and the time from accident to death, were analyzed as a function of mortality trends and causes of death. Hemorrhage and asphyxia account for one—third of all fatalities.

01-3726 S

Ryan, G. A.

**INJURIES IN TRAFFIC ACCIDENTS.**

**J** Accident
**DE** Motor Vehicles, Vehicle
**YEF** Data Statistics, Contents, Study—Report Type
**WMEBD** Regression, Design, Statistical/Probability, Mathematical, Methods
**OAI** Head, Anatomy/Body, Biomedical Aspect
**OAH** Neck
**OAE** Abdomen
**OA/B** Vertebrae, Bones, Musculo—Skeletal System
**OAD** Lower Extremity
**OADH** Pelvis
**OAG** Upper Extremity
**YEG** Tables/Graphs, Contents, Study—Report Type

Discusses Adelaide, Australia study in 1963 and 1964. Investigated 408 accidents involving 1,315 persons. Classification of injury severity is modification of ACIR classification. Gives frequency of injuries by body area, and age distributions. Discusses mechanisms of injury to pedestrians. Analysis of impact point on motorcycle helmets indicates that Australian Standards are not adequate. Frequency of side impacts to cars comparable to front impacts. Tabulates distribution, degree of injury, and cause of injury in car accidents. Emphasis of study is on vehicle design.

01-3749 S

Bauer, K. H.

**UBER VERKEHRSUNFALLE AUS DER SICHT DES CHIRURGEN.** [TRAFFIC ACCIDENTS AS VIEWED BY THE SURGEON.]


**WSD** Surgery, Medical, Methods
**DE** Motor Vehicles, Vehicle
**I** Accident
**YEF** Data Statistics, Contents, Study—Report Type
**VN** Epidemiology, Disciplines
**SC** Economics, Socioeconomic Aspect
**VMB** Biomechanics, Biomedical Sciences

Discusses national (Germany) statistics of trauma and analyzes about 2,500 trauma patients logged during five years at the Heidelberg Clinic. 7,344 of those required admission to hospital, 27% of whom had suffered traffic accidents.

Etiology of trauma, and time trends are discussed. Mortality rates are cited to prove traffic accidents are more serious than industrial accidents. Mortality rates, as analyzed by the area of the body where injuries are produced, are highest for head injuries.

Tabulates traffic and industrial accidents, frequency of occurrence of injuries by body areas, and number of fatalities by body area injured. Frequencies of multiple injuries are also shown.

Time of death after injury in days is tabulated for motor accidents as compared to industrial accidents. Average duration of absence from work is shown as a function of body area injured.

Severity of deceleration is discussed for various kinds of collision. Speed is pointed out to be the only variable that directly influences the severity of an accident which can be controlled by legislation.

01-3751 S

Gögler, E./ Laqua, H.

**DIE BEDEUTUNG DES UNFALLKRANKENGUTES FUR DIE KLINISCHE CHIRURGIE.** [THE SIGNIFICANCE OF TRAUMA RECORDS FOR CLINICAL SURGERY.]


**JN** Injury/Trauma, Accident
**WSD** Surgery, Medical, Methods
**YEF** Data Statistics, Contents, Study—Report Type
**VN** Epidemiology, Disciplines
**L** Time
**EA** Age, People
**OAI** Head, Anatomy/Body, Biomedical Aspect
**OAN** Nervous System

Discusses national statistics of trauma and analyzes about 2,500 trauma patients logged during five years at the Heidelberg Clinic. 7,344 of those required admission to hospital, 27% of whom had suffered traffic accidents.

Etiology of trauma, and time trends are discussed. Mortality rates are cited to prove traffic accidents are more serious than industrial accidents. Mortality rates, as analyzed by the area of the body where injuries are produced, are highest for head injuries.

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Severity of deceleration is discussed for various kinds of collision. Speed is pointed out to be the only variable that directly influences the severity of an accident which can be controlled by legislation.
Authors evaluate records of 6,196 trauma patients in Heidelberg, 1947-1951. Discuss etiology of trauma and emergency—room requirements and show time trends for each accident cause, injury distributions by body area, time lapse from accident to death.

Present diagnosis, therapy, and consequences for fractures and injury to head, spine, thorax, and abdomen.

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discusses organization, staffing, and equipment to improve hospital casualty departments and suggests layout. Recommends resuscitation—ward and resuscitation—trolley equipment.

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Methods and findings are reported of study of 2,028 consecutive visits to emergency service of Yale—New Haven Hospital during two weeks in July, 1964. Data were obtained from medical records and from interview—questionnaires given to randomized subsample of 402 patients. Factors found significantly related to urgency rating of patient were: age, regular relationship with personal physician, professional referral, years at current address, minority—group status, and location of residence in city. Urgency ratings were found to be essentially similar for various days of week and hours of day.

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Data were analyzed of the accident experience of 8,874 children receiving prepaid medical care in Berkeley and Oakland, including boys and girls four to eighteen years old. Race, socioeconomic status, age, sex, birth order, number of siblings, and mother's predisposition to seek medical aid were compared to type, severity, and frequency of injuries.
BIBLIOGRAPHY

01-3824 S
Waller, J. A./ Garner, R./ Lawrence, R.
UTILIZATION OF AMBULANCE SERVICES IN A RURAL COMMUNITY.
School of Medicine, Baltimore, Maryland/ California Univ. Medical School, Los Angeles. March 1966. 8 p.
Sponsor: National Institutes of Health.

K BK Rural, Terrain/Habitat, Space
JR Recovery of Injured, Accident
VN Epidemiology, Disciplines
YEF Data Statistics, Contents, Study--Report Type
YEG Tables/Graphs
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAL Respiratory System

Describes 1963 study of 923 trips made by one California ambulance company. Information about each person was obtained from trip records, admission and Emergency Room records. Distribution of ambulance calls and fatalities by cause is tabulated. Attempt to correlate patient survival with distance carried brought no results except for cardiovascular--respiratory disease. Ambulance subscription systems and "speeding ambulance" are discussed.

01-3834 N
Hampton, O. P., Jr.
PRESENT STATUS OF AMBULANCE SERVICE IN THE UNITED STATES.

FDE Service Organizations, Corporate Bodies, Society
FDEL Ambulance, Special Purpose, Motor Vehicles, Vehicle
YCD Survey, Nature of Study, Study--Report Type

Summarizes findings of survey of 900 cities. Of 204 cities claiming an ordinance regulating ambulance service, only 162 require attendant in addition to driver and only 174 require equipment listed by A.C.S. Committee on Trauma. Recommends that casualty--carrying vehicles not be given special privileges in city traffic.

01-3848 N
Drye, J. C./ Hyde, C. J.
THE LOUISVILLE PLAN FOR CARE OF THE INJURED.
1965. 6 p. figs.
JR Recovery of Injured, Accident
WSB First Aid, Medical, Methods
L Time

Discusses Police Department program to provide prompt care for accident victims. High number of D.O.A.'s at hospital in 1964. No first aid is discussed.

01-3851 N
Wade, P. A.
AUTOMOBILE CRASH INJURIES.

JN Injury/Trauma, Accident
JRH Transportation, Recovery of Injured, Accident
VN Epidemiology, Disciplines
JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident

Discusses the epidemiology of automobile trauma. Improvements in automobile design, risk of ejection, value of seat belts and interlocking door latches are discussed, as are treatment, emergency medical care, and emergency--room requirements. Author claims that medical schools should include more training in trauma. Cites an analysis of 2,500 cases in 1958 in which researchers found that haste was seldom essential to patient's welfare.

01-3853 N
Owens, J. C.
EMERGENCY MEDICAL SERVICES IN THE SMALL COMMUNITY.
Colorado Univ. School of Medicine, Dept. of Surgery. 1966. 9 p. figs.

Sponsor: American College of Surgeons, Colorado Committee on Trauma/ Colorado Univ. Medical Center/ Medical Education for National Defense.

JRJ Hospital Care, Recovery of Injured, Accident
YCD Survey, Nature of Study, Study--Report Type
WSB First Aid, Medical, Methods
SC Economics, Socioeconomic Aspect

Reports on survey of 44 general medical hospital emergency departments with 75 beds or less in 43 communities of 10,000 population or less. Ambulance services were included in survey. Situation and quality of ambulance services and their contact with hospitals are discussed. Personnel first aid training, ambulance design and equipment, confusing highway and street signs leading to emergency hospitals, and types of emergencies are mentioned. Emergency equipment and emergency--room procedures are evaluated.

01-3857 S
Waller, J. A.
CONTROL OF ACCIDENTS IN RURAL AREAS.

YCB Research, Nature of Study, Study--Report Type
Comparing accident fatality rates in urban, agricultural, and mountain counties in California. Fatal rural accidents were no more severe than urban accidents. Motor–vehicle fatalities are over 2½ times as frequent in agricultural counties and 5 times as frequent in mountain counties as in urban counties. Reference is made to another study by the author showing a rural traffic–accident death rate as being four times the urban rate. Over 90% of rural accident deaths within the first hour occurred at accident scene, whereas only one–third of first–hour fatalities in urban areas had not been moved.

Bradham, G. B.
AN ANALYSIS ON 2,418 EMERGENCY ROOM ADMISSIONS.

YCD Survey, Nature of Study, Study–Report Type
JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident
YEF Data Statistics, Contents, Study–Report Type

Frequencies of admissions are given by day of month, hour of day, race, and age group.

Weller, J. A./Curran, R./Noyes, F.
TRAFFIC DEATHS: A preliminary study of urban and rural fatalities in California.

JNB Fatal, Injury/Trauma, Accident
KBM Rural, Terrain/Habitat, Space
KBD Urban/Town/City
YCD Survey, Nature of Study, Study–Report Type
YEF Data Statistics, Contents
L Time

Authors discuss a California death–certificate study of 782 victims enclosed in vehicles in 1961. Tabulations: estimated salvageability by type of accident, urban/rural location, and body areas injured; frequencies for urban or rural accidents by hour and place of residence of victims; proportion of deaths occurring at given intervals after injuries to specific anatomic areas. Indicate more fatalities within one hour of rural than of urban accidents. Distance patient transported before death versus survival times indicates earlier care and transportation for urban victims.

Corcoran, J.
ACCIDENT AND EMERGENCY SERVICES IN DUBLIN.

JR Recovery of Injured, Accident
JN Injury/Trauma
KLC School/Hospital, Zone/Land Usage, Space
YCD Survey, Nature of Study, Study–Report Type
QD Teaching/Training, Educational Aspect
JRG Professional/Physician, Treatment/Care

Describes Dublin ambulance service provided by the Fire Brigade, mentioning ambulance radio communications and resuscitation and suction equipment, and cooperation with the police. Recommendations include separate casualty and emergency services, and a single “Accident and Emergency” center for the whole city. Recommends an advanced first aid course for every
THE CURRENT STATUS OF EMERGENCY TREATMENT IN AUTOMOBILE ACCIDENTS: With recommendations to professional and civilian personnel.

Methodist Hospital, Dept. of Surgery, Memphis, Tennessee. 1965. 6 p. tables. ref.


JR Recovery of Injured, Accident
NJ Injury/Trauma
JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident
YER General Discussions, Contents, Study—Report Type
X Equipment
QD Teaching/Training, Educational Aspect
VN Epidemiology, Disciplines

In a five-year survey, information was compiled about the accident itself, patient’s condition and treatment prior to admission, and emergency—room data. Factors discussed include first aid, equipment in ambulances, police cars, and firemen’s rescue vehicles, and emergency room organization. Frequent mistakes and complications in emergency room are given. Types of injuries and body areas injured are tabulated.

AMBULANCE SERVICE TRANSPORTATION OR MEDICAL CARE.


DEHL Ambulance, Special Purpose, Motor Vehicles, Vehicle
JR Recovery of Injured, Accident
QD Teaching/Training, Educational Aspect
X Equipment
YER General Discussions, Contents, Study—Report Type
SC Economics, Socioeconomic Aspect

Describes ownership, organization, and financial condition of ambulance services, pointing out deficiencies in Red Cross training course and making recommendations for improvement in equipment, training, communications, and emergency medical care research.

THE REMOVAL OF INJURED PERSONNEL FROM WRECKED VEHICLES.

Air Force Medical Service School, Gunter AFB, Alabama. 1965. 4 p.


JRF Extraction of Occupant, Recovery of Injured, Accident
JNH Fracture

WSBC Maintaining Airways, First Aid, Medical Methods

The USAF Air Training Command’s Medical Service School trains men in first aid with special emphasis on techniques for removal of victims from vehicles. Management of fractured femur and lower leg and foot injury is discussed. Good procedure for management of back injuries is still being developed.

THE STAGES OF DEVELOPMENT AND THE ORGANIZATION OF THE BIRMINGHAM ACCIDENT HOSPITAL.


JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident
KLC School/Hospital, Zone/Land Usage, Space
JN Injury/Trauma
WSI Autopsy/Pathology, Medical, Methods
YEF Data Statistics, Contents, Study—Report Type
VN Epidemiology/Etiology, Disciplines

Points out importance of autopsy for teaching and research, which are stressed as part of accident department. Sites of fractures, types of major soft tissue injuries, and complications for 500 autopsies following road accidents are tabulated.

ANALYSIS OF ADMISSIONS TO A CASUALTY WARD.

Aberdeen Univ., Dept. of Statistics (Scotland)/ Aberdeen Royal Infirmary, Casualty Dept. (Scotland). 1963. 3 p. figs. ref.


JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident
L Time
WSC Diagnosis, Medical, Methods
VN Epidemiology/Etiology, Disciplines
YCF Systems Study, Nature of Study, Study—Report Type

Describe work of a short—stay casualty ward in Aberdeen, Scotland, during 1961, giving number of patients, average duration of stay, and number subsequently transferred for various diagnostic classes. Breakdown of admissions by month and day of week. Assuming a Poisson distribution of arrivals and comparing number of admissions with the number expected, it is shown that bed occupancy can be predicted with fair accuracy.

EMERGENCY CARE OF CRITICALLY INJURED.

Louisville Univ. School of Medicine, Dept. of Surgery, Kentucky. July 1963. 9 p. ref.
The article focuses on the system developed at Louisville General Hospital where 30% of operations are on emergency basis. After rapid evaluation in emergency room, the injured person is taken on the same litter to an operating suite which has necessary staff immediately available. Operating suite has its own X-ray equipment, since X-rays have been found to be a major factor in admission delay. There is also a postoperative recovery room.

Worman, L. W./Cook, H. E./King, J. M.
THE TRAUMA PATIENT VS. EMERGENCY CARE: THE ROLE OF THE EMERGENCY HOSPITAL.

KLC School/Hospital, Zone/Land Usage, Space
JRJE Emergency Room, Hospital Care, Recovery of Injured, Accident
WSB First Aid, Medical, Methods
WSE Therapeutic
JN Injury/Trauma
YCD Survey, Nature of Study, Study—Report Type
VN Epidemiology/Etiology
SC Economics, Socioeconomic Aspect

Administrators of county emergency hospital argue that emergency hospital is expensive, delays definitive care of patient, prevents maintenance of efficient operating—room staff, and is not good training for surgical residents. Emergency hospital is termed particularly detrimental to trauma victim who has most to gain from diagnostic, surgical, and convalescent facilities available in modern general hospital.

Bauer, K. H.
GRUNDSATZLICHES ZUR FRAGE DER UNFALLHEILKUNDE. [FUNDAMENTALS OF THE THERAPY OF TRAUMA.]

JN Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines
WSE Therapeutic, Medical, Methods

Author discusses etiology of trauma, and frequency of injuries by body areas and also of certain combinations of injury. Refers to high incidence of head injury (46%) and relative mortality rate (67.0%); low mortality rate of patients who had injuries to extremities only; and increased mortality of combinations which involve thorax and/or abdomen. Emphasis on requirements of neurosurgeon, and trauma surgeon with training for thorax—abdominal injuries.

FATAL PEDESTRIAN AUTOMOTIVE ACCIDENTS.

EM Pedestrians, People
JNB Fatal, Injury/Trauma, Accident
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
JNX Multiple Severe Injuries

After study of 200 cases, authors describe and discuss factors involved in the accident situation, analyze injuries with respect to body site, number, effect on survival time and cause of death, and discuss importance and diagnosis of occult lesions. Data statistics: median age; incidence of alcohol in the blood; incidence of traffic violators; incidence of mechanical defects in vehicles; number of injuries and survival time; site of injury and survival time; number of occult injuries and site of injury.

Wade, P. A.
THE INJURED PATIENT AND THE SPECIALIST.

JN Injury/Trauma, Accident
WS Medical, Methods
VN Epidemiology/Etiology, Disciplines

Discusses increasing incidence of trauma and the role of the automobile. Discusses the vehicle design changes suggested by the Cornell Group. Reviews the current state of emergency services. Discusses the necessity for physicians with a broad understanding of trauma.

Hodge, P. R.
FATAL TRAFFIC ACCIDENTS IN ADELAIDE.

JNB Fatal, Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines
L Time

Author surveys 174 traffic accident fatalities. Data statistics: overall road accident distribution; age, sex, and
mode of transportation; monthly distribution; daily distribution; distribution according to time of day; distribution of injuries; blood alcohol levels; type of injury and mode of transportation.

01-4015 N
Wade, P. A.
THE ACCIDENT SURGERY OF MOTORWAYS.
Nov. 1961. 7 p. tables. figs. graphs. ref.

JN Injury/Trauma, Accident
WSD Surgery, Medical, Methods
VN Epidemiology/Etiology, Disciplines
YCK Case Studies, Nature of Study, Study--Report Type

Author discusses the prevention of motor accidents, describing automobile design changes which prevent or modify injuries; discusses transport of the injured and emergency room treatment. Describes 3 cases to illustrate the frequent multiple nature of injuries. Discusses the role of the orthopedic and the general surgeon.

01-4016 S
Hampson, K. W.
EPIDEMIOLOGY OF TRAFFIC CASUALTIES IN THE CANADIAN ARMED FORCES DURING 1959.
Conference: Canadian Public Health Association, Epidemiology Section, annual, June 1961, Regina, Canada.

JNB Fatal, Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines

Author analyzed 1,500 cases. Discusses findings from epidemiological viewpoint. Presents map of accident sequence stream. Discusses the physical laws related to injury production. Notes that some features are common to military and total populations. Recommends further parallel examinations. Data statistics: incidence of traffic deaths; type of accident; time of accident; day of accident; month of accident; mortality; hospital morbidity; accident rate/command; accident rate/province and service; accident rate/age group; accident rate/rank and service.

01-4017 N
Kubryk, D.
TRAFFIC ACCIDENTS IN CANADA.

JN Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines

Author presents data which show the extent of the traffic accident problem. Discusses causes in terms of host, agent and environment. Describes Canadian accident prevention organizations and briefly outlines their activities.

01-4024 S
Caldwell, L. A.
March 1961. 7 p. figs.
Sponsor: Ontario Medical Association, Committee on the Medical Aspects of Traffic Accidents, Canada.

L Time
DEHL Ambulance, Special Purpose, Motor Vehicles, Vehicle
IQ Hospitals, Services
JNB Fatal, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study--Report Type
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
WSB First Aid, Medical, Methods
YCD Survey, Nature of Study

Describes findings of 1960 Ontario study. For 107 accidents in which casualties were transported by ambulance, data cards were filled out by police, ambulance operators, and hospital admitting and emergency departments. Table shows for urban and rural accidents average time from moment of accident to notification of police, from notification of police to notification of ambulance, from notification of ambulance to arrival at accident scene, from arrival to departure from accident scene, and from departure from accident scene to arrival at hospital.

01-4095 N
Brass, A.
MEDICINE IN SOUTH VIETNAM TODAY.
Part 5: Vung Tau--Australian troops, American helicopters and Sydney doctors.
25 March 1967. 8 p. photos.

DDCD Helicopters, Airborne, Power Vehicle, Vehicle
JRH Transportation, Recovery of Injured, Accident
IO Hospital, Services
NKFF Delay, Frequency/Time, Operating Conditions, Physical Aspect

2nd Field Ambulance, providing medical care for 5000 Australians, is described, mentioning 30-mile radius of helicopter transportation and usual maximum of 30 minutes before treatment in hospital. Dengue, malaria, hemorrhagic fever, and encephalitis are cited as health problems.

01-4096 S
Corcoran, J. / Collins, P. G. / Gallagher, J. E. / Coolican, J. E. / Montgomery, D. / O'Dea, J. St. L. / Lavelle, E. F.
ACCIDENT AND EMERGENCY SERVICES IN DUBLIN.
Study covers 9,538 emergencies treated in eleven hospitals. Frequencies for accident and non-accident cases and mode of transportation are tabulated separately for each hospital. Nature of injuries is tabulated, showing total number, number admitted to wards, and whether emergency operation was performed. Criticisms of existing services and requirements, accommodations, and equipment for Accident Emergency Center are discussed.

The first attempt at systems analysis of an urban emergency medical service system. Authors describe 1963–1964 San Francisco study to develop methodology and data as partial basis for improving emergency care system. Tabulate: frequencies of ambulance and non—ambulance patients by residence, race, sex; etiology of trauma, diagnoses; means of arrival of non—ambulance patients by nature of emergency, time spent in emergency room. Analyze workload of ambulance service by: place of emergency; situation at scene; time spent; patient management; frequency of equipment and supplies used; frequency and location of specific action taken by ambulance crew. Discussion emphasizes radio communication, training of personnel, and economic aspects.


Author surveyed 133 cities and towns. No agency controlled establishment of ambulance services in 38%. Less than 60% specified first aid equipment. In general, requirements for ambulance attendant training were inadequate. Author discusses establishment of local ambulance services, equipment requirements, and attendant training.


Apply systems analysis to study of trauma care in Seattle.

The first year's experience in the anesthesia management of trauma at Parkland Memorial Hospital, Dallas, Texas, and Smithers Memorial Hospital, Arlington, Virginia. 1964. 5 p. figs. ref. tables. "Anesthesia and Analgesia Current Researches, Vol. 45, Nov.–Dec. 1966, pp. 835-842."

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Crichton, H. C./Giesecke, A. H.

Survey of accident and non-accident cases and mode of transportation are tabulated, showing total number, number admitted to wards, and whether emergency operation was performed. Criticisms of existing services and requirements, accommodations, and equipment for Accident Emergency Center are discussed.

The first attempt at systems analysis of an urban emergency medical service system. Authors describe 1963–1964 San Francisco study to develop methodology and data as partial basis for improving emergency care system. Tabulate: frequencies of ambulance and non—ambulance patients by residence, race, sex; etiology of trauma, diagnoses; means of arrival of non—ambulance patients by nature of emergency, time spent in emergency room. Analyze workload of ambulance service by: place of emergency; situation at scene; time spent; patient management; frequency of equipment and supplies used; frequency and location of specific action taken by ambulance crew. Discussion emphasizes radio communication, training of personnel, and economic aspects.

The first year's experience in the anesthesia management of trauma at Parkland Memorial Hospital, Dallas, Texas, and Smithers Memorial Hospital, Arlington, Virginia. 1964. 5 p. figs. ref. tables. "Anesthesia and Analgesia Current Researches, Vol. 45, Nov.–Dec. 1966, pp. 835-842."

Historic survey of literature and analysis of 1161 cases. Authors conclude that patients require rapid assessment in the emergency room as well as the operating theater. List and discuss factors which influence anesthetic management. Discussion following paper. Data statistics: cause of injury; surgical service and number of deaths; premedication; lowest systolic blood pressure before, during, after operation; maintenance relaxant; primary anesthetic agent; total anesthesia time; primary anesthetic technique; fluid and blood therapy before and during operation.

MEDICAL ASPECTS OF AUTOMOTIVE CRASH INJURY RESEARCH.

Surveys and data available on overall degree of injury, degree of fatal injury by number of body areas involved, distribution of injuries among six body areas, and percentage of injured persons receiving injury to each body area, with degree of severity in each.

Describes the epidemiologic study established at Cornell University Medical College in 1952. Reviews literature. Statistical data are available on overall degree of injury, degree of fatal injury by number of body areas involved, distribution of injuries among six body areas, and percentage of injured persons receiving injury to each body area, with degree of severity in each.
YEF Data Statistics, Contents, Study--Report Type
VN Epidemiology/Etiology, Disciplines
SCE Costs/Benefits, Economics, Socioeconomic Aspect

Authors analyze data; describe and discuss general service, method of operation, traffic demands and driver training. Review situation in other cities. Suggest advanced training of ambulance drivers. Data statistics: reporting service; cost to city; disposition of patient; time of call; age; cause of emergency service. Description of survey of ambulance service in 100 cities.

01-4190 N

SUGGESTIONS FOR COMMUNITY ACTION ON EMERGENCY MEDICAL SERVICES.
American Medical Association, Commission on Emergency Medical Services, Chicago, Illinois. n.d. 9 p.
WSB First Aid, Medical, Methods
JRGI Professional/Physician, Treatment/ Care, Recovery of Injured, Accident
IO Hospital, Services
IQ Ambulance
QD Teaching/Training, Educational Aspect

Suggestions are designed to aid in the formation of community action programs. Authors discuss organization structure and evaluation of existing emergency systems. Describe general guidelines for the four phases of an emergency system (first aid, communications, transportation, emergency facilities).

01-4193 N

COMBAT CASUALTY MANAGEMENT IN VIETNAM.
Eisenman, B.
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical, Methods
WSD Surgery
WSE Therapeutic
DDCD Helicopters, Airborne, Power Vehicle, Vehicle
YER General Discussions, Contents, Study--Report Type

Describes type of combat and resulting type of casualties. Discusses the new chain of evacuation to local hospitals, to Guam and Japan, and/or via Clark Air Force Base in the Philippines to the U.S. Speed of rescue, treatment by properly trained Corpsmen, and immediate surgery facilities are described. Helicopter action is significant. Resuscitation is discussed. Types of solutions and blood requirements are covered. Soft tissue wounds, head injuries, chest injuries, vascular surgery, and abdominal injuries are discussed.

01-4186 S

Herzog, K.
UNTERSUCHUNGEN ÜBER DIE EIGNUNG CHIRURGISCHER ABTEILUNGEN ZUR VERSORGUNG VON VERKEHRSUNFALLVERLETZTEN. [INVESTIGATIONS ABOUT THE ADEQUACY OF EMERGENCY HOSPITALS FOR THE MEDICAL CARE OF VICTIMS OF TRAFFIC ACCIDENTS].

1962. 4 p. maps. tables.
IO Hospital, Services
YCD Survey, Nature of Study, Study--Report Type
WS Medical, Methods
XT Medical, Equipment

Author discusses problems in West Germany caused by lack of knowledge of exact location of good emergency hospitals. Patients often are taken to the hospital by laymen or by physicians who do not know the local environment at the scene of the accident. Author prepared a road map containing pertinent data about all qualified emergency hospitals.

01-4193 N

Waters, J. M., Jr.
THE BLOODY LANES.
DDCD Helicopters, Airborne, Power Vehicle, Vehicle
JRGI Professional/Physician, Treatment/ Care, Recovery of Injured, Accident
QD Teaching/Training, Educational Aspect

Review of current status of emergency treatment of highway accident victims. Author discusses need; problems; current legislation; economics; ambulance service, personnel; work of National Highway Safety Bureau; role of federal and state governments, community, physicians. Reproduces Highway Safety Program Standard 4.4.11, "Emergency Medical Services."

01-4194 N

McDougall, R.
PILOT STUDY ON TRAFFIC ACCIDENTS.
1 Jan. 1959. 5 p. tables. ref.
Sponsor: Ford Motor Company of Canada.
JN Injury/Trauma, Accident
Study covers 6-month period in Montreal. Author discusses problems, advantages and limitations of collecting morbidity data from hospital records. Lists minimum information for accident histories. Recommends further studies of this nature, particularly in relation to cause and prevention of accidents. Recommends that hospital records of all accidents be coded according to etiology. Data statistics: number of accident cases treated at hospital and total number in the city; means of transportation to hospital; ambulance runs to hospital — accidents and other causes; types of accidents; types of vehicle accidents; age; sex; pedestrian or driver; time of accident; types of injuries treated in emergency room; types of injuries admitted to hospital; percent of dangerous and fatal injuries by body area.

Heikel, H. V. A.


YCD Survey, Nature of Study, Study—Report Type
YEF Data Statistics, Contents, Study—Report Type
JN Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines

Extensive analysis of 1,831 cases dead on arrival or admitted to Bjorneborg General Hospital, Finland. Data statistics: age; sex; rate of cases in population; number of cases per month; residence of injured; means of travel; distribution by day of week, hour; type of accident; site of injury, type of vehicle; type of skull injury, type of vehicle; length of hospitalization; hospitalization cost; loss of working time; mortality; time and place of death; cause of death.

COMMUNITY—WIDE EMERGENCY MEDICAL SERVICES.

Authors list and discuss recommendations for emergency medical care at the scene, during transportation, and in hospitals. These recommendations are not minimum standards but rather goals based on presently available techniques. Recommend that the goals be reviewed and upgraded periodically.

02-3700 N

JRG I Professional/Physician, Treatment/Care, Recovery of Injured, Accident
DEH Special Purpose, Motor Vehicles, Vehicle
OAI Head, Anatomy/Body, Biomedical Aspect
OANBC Spinal Cord, Central, Nervous System
OALG Mediastinum
OAK Blood Vessels, Cardiovascular System
OAE Abdomen

Author discusses the etiology of trauma in Germany, and statistical data from insurance companies and hospitals. First aid by physician on the scene of an accident is considered. Zuckschwerdt in Hamburg has considered it feasible. Bauer's mobile unit in the Mannheim–Heidelberg area is mentioned. At the scene of an accident, no ultimate therapy is advisable; only stabilization of the patient is necessary to make him fit for transportation. Conditions or dangers to be handled are: aspiration, shock and hemorrhage.

Suckert is mentioned (city of Linz), who has a mobile unit containing also surgical equipment for amputations, tracheostomy set, and drugs to treat (or prevent) brain edema in head injury cases.

Organization of the hospital Emergency Room is discussed. Specific injuries and therapy are discussed: head, spine, thorax, heart and great vessels, abdomen. Frequency and mortality rates are given. Some case studies are included.

Final recommendations include overall prevention, education, training of ambulance personnel, use of helicopter, combination of physician at scene and qualified means of transportation, better hospital care.

02-3714 S
ERSTE HILFE AM UNFALLORT UND ERSTVERSORGUNG VERKEHRSSPÄTETZER NACH KLINIKAUFNAHME. [FIRST AID AT SCENE OF ACCIDENT AND FIRST THERAPY AFTER ADMISSION TO EMERGENCY ROOM.] See 02-3714 S

Wild, R. J./ Jude, J. R./ Kouwenhoven, W. B./ McMahon, M. C.


OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAL Respiratory System
OQD Teaching/Training, Educational Aspect
YEF Data Statistics, Contents, Study—Report Type
Authors analyze 153 reports. Describe training of personnel and discuss results. Recommend procedure. Data statistics: interval between receipt of call and first aid treatment (range and mean); transportation time (range and mean); age range; etiology; results; post-mortem findings. Fifteen illustrative case reports.

02-3740 S
Lehmann, H. D.
KOMPLIKATIONEN NACH SCHWEREM GEDECKTEM SCHÄDELHÜLLENSCHÄDEN IM KLINISCHEN UND MORPHOLOGISCHEN BEFUNDE. [CLINICAL AND MORPHOLOGICAL FINDINGS IN COMPLICATIONS FOLLOWING SEVERE CLOSED CEREBROCRANIAL TRAUMA.]
1964. 11 p. tables, photos.

Bibliography

02-3748 OAI
Head, Anatomy/Body, Biomedical Aspect

JNPL
Shock

Two hundred emergency cases were analyzed in Bayern from the records of the Red Cross which is the agency providing all ambulance services in that province. Ten to fifteen minutes was the total delay from time of call to delivery in the hospital for urban accidents, and 20–30 minutes for rural accidents. To evaluate quality of first aid rendered on the scene, 133 autopsy records (1953–1963) were reviewed of accident victims that arrived in the clinic as D.O.A. or were dead within 48 hours. 17% had died on the scene. Etiology of trauma and frequency of various types of injury are shown. 55% of autopsy material died from the consequence of head injury; 20% from shock, 4% from aspiration, 6.5% of fat embolism.

The severity of head injuries can be reduced if anoxia as a result of obstructed airways or inadequate ventilation is prevented. Author considers the need for medical capability at the scene to reduce morbidity of an accident. First aid training is not adequate to cope with head injury, shock, aspiration.

02-3762 N
Böhler, J.
DRINGLICHKEIT DER VERSORGUNG BEI UNFALL-VERLETZTEN. [URGENCY OF ACCIDENT INJURY CARE.]
1 Feb. 1964. 4 p.

JR
Recovery of Injured, Accident

YCC
State-of-the-Art, Nature of Study, Study–Report Type

Author discusses triage essentially in hopeless cases, severely injured cases needing immediate attention to maintain proper ventilation and treatment for shock, injured patients requiring surgical treatment, and light injuries.

Transportation, especially indication (or not) for air transport, is discussed.

A list of priorities and details of emergency treatment are covered.

02-3764 N
Spitz, W. U.
BEFUNDE BEI VORÜBERGEHENDER WIEDERBELEBUNG NACH ELEKTROUNFALL. [FINDINGS IN TEMPORARY RESUSCITATION FOLLOWING ACCIDENTAL ELECTROCUTION.]
Freien Universität, Institut für gerichtliche und soziale Medizin, Berlin (Germany). March 1964. 4 p.

WSBCR
Resuscitation, Maintaining Airways, First Aid, Medical, Methods

JNPM
Anoxia/Hypoxia, Consequences, Injury/Trauma, Accident

JNPH
Pneumonia

YCC
Case Studies, Nature of Study, Study–Report Type

Report on a young man delivered as D.O.A. to the hospital after an electrical shock, followed by an immediate attempt at resuscitation and another by firemen five
minutes later, both unsuccessful. Ten minutes after arrival at hospital, thoracotomy heart massage at the hospital showed first signs of spontaneous respiration. Heart fibrillation continued for about 30 minutes. Defibrillation was carried out. Heart became rhythmic and normal. Normal reflexes reappeared. Continued unconsciousness. Central hyperthermia on second day, corrected by external hypothermia; EKG normal. Sudden death on third day. Autopsy findings are discussed. Hypoxic brain damage (9—10 minutes without pulse at time of accident). Recommendations are made for vigorous attempts at cardiopulmonary resuscitation on the scene of the accident. The four to six minute anoxia—tolerance of the neurons is pointed out again.

Jude, J. R., Kouwenhoven, W. B./ Knickerbocker, G. G.
CARDIAC ARREST: Report of application of external cardiac massage on 118 patients.
Johns Hopkins Univ. School of Medicine, Dept. of Surgery, Baltimore, Maryland/ Johns Hopkins Hospital, Dept. of Surgery, Baltimore, Maryland. 16 Dec. 1961. 8 p. photos, tables, figs.

OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical, Methods
YEF Data Statistics, Contents, Study—Report Type

Evaluate and carefully describe a method of producing artificial circulation by external sternal compression, used in 138 episodes of cardiac arrest in 118 patients, restoring cardiac action in 78% of arrests. Cardiotonic drugs, electrocardiograms, defibrillation, and continued cardiovascular and pulmonary support were employed as needed. Describe causes and history of treatment for cardiac arrest.

Rowe, N. L.
FIRST AID TREATMENT, DIAGNOSIS AND ROENTGENOGRAPHY OF MAXILLOFACIAL INJURIES,

WSB First Aid, Medical, Methods
WSC Diagnosis
WSBC Maintaining Airways
OAIE Maxilla, Head, Anatomy/Body, Biomedical Aspect
JNH Fracture, Injury/Trauma, Accident
OAL Respiratory System

With maxillofacial injuries, prime consideration must be given to preservation of life, maintenance of function, and restoration of appearance. In immediate post-traumatic phase, acute respiratory obstruction will kill patient more rapidly than will a relatively slowly declining blood pressure or a gradually increasing intracranial pressure. Lists causes of respiratory obstruction, methods of preventing inhalation, and indications for tracheostomy. Describes methods of diagnosis and use of roentgenography.

Wagner, C. J.
THE MEDICAL SELF—HELP TRAINING PROGRAM.

Foster, P. A./ Martinez, L.
THE PERFORMANCE OF THE ENGSTROM VENTILATOR.

Karl, W. F.
OXYGEN CONCENTRATIONS ACHIEVED WITH MANUAL RESUSCITATOR.

Currie, D. J.
EARLY MANAGEMENT OF THE CRITICALLY INJURED.
Priorities of management for injuries are given, with a detailed plan for actions and observations to be carried out on scene of accident, in emergency department, and in surgical operating room. Laboratory control of PO2, PCO2, and pH, endotracheal tubes, tracheostomy, emergency thoracotomy, therapy for cardiac arrest, fibrillation, arrhythmias, and cardiogenic and neurogenic shock are discussed. Reduction in blood volume due to bleeding and fluid loss, as in burns, and control of central venous pressure are discussed.

02-3820
Nobel, J. J./Templeton, J. Y., III.

WSBC
Resuscitation, Maintaining Airways, First Aid, Medical, Methods
XT
Medical, Equipment
OAK
Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAL
Respiratory System

Doctors describe the MAX cart they designed, containing cardiopulmonary resuscitation devices and data-acquisition and data-reduction equipment. Less time is required to meet the basic physiologic demands of establishing an airway, ventilation, and artificial circulation. MAX is powered by a 70 amp–hr storage battery and can be kept on charge whenever not in use. MAX's data–acquisition system functions automatically during the clinical procedure, continuously recording on magnetic tape EKG, EEG, and pulse pressure, while recording the resuscitation team's directions, activities, and comments.

02-3845
Cardillo, T. E./Munson, E. T./Norris, J. L.
CARDIOPULMONARY RESUSCITATION: A TEACHING–TRAINING PROGRAM FOR RESCUE PERSONNEL.

Authors describe industrial program to train employees in mouth–to–mouth breathing and closed–chest cardiac massage. 1500 employees have been trained in program which includes film and practice on manikin. Found that laymen master technique for closed–chest massage much more readily than that for mouth–to–mouth resuscitation. Warn of complications produced by unskilled individuals.

02-3849
IMMEDIATE MEASURES AT SITE OF ACCIDENT.

JN
Injury/Trauma, Accident
QD
Teaching/Training, Educational Aspect
WSB
First Aid, Medical, Methods
WSC
Diagnosis

Translation of German Red Cross publication on first aid, giving instructions in case of traffic accident and describing various situations of acute danger and lifesaving measures to be employed by layman: general positioning of patient, artificial respiration, pressure dressings and pressure points, positioning for patient in shock, and external cardiac massage. Lifting and transport methods are illustrated.

02-3850
Davies, J. W. L.
METHODS OF ASSESSMENT OF BLOOD LOSS IN THE SHOCKED AND INJURED PATIENT.

JNPK
Blood Loss/Bleeding, Consequences, Injury/Trauma, Accident
JNPL
Shock

Discusses advantages and disadvantages of methods for assessing blood loss, including indices of amount of tissue damage and measurements of limb, plasma, and red–cell volume. Some semi–automatic instruments used are the Volemetron, The Hemolitre, and the Blood Volume Computer. Estimation time varies from 20 minutes with the semi–automatic instruments to 2½–3 hours with radioactive phosphorus.

02-3856
Freilich, H.
TEN MUSTS OF A SKILLED AND READY AMBULANCE SERVICE.
CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3874 N

Braun, P./ Reitman, N./ Florin, A. A.

**ING EMERGENCY CARE AND DISASTER MANAGEMENT.**
Harvard Medical School, March 1965. 5 p. table. ref.

**KLC** School/Hospital, Zone/Land Usage, Space

**QD** Teaching/Training, Educational Aspect

**WSB** First Aid, Medical, Methods

Peter Bent Brigham Hospital and Harvard Medical School combined to offer courses to first–aid instructors in local police and fire departments. Provides outline of course offered in tef weekly two–hour sessions. City–wide disaster exercise demonstrated that graduates were not able to perform effective triage.

02-3875 N

Safar, P./ Brose, R. A.

**AMBULANCE DESIGN AND EQUIPMENT FOR RESUSCITATION.**
Pittsburgh Univ. School of Medicine, Dept. of Anesthesiology, Pennsylvania/ Presbyterian–University Hospital, Pittsburgh, Pennsylvania. March 1965. 4 p. figs. tables. ref.

**DEHL** Ambulance, Special Purpose, Motor Vehicles, Vehicle

**XTK** Oxygen Supply, Medical, Equipment

**XTJ** Aspirators

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

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Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.

02-3875 N

Braun, P./ Reitman, N./ Florin, A. A.

**CLOSED-CHEST CARDIAC RESUSCITATION: Problems in the training of laymen in volunteer rescue squads.**
New Jersey State Dept. of Public Health, Heart and Circulatory Disease Program, Trenton/ Public Health Service, Heart Disease Control Program. 7 Jan. 1965. 6 p. tables. ref.

**KD** Teaching/Training, Educational Aspect

**WSBCR** Resuscitation, Maintaining Airways, First Aid, Medical, Methods

**YCH** Field Experiment, Nature of Study, Study–Report Type

Describes modifications of conventional ambulance. The following are recommended: access to patient from his vertex for respiratory resuscitation and from his side for external cardiac compression; hand–operated ventilation equipment; powerful suction from ambulance engine or electric motor; large reservoir of oxygen; transparent bag–mask unit for oxygen inhalation; oropharyngeal tubes; and portable equipment for ventilation, oxygen inhalation, and suction.
courses of instruction which are now the standards recommended by New Jersey State Department of Health.

02-3887 N
Schrogie, J. J.
TRAINING IN CARDIOPULMONARY RESUSCITATION.
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical Methods
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAL Respiratory System
OAFD Ribs, Thorax
JNH Fracture, Injury/Trauma, Accident

A brief state—of—the—art report is given for treatment of cardiac arrest, describing extent of the American Heart Association’s training programs and giving a survival rate of 25% in summary of 969 cases. Disagreements as to who should perform closed—chest cardiac resuscitation and guidelines for broad educational programs are discussed. New York State’s advanced courses for physicians are described.

02-3888 N
Safar, P.
EMERGENCY RESUSCITATION.
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical Methods
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAL Respiratory System
X Equipment
WSBC Maintaining Airways
QD Teaching/Training, Educational Aspect

Key concepts in three phases of cardiopulmonary resuscitation are discussed. The following equipment is discussed: Ruben’s self—inflating bag—valve—mask unit, Laerdal kit, oxygen—bag—mask unit, and modified Kreiselman resuscitator. Special conditions like drowning and inhalation of gastric contents are mentioned.

02-3905 S
Kaplan, B. M./Knott, A. P., Jr.
CLOSED—CHEST CARDIAC MASSAGE FOR CIRCULATORY ARREST.
YEF Data Statistics, Contents, Study—Report Type
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect

BIBLIOGRAPHY

OAL Respiratory System
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical Methods
VN Epidemiology, Disciplines
W1 Autopsy
L Time

Discusses 100 consecutive cases, 1961–1963. Careful search was made for pre—arrest clues of impending circulatory arrest. Ventilation was direct mouth—to—mouth or mouth—to—nose breathing. After closed—chest cardiac massage and ventilation had been instituted, electrocardiograph was attached, vein cutdown performed, and intravenous infusion of levarterenol begun. More specific therapeutic approach was then followed for ventricular fibrillation, ventricular standstill, and complete AV dissociation. Reports on incidence of primary admitting diagnoses, significant cardiovascular disease, and results of resuscitative efforts. Relation of interval before massage to results obtained is shown. Initial cardiac rhythm, complications in 28 patients, and pre—arrest EKG in 76 patients are tabulated.

02-3916 N
Littleton, J. T.
ALL—PURPOSE STRETCHER REDUCES TRANSFERS OF ACUTELY INJURED.
JRH Transportation, Recovery of Injured, Accident
XTO Stretcher, Medical, Equipment
JNX Multiple Severe Injuries, Injury/Trauma

In reply to a survey questionnaire, 300 hospital administrators reported an average of 6.7 manual moves for the average acutely injured patient between street and final hospital bed, with a maximum of eleven. Use of specially designed stretcher and mass—casualty management are discussed.

02-3945 N
Conway, J. P./Hancock, J. E./Ginn, W. V., Jr.
VENTRICULAR FIBRILLATION: Seventeen cases with long—term survival in four.
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical Methods
L Time
WSE Therapeutic

Patients were treated with an external cardiac defibrillator and closed—chest cardiac massage. A representative case report is provided. Importance of acid—base balance is discussed.

02-3949 S
Lind, B./Stovner, J.
MOUTH—TO-MOUTH RESUSCITATION IN NORWAY.
Sentralsykehuset, Dept. of Anesthesiology, Akershus
Follows up Norwegian campaign to teach the public the techniques of oral resuscitation. Of 40 successful rescuers interviewed, 21 had learned the procedure only from printed material or radio. Number of successful resuscitations for 85 victims is shown according to age of victim. Types of accidents and contents of mouth, correlation between duration of artificial ventilation and length of subsequent unconsciousness, and incidence of vomiting and trismus are discussed.

Author reviews and discusses management of cerebro-cranial injuries. Concludes that immediate appropriate measures would prevent many deaths.

Comprehensive discussion of first aid measures which require a minimum of equipment. Author describes management of a blocked air passage, lack of spontaneous respiration, cessation of circulation, and problems of transport.

Author reviews the work of the Canadian Medical Association's committee on medical aspects of traffic accidents. Discusses the following problems: definition of medical standards for drivers; use of seat belts; psychological studies and driver education; emergency treatment of injured persons; causes of traffic accidents.
TRACHEOSTOMY: AN UNDERRATED SURGICAL PROCEDURE.
Kentucky Univ. Medical School, Dept. of Surgery, Lexington. 1 June 1963. 4 p. ref.

Authors list and discuss indications for early tracheostomy. Describe technique, equipment, complications, and postoperative care. Describe the value of the combination of positive pressure mechanical respiration and tracheostomy.

02-4078 N

Author reports on fatality incurred during use of Sheldon tracheotome. Mortality resulted from technical difficulty, but author concludes that it would save more lives than the conventional tracheotomy during mass casualty situation.

02-4078 N

Authors describe in general the procedure at Beekman-Downtown Hospital. Describes and discusses emergency room care, and role of the consultant. Lists critical, immediate medical problems according to the specialty. Presents a classification system which has been found useful in managing patients.

02-4078 N

Authors describe their plan of action in cardiac arrest and the resuscitation equipment used, tabulating 43 episodes with respect to sex, age, diagnosis, cause of arrest, post-arrest stay, deficiencies in treatment and result of treatment. Include some illustrative case histories. Suggest percutaneous subclavian vein puncture and insertion of a plastic catheter for immediate delivery of drugs to the heart and body tissues, and lidocaine hydrochloride, a valuable therapeutic adjunct. Discuss the need for some type of internal cardiac pacemaker.

Since program began in 1964, growing individual experience and improvement in resuscitative techniques produced a marked increase in the survival rate.

BIBLIOGRAPHY
may be improved by closer patient observation and by the instruction of nursing personnel in the techniques of external cardiac massage. Notes that the procedure is unobjectionable and technically simple. Presents data which show the relationship between survival and cause of arrest, age, type of rhythm, and severity of illness.

02-4152 N
Dwyer, B.
RESUSCITATION AFTER MULTIPLE INJURIES.

JNX Multiple Severe Injuries, Injury/Trauma, Accident
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical, Methods 
YER General Discussions, Contents, Study–Report Type

Author reviews the biochemical and physiological changes which follow hemorrhage. Notes that hemorrhagic shock in the young will respond to transfusion of whole blood; this is not necessarily true in elderly patients. Describes and discusses ancillary forms of resuscitation. Discusses complications of rapid massive transfusion. Notes that new techniques are needed for measurement of blood volume in the injured.

02-4170 N
Phillips, P. J.
DISASTER FIRST AID: Part I.
Jan.–Feb. 1968. 7 p. figs. 

WSB First Aid, Medical, Methods
JN Injury/Trauma, Accident
YER General Discussions, Contents, Study–Report Type

First of a series related primarily to nuclear disaster, designed to supplement elementary first-aid training. Much of the information should be useful in other accident situations.

Author presents classification of casualties with regard to priority of evacuation and treatment. Describes diagnosis and treatment of minor injuries: lacerations; sprains; fractures; dislocations; concussion; burns.

02-4180 N
Gissane, W.
MEDICAL FIRST–AID AT THE ACCIDENT SITE.

JN Injury/Trauma, Accident
JRGJ Professional/Physician, Treatment/Care, Recovery of Injured 
WSB First Aid, Medical, Methods
DEHM Medical Units, Special Purpose, Motor Vehicle, Vehicle

Author describes and discusses treatment of acute conditions demanding immediate medical assistance. Describes a first-aid kit for physicians. Lists minimum equipment.

02-4183 N
COMBAT CASUALTY MANAGEMENT IN VIETNAM.
See 01-4183 N

02-4184 N
Farrington, J. D.
DEATH IN A DITCH.
June 1967. 12 p. fig. photos. 

QD Teaching/Training, Educational Aspect
WSB First Aid, Medical, Methods 
XT Medical, Equipment
OAH Neck, Anatomy/Body, Biomedical Aspect
OANBC Spinal Cord, Central, Nervous System

Minoqua, on Highway 51 in Wisconsin, is a city of 2,000 that grows to 30,000 with the resort activities. Due to poor ambulance services and inadequate training of personnel, Dr. Farrington instructed ambulance operators in rescue techniques. Gives survey in a diagnostic form to be carried out by rescue person, with recommendations for treatment if possible. States that training of rescue workers must go beyond Red Cross, International Rescue or Bureau of Mines training courses. Emphasizes attention to neck and back injuries. Describes use of back boards, equipment for rescue vehicle.

02-4185 S
Pettinari, V./Dagradi, A.
ORGANIZZAZIONE E SCOPI DEL PRONTO SOCORSO STRADALE. [ORGANIZATION AND SCOPE OF HIGHWAY FIRST AID].
June 1960. 11 p. figs, map. ref. 

JNB Fatal, Injury/Trauma, Accident
JNPJ Aspiration/Dehydration, Consequences/Complications
JNPL Shock
INK Hemorrhage
WSB First Aid, Medical, Methods
VN Epidemiology/Etiology, Disciplines
YEF Data Statistics, Contents, Study–Report Type

Discuss accident statistics and the position of traffic fatalities among other causes of death. 

First aid dealt with as a problem of the community authorities. Ambulances stationed at the emergency hospitals, radius of action of about 20 to 30 kilometers. 

Describe and analyze injuries: 40% head injuries, 30% joint injuries, 10% thorax, etc. Many multiple injuries. 

Stress the fact that with improved first aid combined with better surgical procedures, more lives could be saved (this conclusion drawn from the analysis of fatality causing injuries). Infusions carried out on the scene of the accident, plasma carried on all ambulances. 

Authors say that a physician in the ambulance should limit his activity to the reestablishment of airways and of the circulatory system. They favor creation of trauma centers for traffic accident surgery.
BIBLIOGRAPHY

02-4188 N
Kossuth, L. C.
VEHICLE ACCIDENTS: IMMEDIATE CARE TO BACK INJURIES.
Air Force Medical Service School, Gunter AFB, Alabama.
1966. 10 p. photos.
Conference: American Association for Automotive Medicine,

OAOBB Vertebral/ Spine, Bones, Musculo–Skeletal System, Anatomy/ Body, Biomedical Aspect
OANBC Spinal Cord, Central, Nervous System
OAH Neck
XTH Backboards, Medical, Equipment
JR Recovery of Injured, Accident

Author describes use of MSS Winch Board, a seven
foot long, waxed board, with a winch at one end. Holes in
legs and pins used to adjust height to that of car floor
level. Pictures show use of winch board, of chair splint for
immobilizing seated patient with vertebral fractures, of
head band and blanket roll, and of short board back
splint. Patients in various positions are discussed and
precautions to be taken are suggested.

02-4191 N
STANDARDS FOR EMERGENCY AMBULANCE SERVICES.
American College of Surgeons, Committee on Trauma,

YEN Standards, Contents, Study–Report Type
IQ Ambulance, Services

Authors describe standards for organization and operation,
personnel, vehicles, equipment, and communications. Discuss some other factors for which standards do
not exist. List sources from which the "model ambulance
ordnance" may be obtained.

02-4511 N
Wilder, R. J./McMahon, M. C.
EMERGENCY SQUAD DOCTOR: A PLAN FOR HANDLING TRAPPED CASUALTIES.
Baltimore City Hospitals, Maryland/ Baltimore City Fire
57–58.

DEHM Medical Units, Special Purpose, Motor Vehicles,
Vehicle
WS Medical, Methods
WSD Surgery
JRGII Professional/ Physician, Treatment/ Care, Re-
covery of Injured, Accident

Authors describe, in general, the methods, personnel,
and equipment used in an emergency plan.

02-4512 N
ERFAHRUNGEN MIT DEM NOTFALLARTZWAGEN DER CHIRURGISCHEN UNIVERSITÄTSKLINIK
KÖLN. [EXPERIENCES WITH THE MOBILE UNIT OF THE SURGICAL UNIVERSITY CLINIC IN COLOGNE.]
See 03-4512 N

02-4523 N
Speier, F.
BEITRAG ZUR SCHOCKBEKAMPFUNG AUF DER AUTOBAHN. [CONTRIBUTION TO THE THERAPY OF SHOCK ON THE HIGHWAY.]
1957. 2 p.
Münchener Medizinische Wochenschrift, Vol. 99, 1957,
pp. 1459–1460.

WSB First Aid, Medical, Methods
JRGII Professional/ Physician, Treatment/ Care, Re-
covery of Injured, Accident
XT Medical, Equipment

Author describes instance where he could save a life
on the scene of an accident. Ambulance arrived 20
minutes after author (M.D.) started i.v. A new infusion
method is reported.

Contribution to the therapy of shock on the highway.

02-4524 N
Ungeheuer, E./Contzen, H.
BESTECK FÜR LEBENSPRÄVENTIVE MASSNAHMEN AM UNFALLORT "ARZT–KOEFFER." [THE PHYSI-
CIAN'S KIT FOR LIFE—SAVING MEASURES AT THE SCENE OF THE ACCIDENT].
figs.
Münchener Medizinische Wochenschrift, Vol. 105, 5 April

XT Medical, Equipment
JRGII Professional/ Physician, Treatment/ Care, Re-
covery of Injured, Accident
IN Injury/ Trauma
WSBCR Reuscitation, Maintaining Airways, First Aid,
Medical, Methods

Without the necessary instruments and drugs the
physician can hardly be more effective than the medical
layman trained in first aid when he is called to prevent or
deal with life-threatening situations at the scene of the
accident or on the way to a hospital. A few simple and
suitable instruments and tools, however, will enable him
to perform the most decisive emergency treatment. The
"Doctor's Box" was developed and demonstrated for
first-aid emergency treatment at the scene of the
accident. It contains all necessary instruments and drugs
and can be used by any physician without any special
training or experience.

02-4530 N
Zhukov, B. P.
TRACHEAL INTUBATION IN FIRST AND EMER-
GENCY AID.
Donets Medical Institute, Bogoslavskii Surgical Clinic
(Russia). 1961. 9 p. table. ref.
Order No: STS 6328 (English translation).

WSBC Maintaining Airways, First Aid, Medical, Meth-
ods
JRGII Professional/ Physician, Treatment/ Care, Re-
covery of Injured, Accident

Author recommends intubation and subsequent assisted
ventilation as an effective first aid procedure. Describes
clinical experience (methods, indications, results) in an
emergency ward situation. Three illustrative case reports.
Proceedings of the conference presented in summary form. (1) Reference made by Lembke in Magdeburg about experiences on 2,500 calls to the scene of an accident. In this sample, Lembke only had one death during transportation. (2) Kothe discusses injuries to esophagus in chest trauma. (3) Bellmann (Dresden) discusses advisability of a mobile unit in Dresden. Author is in favor of such a measure complemented by better training of ambulance personnel and mandatory availability of first-aid kit in each physician's (good samaritan) car. (4) Ziegler in Kirchberg analyzes Emergency Department data and the geographical location of the hospital. Improved first-aid training of police officers recommended. One common telephone number for emergency throughout the nation is suggested. Improved radio communications mentioned. (5) Haase in Templin discussed insurance problems. (6) Hartmann (from Jena) discussed organization of emergency hospital and mobile unit in Moscow. The Skilfosowsky Institute has about 120–140 admissions (Emergency Room). 80% of blood transfusions are with blood obtained from cadavers. Advantage: when a victim needs large quantities of blood, they can possibly be provided from one donor only. (7) Usbeck (Erfurt). First therapy with head injuries. Advises further research by physicians on scene and during transportation. (8) Schumann (Dresden). Therapy of skull–brain injuries. Emphasis on treatment for shock, maintenance of airways, tracheostomy. Attention necessary to danger of hyperthermia. (9) Holwich (Jena). First aid to eye injuries. (10) Rose (Magdeburg). Head injury as seen by physician at site of accident. (11) Bummer (Zurich). First aid at scene with thorax injuries. Flail chest, hemothorax, pneumothorax and cardiopulmonary resuscitation in cases of electrocution are discussed. (12) Noller (Gera). Fat embolism. Agenda of conferences are interesting, and such discussions (and/or data provided by research–physicians) will certainly clarify some of the doubts and questions about a probabilistic model for emergency medical care.
Author discusses etiology of head trauma. Findings of complications of head injuries on the scene and during transportation are discussed as a result of the experience of author who in about 3 years went on 2,393 ambulance runs.

Aspiration, shock and hemorrhage are discussed. Brief presentation of etiology of trauma, and of on-the-scene experience of other German physicians. Case material is discussed. Of 2393 ambulance runs carried out in three years by the Surgical Clinic of the Medical School in Magdeburg, 511 had head injuries. The severity of head, skull and brain injuries and measures required on the scene to assure transportability are discussed. Some recommendations about therapy.

Number of severe head injuries, and number of fatalities before arrival of physician, are given. Claims no fatalities during transportation. Etiology of trauma, description of accident, and description of specific type of head injury are tabulated. Autopsy results show pulmonary complications, as tabulated for 10 cases.
Authors describe mobile unit as it is used in the city of Cologne. Tabulate etiology of trauma by number of calls, people involved, fatalities before arrival of the unit, deceased in the mobile unit, and transported by other means.

Stress promoting transportability of patient as main objective of medical team. Therapeutic measures for the respiratory system, circulatory system, pain relief, and others are indicated by frequencies for each type of trauma. The difference between urban and rural conditions is discussed. A discussion by conference participants follows.

Authors stress that mere transportation of accident victims is dangerous for cases with severe bleeding, shock, multiple fractures, and a large number of those with brain injuries. The surgery clinic of the Heidelberg University has a staff of about 60 doctors and 140 nurses, out of which a surgical team is scheduled to be available around the clock to go out to the scene of serious accidents. The surgical—bus is described. On every call one surgeon, two assistant surgeons, one anesthesiologist, a surgery nurse, and an aide make up the team. The major objective is not to provide major surgery on the scene of an accident but to achieve “transportability” of the victim. After the victim has been stabilized, the transportation is provided by regular ambulances of the German Red Cross.

Some case reports are given. Frequency of various kinds of injury are shown. On 20% of the calls author claims that life—saving measures by surgical team were indispensable for the survival of victim.
28 cases the presence of the physician at the scene was definitely required.

03-3982 S
Liebenow, H. C.
ÄRZTLICHE ERSTE HILFE AM UNFALLORT IN EINER MITTELSTADT. [MEDICAL FIRST AID AT THE SITE OF AN ACCIDENT IN A MEDIUM SIZE TOWN.]

03-3983 S
JPGI Professional/Physician, Treatment/Care, Recovery of Injured, Accident
KBM Urban/Town/City, Terrain/Habitat, Space
X Equipment

Authors summarize continued experience with surgical van in Cologne. About one in every few ambulance calls required trauma team attention on the scene. In three years (1960–62) in a total of 8,950 ambulance calls, 774 surgical–van runs were carried out. Of these 774, a total of 310 are called fully justified.

Reasons for inefficiency in system (60% of calls did not need physician) are the inadequate assessment of severity of injury by lay people, and the unwillingness to risk a loss in time to allow for more skilled people to arrive at the scene, assess criticality and then call the surgical van and trauma team.

Of 310 runs, 187 were properly stabilized and taken to hospital alive and in improved conditions. 50% of the latter had head injuries. Tracheostomy a very frequent procedure.

03-3984 S
ÄRZTLICHE AUFGABEN BEIM TRANSPORT VON SCHWERVERLETZTEN MIT HUBSCHRAUBERN. [TASKS OF THE PHYSICIAN IN THE TRANSPORTATION OF SERIOUSLY INJURED PERSONS BY HELICOPTER.] See 04-3984 S

03-3993 N
Hackethal, K. H.
DIE ERSTVERSORGUNG DES VERLETZTEN AM UNFALLORT. [FIRST MANAGEMENT OF THE INJURED AT THE SITE OF THE ACCIDENT.]
Erlangen Universität, Chirurgischen Klinik (Germany). 22 Feb. 1963. 6 p. tables. figs.

JPGI Professional/Physician, Treatment/Care, Recovery of Injured, Accident
WSB First Aid, Medical, Methods
JN Injury/Trauma
WSBC Maintaining Airways
JNN Asphyxia/Suffocation
JRH Transportation, Recovery of Injured, Accident

Author discusses in detail resuscitation, effective pain relief, preparation for transportation, adequate positioning, clear directions for transportation. Special attention given to whip-lash victims and corresponding care.

03-4018 N
SOME PROBLEMS ENCOUNTERED IN THE AERIAL TRANSPORTATION OF PATIENTS TO HOSPITAL. See 04-4018 N

03-4090 S
Friedhoff, E./ Hoffmann, V.
ÄRZTLICHE VERSORGUNG SCHWERVERLETZTER AM UNFALLORT UND AUF DEM TRANSPORT. [TREATMENT BY PHYSICIAN OF THE SEVERELY INJURED, AT THE SCENE OF THE ACCIDENT AND DURING TRANSPORTATION.]
Authors describe most frequent causes of death on the scene of an accident and during transportation, and a mobile unit containing a small surgery room for more efficient treatment of the severely injured. 579 calls, involving 702 injured persons, during a period of about two years, are described listing in detail the following:
etiology of trauma, number of deaths, number of deaths before arrival of the physician on the scene, distribution of injuries by body area, frequencies by hour of day, day of week, month of year, medical therapy provided at scene and during transportation. Intubation is considered superior to tracheostomy. Frequency of I.V.'s and aspiration (suction) to maintain airways is high.

Five case reports are mentioned to demonstrate need for physician at scene.

Author discusses etiology of trauma, epidemiologic aspects, injury patterns, causes of death. Case histories documented with photos provide coverage of majority of injuries presented. First aid, emergency treatment at hospital, and surgery are discussed and documented. Bibliography, with 765 references, covers many aspects of accident causation, modes of injury, therapy, rehabilitation.
Order No: STS 6059 (English translation).

DEHM Medical Units, Special Purpose, Motor Vehicles, Vehicle  
JNGI Professional/Physician, Treatment/ Care, Recovery of Injured, Accident  
JNX Multiple Severe Injuries, Injury/ Trauma  
WSI Autopsy/ Pathology, Medical, Methods  
XT Medical, Equipment

Describes mobile surgery room of the Tokai Accident Control Center, affiliated with surgical section of Medical School, Nagoya University, TACC has radio communications, telemetry, three ambulances, ten patrol cars, and reporting vehicles. Stresses accident frequency; need for photos.

An outline of the mobile operating room, "Toyota-Go." Tokai Traffic Accident Control Center (Japan). n.d. 15 p. photos.  
Order No: STS 6060 (English translation).

DEHM Medical Unit, Special Purpose, Motor Vehicles, Vehicle  
JNGI Professional/Physician, Treatment/ Care, Recovery of Injured, Accident  
JNX Multiple Severe Injuries, Injury/ Trauma  
WSI Autopsy/ Pathology, Medical, Methods  
XT Medical, Equipment

Describes communication systems for the TACC. Gives dimensional description and lists equipment of the bus–surgery room: operating equipment, defibrillator, skull surgical equipment, U.S. diagnosis systems, Byrd’s respirator, iron lung, surgical cabinet with instrument sets for brain, chest, abdominal, and vascular surgery and tracheotomy, scrubbing equipment, sterilizing lamp, refrigerator, telemetry equipment, air conditioning generator.

03-4531 S  
Junghanss, H.  
BERICHT ÜBER EIN CLINOMOBIL. [REPORT ON A CLINOMOBILE.]  

JN Injury/Trauma, Accident  
DEHM Medical Units, Special Purpose, Motor Vehicles, Vehicle  
JNGI Professional/Physician, Treatment/ Care, Recovery of Injured  
YEF Data Statistics, Contents, Program–Report Type

Report on the mobile unit of a workman’s compensation hospital in Frankfurt, Germany. Author discusses organization of first aid at the scene: cooperation with police, geographical range, staff. Emphasis on first aid at the scene and reasonable transportation.

04-3762 N  
DRINGLICHKEIT DER VERSORGUNG BEI UNFALLVERLETZTEN. [URGENCY OF ACCIDENT INJURY CARE.] See 02-3762 N

04-3962 N  
Gogler, E.  
DIE ERSTVERSORGUNG AM UNFALLORT. [FIRST TREATMENT AT THE SCENE OF AN ACCIDENT.]  
Chirurgischen Universitätsklinik Heidelberg (Germany). April 1964. 5 p. ref.  

JNGI Professional/Physician, Treatment/ Care, Recovery of Injured, Accident  
DEHM Medical Units, Special Purpose, Motor Vehicles, Vehicle  
WSC Diagnosis, Medical, Methods

Author points out need to prepare victim for transportation; discusses difficulty of diagnosis in many cases, and use of the helicopter. Describes "physician’s kit" for emergencies. Extensive bibliography.

04-3977 N  
Scholler, K. L./ Weller, S.  
HUBSCHRAUBERTRANSPORT VON SCHWERVERLETZTEN – ÄRZTLICHE AUFGABE UND ERFahrungen. [TRANSPORT BY HELICOPTER OF SEVERELY INJURED – MEDICAL FUNCTION AND EXPERIENCE.]  
May 1965. 3 p. figs. tables. ref.  

DDCD Helicopters, Airborne, Power Vehicle, Vehicle  
JNX Multiple Severe Injuries, Injury/Trauma, Accident  
JNGI Professional/Physician, Treatment/ Care, Recovery of Injured

Authors discuss their experience with helicopters. Two types of utilization: patient transfer and first aid on accident scene. Helicopters in Germany can be requested from the army. Discuss machines currently available in Germany, advantages and disadvantages of the types. List number of cases and types of patients transferred, equipment carried on helicopter. Accompanying physician usually an anesthesiologist.

04-3984 S  
Scholler, K. L./ Weller, S.  
ÄRZTLICHE AUFGABEN BEIM TRANSPORT VON SCHWERVERLETZTEN MIT HUBSCHRAUBERN. [TASKS OF THE PHYSICIAN IN THE TRANSPORTATION OF SERIOUSLY INJURED PERSONS BY HELICOPTER.]  
Chirurgischen Universitätsklinik Freiburg (Germany). 19 Feb. 1965. 3 p. table. fig.  

DDCD Helicopters, Airborne, Power Vehicle, Vehicle  
JNGI Physician, Treatment/Care, Recovery of Injured, Accident  
JNP Consequences/Complications, Injury/Trauma

25
OAL  Respiratory System, Anatomy/Body, Biomedical Aspect

Authors describe their experience with patient transfers in helicopter. All of them were cases of spinal cord injury. Age of patient, type of injury, number of days between accident and transfer, position of patient, tracheostomy and/or oxygen and type of helicopter are tabulated. Patients usually accompanied by anesthesiologist.

04-4018 N
O'Leary, T. J.
SOME PROBLEMS ENCOUNTERED IN THE AERIAL TRANSPORTATION OF PATIENTS TO HOSPITAL.

DDC Airborne, Power Vehicle, Vehicle
JRH Transportation, Recovery of Injured, Accident
YN General Discussions, Contents, Study–Report Type

Author describes purpose and history of the Flying Doctor Service, discusses medical personnel and method of financing, and recounts a number of difficult transport problems.

04-4021 N
MEDICAL CRITERIA FOR PASSENGER FLYING.

JNG Professional/Physician, Treatment/ Care, Recovery of Injured, Accident
DDC Airborne, Power Vehicle, Vehicle
YER General Discussions, Contents, Study–Report Type

Author discusses factors which should be considered when establishing such criteria. Lists and describes the physiologic changes associated with flight. Lists and discusses common medical problems which may or may not require special precautions.

04-4093 N
Waters, J. M., Jr.
HELICOPTERS IN CIVIL MEDICAL EVACUATIONS.

DDCD Helicopters, Airborne, Power Vehicle, Vehicle
YN Injury/Trauma, Accident
JRH Transportation, Recovery of Injured

Author reviews use of helicopters by the military and indicates potential for such use in highway accidents. Suggests possible sources of helicopters for use in civil emergencies. Discusses practical and economic factors.

04-4095 N
MEDICINE IN SOUTH VIETNAM TODAY. PART 5: VUNG TAU—AUSTRALIAN TROOPS, AMERICAN HELICOPTERS AND SYDNEY DOCTORS. See 01-4095 N

04-410 N
Myers, R. N./ Angelides, A. P./ Haupt, G. J.
A CIVILIAN AEROMEDICAL LIFESAVING PLAN, HELP.

JNG Professional/ Physician, Treatment/ Care, Recovery of Injured, Accident
DDCD Helicopters, Airborne, Power Vehicle, Vehicle

Historical background and organization of Helicopter Emergency Lifesaving Patrol (HELP) of Philadelphia.

04-4135 N
MEDICAL CRITERIA FOR PASSENGER FLYING ON SCHEDULED COMMERCIAL FLIGHTS.

DDC Airborne, Power Vehicle, Vehicle
JRH Transportation, Recovery of Injured, Accident
YER General Discussions, Contents, Study–Report Type
WS Medical, Methods

04-4136 N
Stonehill, R. B.
THE PATIENT IN COMMERCIAL JET AIRCRAFT.

DDC Airborne, Power Vehicle, Vehicle
JRH Transportation, Recovery of Injured, Accident
YER General Discussions, Contents, Study–Report Type
WS Medical, Methods

Author describes and discusses general aeromedical considerations. Discusses suitability of air travel with respect to several common types of medical disorders.

04-4137 S
Bourne, G.
EFFECTS OF FLYING ON PATIENTS WITH CARDIOVASCULAR DISEASE.
BIBLIOGRAPHY

04-4138 N
Waller, D. J.
ASSISTED RESPIRATION IN AIR EVACUATION.

04-4139 N
Ware, R. W./ Kahn, A. R.
AUTOMATIC INDIRECT BLOOD PRESSURE DETERMINATION IN FLIGHT.
Air Force School of Aerospace Medicine, Dept. of Bioastronautics, Brooks AFB, Texas. Jan. 1963. 5 p. figs. ref. 

04-4140 N
O'Leary, T. J.
AERIAL MEDICAL EVACUATION WITH SPECIAL EMPHASIS ON THE PRECAUTIONS NECESSARY IN PARTICULAR CIRCUMSTANCES.

04-4141 N
Patti, M./ Giuffrida, L.
L'IMPIEGO DELL'ELICOTTERO QUALE MEZZO DI PRIMO SOCCORSO DURANTE LE OPERAZIONI DI SGOMBERO E DI TRASPORTO SANITARIO. [THE USE OF THE HELICOPTER AS A MEANS OF FIRST AID DURING OPERATIONS OF MEDICAL EVACUATION AND TRANSPORT].

04-4142 N
Authors describe operation and experience of the Helicopter Group M.M. di Catania, which, in the last three years, has carried out 94 flights for medical transportation, of which approximately 10% were for traffic accidents. A physician always rides the helicopter, and the need to have this set-up is stressed based on their experience. Some sample cases are mentioned. One particularly demonstrates the need for a physician in care of a patient in acute traumatic shock to give the pilot instructions about flying height and speed, to minimize pressure variation and vibration effects.

04-4143 N
Cara, M./ Poisvert, M.
THE TRANSPORT OF PATIENTS WITH RESPIRATORY INSUFFICIENCY.
Hospital Necker, Paris (France). 24 March 1965. 3 p. ref. figs. 

04-4144 N
OAL Respiratory System, Anatomy/ Body, Biomedical Aspect 
DDC Airborne, Power Vehicle, Vehicle 
JRH Transportation, Recovery of Injured, Accident

Authors describe system used to transport seriously ill patients who require treatment en route to the hospital (1800 cases in eight years). Describe standard equipment carried by each unit of transport (airplane, ambulance or helicopter). Briefly describe resuscitation procedures.

04-4145 N
Waller, D. J.
ASSISTED RESPIRATION IN AIR EVACUATION.

04-4146 N
Authors describe experience with 24 seriously ill patients with varying degrees of hypoventilation. Describes pre-flight care, in-flight care, and results. Describes the intermittent positive pressure apparatus (Bird MKVII) used, and modifications of apparatus. Concludes that this type of respirator is particularly suitable for air evacuation. Three illustrative case reports.

04-4147 N
Patti, M./ Giuffrida, L.
L'IMPIEGO DELL'ELICOTTERO QUALE MEZZO DI PRIMO SOCCORSO DURANTE LE OPERAZIONI DI SGOMBERO E DI TRASPORTO SANITARIO. [THE USE OF THE HELICOPTER AS A MEANS OF FIRST AID DURING OPERATIONS OF MEDICAL EVACUATION AND TRANSPORT].

04-4148 N
Authors describe operation and experience of the Helicopter Group M.M. di Catania, which, in the last three years, has carried out 94 flights for medical transportation, of which approximately 10% were for traffic accidents. A physician always rides the helicopter, and the need to have this set-up is stressed based on their experience. Some sample cases are mentioned. One particularly demonstrates the need for a physician in care of a patient in acute traumatic shock to give the pilot instructions about flying height and speed, to minimize pressure variation and vibration effects.

04-4149 N
Cara, M./ Poisvert, M.
THE TRANSPORT OF PATIENTS WITH RESPIRATORY INSUFFICIENCY.
Hospital Necker, Paris (France). 24 March 1965. 3 p. ref. figs. 

04-4150 N
OAL Respiratory System, Anatomy/ Body, Biomedical Aspect 
DDC Airborne, Power Vehicle, Vehicle 
JRH Transportation, Recovery of Injured, Accident

Authors describe system used to transport seriously ill patients who require treatment en route to the hospital (1800 cases in eight years). Describe standard equipment carried by each unit of transport (airplane, ambulance or helicopter). Briefly describe resuscitation procedures.

04-4151 N
Waller, D. J.
ASSISTED RESPIRATION IN AIR EVACUATION.

04-4152 N
Authors describe experience with 24 seriously ill patients with varying degrees of hypoventilation. Describes pre-flight care, in-flight care, and results. Describes the intermittent positive pressure apparatus (Bird MKVII) used, and modifications of apparatus. Concludes that this type of respirator is particularly suitable for air evacuation. Three illustrative case reports.

04-4153 N
Patti, M./ Giuffrida, L.
L'IMPIEGO DELL'ELICOTTERO QUALE MEZZO DI PRIMO SOCCORSO DURANTE LE OPERAZIONI DI SGOMBERO E DI TRASPORTO SANITARIO. [THE USE OF THE HELICOPTER AS A MEANS OF FIRST AID DURING OPERATIONS OF MEDICAL EVACUATION AND TRANSPORT].

04-4154 N
Authors describe operation and experience of the Helicopter Group M.M. di Catania, which, in the last three years, has carried out 94 flights for medical transportation, of which approximately 10% were for traffic accidents. A physician always rides the helicopter, and the need to have this set-up is stressed based on their experience. Some sample cases are mentioned. One particularly demonstrates the need for a physician in care of a patient in acute traumatic shock to give the pilot instructions about flying height and speed, to minimize pressure variation and vibration effects.
04-4177 S

Lavernhe, J./ Lafontaine, E./ Lequesne, M.
LE TRANSPORT AERIEN, DES MALADES ET BLESSES; A propos d'une serie de 707 observations.
[AERIAL TRANSPORT OF THE SICK AND INJURED; Apropos of a series of 707 cases].
23 July 1966. 3 p. tables. ref.

DDCB Airplanes, Airborne, Power Vehicle, Vehicle
JRH Transportation, Recovery of Injured, Accident
JN Injury/ Trauma
YEF Data Statistics, Contents, Study—Report Type

Listing of conditions of patients to whom admission to flight was refused. Tabulation of illnesses, trauma and surgery conditions of those admitted for flight. Length of flights, types of plane, means of arrival at airport, and type of person accompanying the patient (none, lay, nurse or physician) are tabulated. Precautions and/or emergencies occurring during flight listed.

04-4178 N

Kirby, E. L.
PATROLLING THE ROADS WITH AIRCRAFT.

DDCB Airplanes, Airborne, Power Vehicle, Vehicle
YCD Survey, Nature of Study, Study—Report Type
JRH Transportation, Recovery of Injured, Accident

Author found 18 of 45 states used aircraft, primarily for detection of traffic violations. Lists some other uses. Concludes chief disadvantage is expense. Tabulates (18 states): aircraft used; hours flown per yr.; types of roads patrolled; number of pilots; observer. Lists reasons for discontinuance (7 states).

04-4183 N

COMBAT CASUALTY MANAGEMENT IN VIETNAM. See 01-4183 N

04-4187 N

Howard, J. R.
HELCOPETERS EXPAND HOSPITAL SERVICE AREA.
Source: McGraw—Hill, Inc.

DDCD Helicopters

There are 1000 heliports and 860 operators of 2035 helicopters in the U.S. and Canada, but in the entire U.S. only 34 hospitals are known to have designated heliports. Describes heliport site, design, size, cost. The Los Angeles area has 18, the largest network of city—center heliports in the world.

The Indiana University Medical Center uses its heliport to pick up ambulance patients at the city's edge for over—traffic flight to the hospital.

Reference is made to a Helicopter Medical Emergency Service in West Germany.

List the designated Hospital Heliports in the U.S.

04-4193 N

THE BLOODY LANES. See 01-4193 N

11-2592 S

TRAFFIC INJURY IN BRISBANE. Report of a general survey. See 01-2592 S

11-3705 S

AN ANALYSIS OF 950 FATAL INJURIES. See 25-3705 S

11-3713 S

EINE ANALYSE VON 827 UNFALLTODESFÄLLEN. [AN ANALYSIS OF 827 CASES OF FATAL ACCIDENTS.] See 24-3713 S

11-3738 S

Schüermann, K.

JNF Concussion, Injury/Trauma, Accident
JNH Fracture
JNK Hemorrhage
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
OAIA Skull, Head
OANBB Brain, Central, Nervous System
YEF Data Statistics, Contents, Study—Report Type

1639 brain and skull injury cases were observed during seven and a half years. Material is classified by type of injury and mortality in each group is given. The relative frequency of the shock syndrome is shown. Some sample cases are discussed in detail displaying time-series clinical data on a special tabulation.

11-3741 S

Bischof, W.
PULMONALE UND ENTERALE KOMPLIKATIONEN NACH HIRNSCHÄDIGUNGEN. [PULMONARY AND ENTERAL COMPLICATIONS AFTER BRAIN INJURIES.]
23 April 1964. 11 p. ref. illus. tables.

OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
OALE Lungs, Respiratory System
OAE Abdomen
L Time
YEF Data Statistics, Contents, Study—Report Type
JNK Hemorrhage, Injury/Trauma, Accident
YCG Laboratory Experiment, Nature of Study

Discusses frequency of acute gastrointestinal hemorrhages after brain surgery and pathological conditions of...
the lungs in 3620 cases, location of cerebral processes that induce intestinal hemorrhage and mortality as function of time after surgery.

With experimental injury in laboratory animals, pulmonary edema and intestinal hemorrhage were frequent. There were no cases of intestinal hemorrhage without pulmonary edema.

The author assumes that during peripheral vasconstriction in normovolemic neurogenic shock, overloading of the pulmonary circulation occurs which leads to hemorrhages in the alveoli. The hemorrhagic lung edema reaches such proportions that all lobes of the lungs are flooded with blood. The consequent hypoxia leads to the acute gastrointestinal hemorrhage.

The therapeutic consequence of the animal experiments is that in addition to maintaining a free airway one should reduce the peripheral vasconstriction and thus enlarge the active circulatory area, to reduce likelihood of hemorrhagic lung edema.

11-3742 S
Ketz, E.

JN Injury/Trauma, Accident
DE Motor Vehicles, Vehicle
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
JNP Consequences
YCC State—of—the—Art, Nature of Study, Study—Report Type

Analyzes etiology of trauma for 119 cases, giving direction of impact, brain area damaged, and frequency of injury for each category of accident (car, motorcycle, pedestrian, etc.). Blunt head injury was predominant.

11-3743 S
DER SCHÄDELVERLETZTE AUS DER SICHT DES ARZTES AM UNFAHRT. [SKULL INJURIES AS SEEN BY THE PHYSICIAN AT THE ACCIDENT.] See 03-3743 S

11-3744 S
DAS SCHICKSAL DES AM UNFAHRT ÄRZTLICH VERSORGTEH SCHÄDELHINNVerletzt. [THE OUTCOME OF THE CEREBROCRANIAL INJURY GIVEN MEDICAL CARE AT THE ACCIDENT SITE.] See 03-3744 S

11-3746 S
Nystrom, S. / Mäkelä, T.

11-3747 S
Pla, H. W.

JN Injury/Trauma, Accident
JNK Hemorrhage
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
EC Children, People
L Time
YEF Data Statistics, Contents, Study—Report Type
YEE Reviews

Discusses 412 cases, giving frequencies of various sites of hemorrhage and discussing symptoms, therapy, and mortality rates for epidural hematoma, subdural hematoma, and hydroma. Etiology and frequency of associated damage are covered for subdural hematoma.

11-3752 N
Müller, N.

JNP Consequences, Injury/Trauma, Accident
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing
YCC State—of—the—Art, Nature of Study, Study—Report Type

State—of—the—art report. Location, extent, form, and pathogenesis of secondary effects are discussed.
TREATMENT OF THE COMPLICATIONS OF INJURY WITH TRAFFIC ACCIDENT. See 23-3754 S

11-3760 S
Orecchia, C./ Lojacono, F./ Signudo, F.
I TRAUMATISMI CRANIO-CEREBRALI NELLA PRATICA CHIRURGICA OSPEDALIERA (Osservazioni su 200 casi). [CRANIO—CEREBRAL INJURIES IN HOSPITAL SURGICAL PRACTICE (Observations on 200 cases).]
5 April 1964. 5 p. table. ref.

Authors discuss etiology and advisability of surgery and classify cases by severity, using criteria of physiological parameters, state of consciousness, pupillary reactions, complete neurological examination. Table relates severity group to mortality for tracheostomy, craniotomy, and conservative treatments.

11-3761 S
Caprotti, G./ Tirone, S.
CONSIDERAZIONI CLINICHE E STATISTICHE SU 1513 CRANIOLESI. [CLINICAL AND STATISTICAL CONSIDERATIONS ON 1513 CRANIAL INJURIES.]
31 Oct. 1963. 5 p. tables. ref.

Authors discuss etiology and advisability of surgery and classify cases by severity, using criteria of physiological parameters, state of consciousness, pupillary reactions, complete neurological examination. Table relates severity group to mortality for tracheostomy, craniotomy, and conservative treatments.

11-3784 N
Meacham, W. F.
THE MANAGEMENT OF HEAD INJURIES COMPLICATED BY MAJOR EXTRACRANIAL TRAUMA.
1964. 6 p. ref.

Authors discuss etiology and advisability of surgery and classify cases by severity, using criteria of physiological parameters, state of consciousness, pupillary reactions, complete neurological examination. Table relates severity group to mortality for tracheostomy, craniotomy, and conservative treatments.

Clinical priorities following head injury and establishing adequate blood circulation before diagnosis of causes of shock are discussed. Management with complicating thoracic and abdominal injuries, injuries to the great vessels of the neck, and post-traumatic fat embolism is also discussed.

11-3792 S
Youmans, J. R.
CAUSES OF SHOCK WITH HEAD INJURY.
South Carolina Medical College, Div. of Neurological Surgery, Charleston. March 1964. 3 p. tables. ref.
Grant No: NL–04991–01.
Sponsor: National Institutes of Health.

Of 654 patients with diagnosis of head injury during seven-year period, only 13.1% were in any degree of shock. Author found shock to be due to one or more of the following: blood loss, brain injury, general trauma, hypoxia, and "spinal shock." If severely injured patient does not have bilaterally dilated and fixed pupil and if airway is adequate, shock is almost always on basis other than head injury.

11-3793 N
Stark, R. B.
EARLY VERSUS LATE TREATMENT OF FACIAL FRACTURES.
St. Luke’s Hospital, Robert Abbe Laboratory of Plastic Surgery, New York. 1964. 5 p. photos. figs. ref.

Brief state-of-the-art report for treatment of facial fractures, with discussion of early fixation of bony fragments (two weeks or less after injury) versus late treatment. Direct wiring is described and recommended. Case reports are given.

11-3802 S
PEDESTRIAN DEATHS IN OSLO TRAFFIC ACCIDENTS. See 18-3802 S

11-3854 S
Lewis, N. R.
REHABILITATION AFTER HEAD INJURY.

Clinical priorities following head injury and establishing adequate blood circulation before diagnosis of causes of shock are discussed. Management with complicating thoracic and abdominal injuries, injuries to the great vessels of the neck, and post-traumatic fat embolism is also discussed.
Discusses 140 airmen with head injuries admitted to RAF Rehabilitation Unit from 1956 to 1966. Physical examination and psychometric tests on arrival were used to assess progress. Periods of unconsciousness are correlated to defects resulting from head injury, time in hospital, time at Rehabilitation Unit, and number of invalids.

11-3880 S
Miller, H. / Stern, G.
THE LONG-TERM PROGNOSIS OF SEVERE HEAD INJURY.
Newcastle Univ., Dept. of Neurology, 30 Jan. 1965. 5 p. ref.
JNE Contusion/Crushing, Injury/Trauma, Accident
JNF Concussion
JNH Fracture
JNP Consequences
OAI Head, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study–Report Type
YEF Data Statistics, Contents

Long-termm follow-up study of 100 consecutive cases of severe head injury with post-traumatic amnesia is reported. Sixty-four injuries resulted from traffic accidents. Only one death was attributable to sequelae of head injury. Sixteen patients manifested psychiatric symptoms on re-examination, and 19 developed epilepsy. Half of patients escaped loss of occupational status. Brief case reports are included.

11-3882 S
THE PATHOLOGY OF PEDESTRIAN AUTOMOTIVE ACCIDENT VICTIMS. See 21-3882 S

11-3884 S
Raaf, J.
TREATMENT OF THE PATIENT WITH ACUTE HEAD INJURY.
OAI Head, Anatomy/Body, Biomedical Aspect
WSE Therapeutic, Medical, Methods
WSD Surgery
YEF Data Statistics, Contents, Study–Report Type
JNH Fracture, Injury/Trauma, Accident

Mortality rates by type of treatment and five-year period are given for 2,024 patients with intracranial injury treated from 1937 through 1962. Elevation of simple depressed skull fracture, debridement of compound skull fracture, evacuation of intracranial hematoma, internal decompression, drainage of meningeal effusions, and decompression by bone removal are discussed.

11-3922 S
Rowbotham, G. F. / Maciver, I. N. / Dickson, J. / Bousfield, M. E.
ANALYSIS OF 1,400 CASES OF ACUTE INJURY TO THE HEAD.
JNH Fracture, Injury/Trauma, Accident
JNF Concussion
YEF Data Statistics, Contents, Study–Report Type
OAI Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
JNK Hemorrhage

Etiology, severity and nature of injury, cause of death, and appraisal of surgical treatment are given for 1000 adults and 400 children, 1945–1951, grouping cases by state of coma, semicoma, confusion or full consciousness on admission. Etiology and mortality are tabulated by age and sex, and extradural hemorrhages and crushing injuries of head are discussed in detail. Follow-up reports on survivors are discussed.

11-3923 N
Edberg, S. / Ricker, J. / Angrist, A. A.
INTRACEREBRAL VASCULAR LESIONS FOLLOWING CRANIAL IMPACT: A proposed mechanism.
OAI Head, Anatomy/Body, Biomedical Aspect
OAKC Blood Vessels, Cardiovascular System
JNF Concussion, Injury/Trauma, Accident
YCG Laboratory Experiment, Nature of Study, Study–Report Type
VMB Biomechanics, Biomedical Sciences, Disciplines

The authors describe past experiments to record effects of impact on skull models, and current study of traumatic intracerebral hemorrhages with box model of intracerebral vascular system. Suggest reversal on impact of blood flow at venous capillary junction, with likelihood of rupture and hemorrhage. Short state–of–the–art discussion.

11-3932 S
Denny–Brown, D.
DISABILITY ARISING FROM CLOSED HEAD INJURY.
JNF Concussion, Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
JNP Consequences
P Psychological Aspect
BIBLIOGRAPHY

YCC State-of-the-Art, Nature of Study, Study-Report Type
YEF Data Statistics, Contents

Contains brief state-of-the-art report. Investigators analyzed 200 cases, with follow-up from four months to over a year later. Frequencies are given for duration of absence from work as a function of age, sex, education, occupation, psychiatric evaluation of post-traumatic state, other injury, clinical conditions, tests (EEG, intellectual performance, etc.), and complications.

11-3933 S
Barr, J. B./ Ralston, G. J.
HEAD INJURIES IN A PERIPHERAL HOSPITAL: A five-year survey.
Kilmarnock Infirmary (Scotland). 5 Sept. 1964. 4 p. figs. ref. table.

OA1 Head, Anatomy/Body, Biomedical Aspect
JNF Concussion, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study-Report Type
WSE Therapeutic, Medical, Methods

Survey management of head injuries in hospitals with no special neurosurgical facilities. Provide critical review of nature, frequency, etiology, and management of 532 acute head injuries in mixed agricultural and industrial area. Frequency of causes by age and sex, fatality rates according to various levels of consciousness on admission, time lost from work, and some information on length of stay in the hospital are given. Follow-up questionnaire one and four years after injury showed no significant difference in the complaints about the effects of head injury. Recommend formation of head injury rehabilitation center.

11-3938 S
HEAD INJURIES IN CHILDREN: A survey of 4465 consecutive cases at the Hospital for Sick Children, Toronto, Canada. 1964. 10 p. graph. tables. ref.

Sponsor: Hospital for Sick Children, Surgical Studies Fund, Toronto (Canada).

JNH Fracture, Injury/Trauma, Accident
JNE Contusion/Blunt
JNF Concussion
EA Age, People
EC Children
YEF Data Statistics, Contents, Study-Report Type
OAI Head, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology/Disciplines
L Time
WSC Diagnosis, Medical, Methods
WSD Surgery
JNK Hemorrhage

Study covers 1954–1962 and includes only children under fifteen. Types of accidents are compared for various age groups. Level of consciousness is correlated with triad of extradural hematoma, subdural hematoma, and brain damage. If shock was present, cause was extra cranial. Types and location of linear or depressed fracture are discussed. Neurological signs are discussed and their frequency of occurrence given. Diagnostic studies, therapy, and additional surgery are discussed.

11-3960 S
Nick, J. J./ Sicard–Nick, C.
LES CEPHALES POST-TRAUMATIQUES TARDIVES. Etude semio-morphologique, physiopathologique et therapeutique, a propos de 240 cas. [LATE POST-TRAUMATIC HEADACHE. Symptomatologic, physiopathological and therapeutic study, apropos of 240 cases.]

OA1 Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
JNE Contusion/Blunt, Injury/Trauma, Accident
JNF Concussion
JNP Consequences/Complications
YEF Data Statistics, Contents, Study-Report Type
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
PF Behavioral Factors, Psychological Aspect

Authors define chronic post-traumatic headache when the pain persists or appears three months after the injury. Frequency of cases is given according to the length of the period of coma. Aches are classified as local, cervical, and psychological with frequency again given by length of unconsciousness. Another classification is given by arterial, venous, neuralgic, and “localized, undefined.” Frequency according to unconsciousness given.

Therapies are discussed.

11-3963 S
Obrador Alcalde, S.
TRAUMATISMOS CRANEOENCEFALICOS. [CRANIO-CEREBRAL TRAUMA.]

OA1 Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
JNH Fracture, Injury/Trauma, Accident
JNE Contussion/Blunt
YEF Data Statistics, Contents, Study-Report Type
WSC Diagnosis, Medical, Methods
WSE Therapeutic

Brief state-of-the-art report. Author discusses data from own clinic, giving etiology of trauma and details of cases with and without skull fracture or severe brain injury, and refers to frequency of surgical cases in each group, associated injury, and mortality.

11-3964 N
Kramer, G.
ZUR ERSTVERSORGUNG SCHWERSTER SCHÄDEL-HIRNTRAUMEN. [ON FIRST AID IN VERY SEVERE CRANIOCEREBRAL TRAUMAS.]
7 April 1962. 6 p. ref.

OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
Brief literature review. Importance of ventilation, circulation, and control of agitated patient are discussed. Hypothermia is discussed separately. Difficulty of diagnosis of intracranial hemorrhage is pointed out.

Studies 169 patients treated by a multiple injury unit. Author describes principles of management, diagnostic procedures, routine examination, and priorities for treatment. Stresses the severity of a concomitant chest injury. Data statistics: associated injuries; mortality; causes of death; concomitant chest injury and mortality; type of head injury and mortality in 1303 patients admitted to neurosurgical service.

Author's observations from 15 years of records, covering 3,247 cases of closed injury to brain. Tabulation shows etiology, consequences, surgery and final outcome for 33 cases of epidural hemorrhage. Diagnostic procedures are discussed. Case histories reported.

Provides description and evaluation of surgical techniques for the following types of graft: fascia lata, temporal or occipital fascia, periosteum, and fibrin film. Cites case report of cortical herniation resulting from defective graft. Advantages of watertight closure of dural defect include: fluid fistula, facilitation of cranioplasty, and avoidance of corticomeningeal scar formation.
DIE WIEDEREINGLIEDERUNG SCHADEL-HIRN-VERLETZTER: Ergebnisse aus der Behandlung von 4139 Fallen. [REHABILITATION OF CRANIO-CEREBRAL INJURIES: Results of therapy of 4139 cases.]
4 June 1960. 7 p. ref, tables. graphs.

JNF Concussion, Injury/Trauma, Accident
OANBB Brain, Central, Nervous System
NKF Frequency/Time, Operating Conditions, Physical Aspect

Author makes a literature survey and discusses state-of-the-art. Tabulates types of skull fractures for 925 cases, and discusses therapy and complications for facial bones, skull basis and upper skull.

Length in days for stationary treatment of 1266 cases of commotio cerebri is represented on a graph (minimum 1 day, maximum 25 days, peak frequency about 7 days).

Similar graph for length of disability to work (minimum 2 days, maximum 60 days, peak frequency 29 days). Frequency of various types of skull and brain injuries is tabulated by year (1953 to 1958). Length of stationary treatment for 89 closed skull-brain injuries is compared to that of 21 open skull-brain injuries. Frequency of disability to work displayed for the same cases.

Rehabilitation toward occupation same as pre-accident employment, stepwise rehabilitation, change in occupation, and permanent disability, are tabulated for closed brain injury, open brain injury, and commotio. Frequencies of insurance and/or pensions are discussed.

BIBLIOGRAPHY

OANBB Brain, Central, Nervous System
YEF Data Statistics, Contents, Study—Report Type
WSE Therapeutic, Medical, Methods

Author comments on experience from 1952 to 1956. No correlation was found between severity of external injury and the severity of the total injury (i.e., including brain injury) in those cases where no skull fracture had occurred.

Diagnosis and therapy are discussed. Commotio and contusio are defined and discussed.

Bohmer, G./Carlsson, C. A.
ENTSCHEIDENDE FAKTEN FUR DEN BEHANDELNUNGSERFOLG BEIM EPIDURALHAMATOM: Eine Analyse von 64 Fallen. [DECISIVE FACTORS IN THE SUCCESS OF TREATMENT OF EPIDURAL HEMATOM: An analysis of 64 cases.]
Sodersjukhuset Neurochirurgischen Klinik, Stockholm (Sweden), Oct. 1964. 8 p. tables. charts. ref.

JNK Hemorrhage, Injury/Trauma, Accident
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
WSE Therapeutic, Medical, Methods
JNE Contusion/ Crushing/Blunt
EA Age, People
VN Epidemiology/Etiology, Disciplines
JNP Consequences/Complications

Mortality rates from literature are compared. Age distributions, mortality rates and etiology of trauma are discussed. State of consciousness and mortality are correlated. The frequency of neurologic symptoms is given. Time interval to surgery, and mortality are displayed on graph, coded by the neurologic symptoms.

Frequency of deaths and survivors are given for each type of symptom. X ray, echoencephalography, surgery, and associated injuries, and follow-up results are discussed. Causes of death are given. Mortality rate of 36% could have been 12% if all cases had been operated on in time.

A PROPOS DE 268 TRAUMATISMES THORACIQUES FERMES. [A PROPOS OF 268 CLOSED CHEST INJURIES.]

11-4068

11-4086

Nockemann, P. F.
DIE HIRNERSCHÜTTERUNG: Ergebnisse aus der Behandlung von 3056 Fallen. [BRAIN CONCUSSION: Results from the therapy of 3056 cases.]
28 May 1960. 7 p. tables. ref.

OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
JNF Concussion, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study—Report Type
YCC State-of-the-art, Nature of Study

State-of-the-art discussion. Author gives etiology of trauma. Tabulates length of unconsciousness for 1,266 cases, and number of cases of circulatory disturbances as result of commotio by severity of disturbance and by year. Average length of stationary treatment 8.2 days, average length of inability to work 31.9 days.

11-4089

Nockemann, P. F.
CONSIDERAZIONI STATISTICHE E DI TERAPIA SU 517 TRAUMATIZZATI CRANIO-ENCEFALICI. [STATISTICAL AND THERAPEUTIC CONSIDERATIONS ON 517 PATIENTS WITH CRANIOCEREBRAL INJURIES.]
3 March 1966. 9 p. tables, charts. figs. ref.

JN Injury/Trauma, Accident
JNB Fatal
JNH Fracture
OAI Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
VN Epidemiology/Etiology, Disciplines
EA Age, People
EF Sex
JNX Multiple Severe Injuries
YEF Data Statistics, Contents, Study—Report Type

Etiology of trauma given: age, type of accident, frequency of commotio, contusio, hematoma, and lacerations, given with and without skull fracture, and with associated injuries. Associated injuries are tabulated in detail by type.

Types of skull fracture given with respective frequen-
cies. Etiology given for 48 fatals, compared with diagnosis and causes of death. Consequences and therapy of head injuries discussed.

11-4104 S
Wray, J. B./ Davis, C. H.
THE MANAGEMENT OF SKELETAL FRACTURES IN THE PATIENT WITH A HEAD INJURY.
Bowman Gray School of Medicine, Dept. of Surgery, Winston-Salem, North Carolina. June 1960. 6 p. table. figs. ref.
Conference: Southern Medical Association, Section on Orthopedic and Traumatic Surgery, 53rd annual, 16–19 Nov. 1959, Atlanta, Georgia.

OAI Head, Anatomy/Body, Biomedical Aspect
OAO Musculo–Skeletal System
JNH Fracture, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study—Report Type
WSC Diagnosis, Medical, Methods
WSE Therapeutic

Discuss, with some case studies, 75 patients (1949–1958) with significant head injuries and skeletal fractures, giving frequency of injuries by body area. Principles of management are given and priorities established for injuries affecting vascular, respiratory, or other vital organs. Mortality rate in closed head injury was over double that in compound head injuries.

11-4106 S
UNRECOGNIZED ABDOMINAL TRAUMA IN PATIENTS WITH HEAD INJURIES. See 15-4106 S

11-4107 S
Brandesky, G.
SEVERE HEAD INJURIES IN CHILDREN: Treatment and long–range outlook.
2nd Surgical Clinic, Univ. of Vienna, Vienna, Austria. March 1965. 6 p. tables, figs. ref.

OAI Head, Anatomy/Body, Biomedical Aspect
WSE Therapeutic, Medical, Methods
YEF Data Statistics, Contents, Study—Report Type
EC Children, People

Discusses review and follow–up of cases of children up to age 16 from 1950 to 1959. Frequency of diagnoses, neurological disorders, combined injuries, and deaths are tabulated. Through follow–up studies, incidence of late symptoms is tabulated as a function of concussion or fracture. Some cases are cited. Author could not find that duration of unconsciousness indicates degree of cerebral injury. Concludes that children have much better chance of survival after severe cranioencephalic trauma than do adults.

11-4108 S
Irving, M. H./ Irving, P. M.
ASSOCIATED INJURIES IN HEAD INJURED PATIENTS.

11-4104 S to 11-4151 N
BIBLIOGRAPHY

Newcastle General Hospital, Regional Neurological Centre (England)/ Sydney Univ., Dept. of Surgery, Sydney, New South Wales (Australia). 1967. 12 p. figs. ref.

JN Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
JNX Multiple Severe Injuries
YEF Data Statistics, Contents, Study—Report Type
WSC Diagnosis, Medical, Methods
OAI B Face
OAF Thorax
OA E Abdomen

364 patients with head injuries, 47% with significant associated injuries. Authors describe and discuss the most common types of associated injuries particularly with respect to diagnostic problems. Data statistics: type of accident and severity of associated injury; type of accident, severity of associated injury and mortality; types of associated injuries and diagnostic difficulties; number of significant injuries.

11-4119 S
FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964. See 21-4119 S

11-4124 S
McKissock, W./ Taylor, J. C./ Bloom, W. H./ Till, K.
EXTRADURAL HAEMATOMA: Observations of 125 cases.

JNK Hemorrhage, Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines
YEF Data Statistics, Contents, Study—Report Type
WSC Therapeutic, Medical, Methods
WSI Autopsy/ Pathology

Authors describe and discuss clinical features, diagnosis, treatment, and prognosis in adults and children. Analyze data and find prognosis to be correlated with: age; level of consciousness at time of operation; and rate of evolution. Discuss errors in management and emphasize need for prompt diagnosis. Data statistics: age; sex; type of accident; clinical picture; mortality; treatment; post-mortem findings; disability; interval between operation and injury; absence of skull fracture; level of consciousness.

11-4151 N
Lundberg, N./ Troupp, H./ Lorin, H.
CONTINUOUS RECORDING OF THE VENTRICULAR–FLUID PRESSURE IN PATIENTS WITH SEVERE ACUTE TRAUMATIC BRAIN INJURY: A preliminary report.
Lund Univ., Dept. of Neurological Surgery (Sweden). June 1965. 6 p. figs. ref.
Authors describe methods and materials. Describe and discuss findings, comparing them with findings in non-traumatic cases. Conclude that procedure is safe and offers a more rational basis for treatment than do conventional control methods. 4 illustrative case reports.

**11-4162 N**

Akerlind, E.

THE LATE PROGNOSIS IN SEVERE HEAD INJURIES.


OAI Head, Anatomy/ Body, Biomedical Aspect

JNP Consequences/ Complications, Injury/ Trauma, Accident

VN Epidemiology/ Etiology, Disciplines

Two–six patients who survived after being unconscious for at least a week. Author concludes grave neurologic defects can be anticipated when unconsciousness lasts for more than a month. Data statistics: age; origin of injury; duration of unconsciousness and status at follow-up; main causes of disability.

**11-4166 S**

Happel, W./ Ketz, E./ Peters, G.

ZUR DIFFERENTIALDIAGNOSE GEDECKTER HIRNDAUERSCHÄDEN: eine Übersicht über 4031 Falle. [ON THE DIFFERENTIAL DIAGNOSIS OF PERMANENT CLOSED BRAIN INJURIES: A survey of 4031 cases.]

1963. 11 p. tables. ref.


JNF Concussions, Injury/ Trauma, Accident

JNE Contusion/ Crushing/ Blunt

JNP Consequences/ Complications

OANBB Brain, Central, Nervous System, Anatomy/ Body, Biomedical Aspect

NKFF Delay, Frequency/ Time, Operating Conditions, Physical Aspect

YEF Data Statistics, Contents, Study–Report Type

VN Epidemiology/ Etiology, Disciplines

Brief state–of–the–art report. Of 10,000 patients admitted to the Bonn clinic for brain injuries from 1952 to 1960, authors selected 4,031 on the basis of pre-admission records, encephalographic and electrophysiologic reports as victims of traumatic, permanent brain injury. Give etiology and age distribution according to type of trauma (open or closed). High number of war injuries (penetrating trauma).

For blunt trauma reversibility of brain damage tabulated as a function of length of unconsciousness. Chi–square tests indicate not always significant correlation. Another table correlates length of unconsciousness to level of impact of traumatic agent. Blunt trauma on large area significantly correlated to long unconsciousness, as opposed to penetrating and blunt trauma on small impact area. No correlation found (chi–square test) between length of unconsciousness and condition or absence of skull fracture.

Period of unconsciousness correlated to direction of impact. Fewer cases without unconsciousness for front impact than back or side impact.

Clinical symptoms of permanent injury to brain, tabulated for 1042 cases, as a function of direction of impact. Aphasia, alexia, agraphia, and acalculia, occur most frequently with left side impact. Initial psychoses associated with blunt impact caused on large area.

**11-4199 N**

Segerberg, L. H./ Spurling, R. G.

ACUTE CRANIOCEREBRAL TRAUMA: Essential considerations of diagnosis and treatment.

Louisville Univ., Dept. of Surgery, Kentucky. 8 Oct. 1949. 6 p.


Conference: American Medical Association, Section on Surgery, General and Abdominal, 9 June 1949, Atlantic City, New Jersey.

OAI Head, Anatomy/ Body, Biomedical Aspect

OANBB Brain, Central, Nervous System

JN Injury/ Trauma, Accident

WSC Diagnosis, Medical, Methods

YER General Discussions, Contents, Study–Report Type

Authors outline and discuss essential considerations in the diagnosis and treatment of acute head injuries. Article is intended for physicians, other than neurosurgeons, who routinely encounter such injuries.

**11-4337 S**

ROAD ACCIDENTS. See 03-4337 S

**11-4501 S**

THE INCIDENCE AND SIGNIFICANCE OF SHOCK IN HEAD INJURY. See 24-4501 S

**11-4502 S**

Ulín, A. W./ Rosomoff, H. L./ Berkowitz, D./ Olsen, A. K.

ACUTE HEAD INJURY: A review of one thousand cases. Hahnemann Medical College and Hospital, Dept. of Surgery, Philadelphia, Pennsylvania. 1953. 6 p. tables. ref.


OAI Head, Anatomy/ Body, Biomedical Aspect

OANBB Brain, Central, Nervous System

YEF Data Statistics, Contents, Study–Report Type

JNX Multiple Severe Injuries, Injury/ Trauma, Accident

OAL Respiratory System

Authors present classification of head injuries. Recommend classification as a practical clinical approach to assessing severity of patient’s condition. Discuss selective hospitalization, use of X ray in diagnosis, significance of neurologic signs and coma, spinal type, concomitant systemic injury and associated medical disease, factors contributing to mortality, indications for tracheostomy, and indications for exploratory craniotomy. Data statistics: mortality; type of head injury; complications; and neurologic manifestations.
DIED IN HOSPITAL: A three-year study of deaths following trauma. See 21-4504 S

Burner, M./Regli, F./del Vivo, R. E.
KLINISCHE ERFAHRUNGEN IN DER NEUROCHIRURGISCHEN KLINIK ZURICH BEI AKUTEN SCHADEL-HIRN-VERLETZUNGEN. [CLINICAL EXPERIENCES IN THE NEUROSURGICAL CLINIC IN ZURICH WITH ACUTE SKULL AND BRAIN INJURIES].

JN Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
YEF Data Statistics, Contents, Program–Report Type
WSC Diagnosis, Medical, Methods
JNP Consequences/Complications
JNF Concussion
JNH Fracture
JNK Hemorrhage

289 cases of acute brain–skull injury patients are analyzed. Types of hemorrhage (epi— and sub—dural or combinations, intra—cerebral), contusions without hemorrhage, and brain lacerations are tabulated. Delay from accident to admission and from admission to surgery are tabulated. The free interval is discussed. Mortality, type of injury, severity of unconsciousness are correlated. Etiology, state of unconsciousness, neurologic symptoms, type of injury, post—operative therapy and results are shown on table.

Dubitscher, F.
FESTSTELLUNGEN BEI 1000 HIRNVERLETZTEN AUF DER BASIS VETERANS' COMPENSATION RECORDS.
Sept. 1959. 10 p. tables.

JN Injury/Trauma, Accident
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Program–Report Type
SCE Costs, Benefits, Economics, Socioeconomic Aspect

1000 brain injury cases analyzed from the insurance records. Type of injury and etiology tabulated. Category of compensation, neurologic, psychologic and vegetative problems are tabulated as a function of the location of the injury. Systolic and diastolic blood pressure values in age categories compared to “normal” values. Frequency and timing (after injury) of spasms given by location of injury. Occupation before and after accident shown, allowing for some economic analysis.

ACUTE, SUBACUTE, AND CHRONIC SUBDURAL HEMATOMA.
New York Univ.—Bellevue Medical Center, Dept. of Neurosurgery. 4 Aug. 1956. 6 p. figs. ref.

JN Injury/Trauma, Accident
OANBB Brain, Central, Nervous System
YEF Data Statistics, Contents, Program–Report Type
WSC Diagnosis, Medical, Methods
WSD Surgery

Discussion of 300 cases. Defines concept of sub—acute condition—surgery on 7th to 21st day after injury. Mortality rates given in each group. Spinal fluid, X—ray and surgical findings for all diagnostic problems, and causes of death discussed.

TRAFFIC INJURY IN BRISBANE. Report of a general survey. See 01-2592 S

Pate, J. W./Wilson, H.
ARTERIAL INJURIES OF THE BASE OF THE NECK.
Tennessee Univ. 1964. 3 p. ref. tables. figs.

JNG Laceration/Openwound, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study–Report Type
OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect

In 21 patients over a 12—year period, arterial injuries at the base of neck were associated with 20% mortality from uncontrolled hemorrhage and cerebral ischemia. Describes incisions to be made during surgery in injuries to carotid, innominate, and subclavian arteries.
BIBLIOGRAPHY

OANBC Spinal Cord, Central, Nervous System, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
WSE Therapeutic
YCK Case Studies, Nature of Study, Study—Report Type

Authors outline method of evaluation and care of neck injuries with fracture or fracture—dislocation, and describe signs of fracture in comatose and conscious patients. Four cases are used for illustration.

12-3782 N
Guttmann, L.
SOME PROBLEMS IN THE INITIAL MANAGEMENT OF SPINAL CORD INJURIES.

WSE Therapeutic, Medical, Methods
WSB First Aid
OANBC Spinal Cord, Central, Nervous System, Anatomy/Body, Biomedical Aspect

Director describes treatment employed at National Spinal Injuries Centre in England, including physiotherapy and electrotherapy. Gives essential points in first aid for patients with suspected spinal fracture. Lists symptoms of respiratory difficulties.

12-3803 N
Sandor, F.
DIAPHRAGMATIC RESPIRATION: A sign of cervical cord lesion in the unconscious patient ("horizontal paradox").

Sponsor: Newcastle Regional Hospital Board (England).

OANBC Spinal Cord, Central, Nervous System, Anatomy/Body, Biomedical Aspect
OALF Diaphragm, Respiratory System
YCK Case Studies, Nature of Study, Study—Report Type

Describes how observing type of respiration allowed correct diagnosis of cervical—cord damage in two unconscious patients. Suggests that diaphragmatic respiration be looked for in patients with severe head injuries, especially vertical fractures of skull.

12-3839 N
Harris, H. H./Ainsworth, J. Z.
IMMEDIATE MANAGEMENT OF LARYNGEAL AND TRACHEAL INJURIES.

OALC Larynx, Respiratory System, Anatomy/Body, Biomedical Aspect
OALD Trachea/Bronchi
JNG Laceration/Openwound, Injury/Trauma, Accident
JNE Contusion/Crushing
WSD Surgery, Medical, Methods
YCK Case Studies, Nature of Study, Study—Report Type

Review 22 cases of acute injury, with a detailed description of treatment, types of airways, and voices which resulted. Tracheotomy is said to be necessary with subcutaneous emphysema or laryngeal obstruction. Although internal splinting or skin graft was not used for stab wounds, no strictures developed. For other injuries, value of open reduction with replacement of cartilage, suturing of internal lacerations, internal splinting with split thickness graft, and wire fixation is stressed.

12-3842 S
Hass, A./Lowman, E. W./Bergofsky, E. H.
IMPAIRMENT OF RESPIRATION AFTER SPINAL CORD INJURY.


JN Injury/Trauma, Accident
OAL Respiratory System
OANBC Spinal Cord, Central, Nervous System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type

Assessment of respiratory performance in 31 male patients with spinal—cord injury; tables include average values of pulmonary—function studies, and pulmonary gas exchange. Respiratory insufficiency develops months after injury due to dysfunction of thorax rather than to intrinsic lung disease. Ventilation is worsened by sitting position, but not by application of braces.

12-3882 S
THE PATHOLOGY OF PEDESTRIAN AUTOMOTIVE ACCIDENT VICTIMS. See 21-3882 S

12-3911 S
Holinger, P. H./Curtin, J. W.
AUTOMOBILE ACCIDENTS AND LARYNGEAL AND UPPER TRACHEAL TRAUMA.

JN Injury/Trauma, Accident
OALD Trachea/Bronchi, Respiratory System, Anatomy/Body, Biomedical Aspect
VN Epidemiology, Disciplines
WSE Therapeutic, Medical, Methods

Discusses 34 patients with laryngeal trauma, 28 from automobile accidents. Of the 28 tracheomtomy patients,
Techniques of reconstruction are discussed in detail.

ZUR INITIALEN BEHANDLUNG DER FRISCHEN TRAUMATISCHEN QUERSCHNITTLASION. [ON THE INITIAL TREATMENT OF ACUTE TRAUMATIC SPINAL CORD INJURIES.]

The management of patients with acute spinal cord injuries is discussed. Repeated neurological tests are important. A review of the indications for early laminectomy follows by a discussion of the treatment for paralysis of bladder and bowel, physiotherapeutic measures and the correction of metabolic disorders in the initial stages of paraplegia. Authors noted high rate of pulmonary embolism, pathogenesis and prophylaxis of deep venous thrombosis in traumatic spinal cord injuries are discussed.

The management of patients with acute spinal cord injuries is discussed. Repeated neurological tests are important. A review of the indications for early laminectomy follows by a discussion of the treatment for paralysis of bladder and bowel, physiotherapeutic measures and the correction of metabolic disorders in the initial stages of paraplegia. Authors noted high rate of pulmonary embolism, pathogenesis and prophylaxis of deep venous thrombosis in traumatic spinal cord injuries are discussed.

INJURIES OF THE LARYNX AND CERVICAL TRAUMA.

BIBLIOGRAPHY
YCK Case Studies, Nature of Study, Study—Report Type

Report is made on two cases. An improperly positioned or inadequately tightened lap belt may act as a fulcrum to produce transverse fractures of lumbar vertebrae. References are made to other cases. Frequency of such injury is low.

12-4116 N
Saldeen, T.

FATAL NECK INJURIES CAUSED BY USE OF DIAGONAL SAFETY BELTS.
Lund Univ., Dept. of Forensic Medicine (Sweden). 1967. 7 p. figs. ref.

JNB Fatal Injury/Trauma, Accident
OAH Neck, Anatomy/ Body, Biomedical Aspect
JKB Ejection, Accident Hazards
DMDC Shoulder Harnesses, Restraint Systems, Accessories, Vehicle
JNO Dismemberment/ Decapitation

Three case reports. All victims were ejected from the car, with decapitation or fracture of the cervical vertebrae. Author concludes that these cases reflect the risk involved with the combination of inadequate car-door locks and a diagonal belt used without a lap belt.

12-4117 S
Lausberg, G.

DIFFERENTIALTHERAPEUTISCHE EROERTERUNGEN BEI RUECKENMARKS—UND CAUDAVERLETZUNGEN. [DIFFERENTIAL THERAPEUTIC DISCUSSIONS ON SPINAL CORD AND CAUDAL INJURIES.]
Giesen Univ., Neurosurgical Dept. (Germany). 17 June 1966. 6 p. table, figs. ref.

WSE Therapeutic, Medical, Methods
JN Injury/ Trauma, Accident
OANBC Spinal Cord, Central, Nervous System, Anatomy/ Body, Biomedical Aspect

Author discusses conservative treatment as compared to surgery and, based on his own series of 70 cases, recommends conservative treatment. Indication for laminectomy given by restriction to the passage of fluid rather than by the X-ray measurement of the restriction. Table shows relationship between restriction and mortality for cervical spine, dorsal and lumbar and caudal injury, and the complete or incomplete “cross-section” syndrome. Unsuccessful procedures are discussed. Case reports are included.

12-4119 S

FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964. See 21-4119 S

12-4150 N
Curtin, J. W., Holinger, P. H., Greeley, P. W.

BLUNT TRAUMA TO THE LARYNX AND UPPER TRACHEA: Immediate treatment, complications and late reconstructive procedures.

12-4159 N
Haller, J. A., Jr.

BULLET TRANSECTION OF BOTH COMMON CAROTID ARTERIES WITH IMMEDIATE REPAIR AND SURVIVAL.
Louisville Univ., Dept. of Surgery, Kentucky. May 1962. 2 p. figs. ref.

JNE Contusion/ Injuries, Injury/ Trauma, Accident
OALC Larynx, Respiratory System, Anatomy/ Body, Biomedical Aspect
OALD Trachea/ Bronchi
WSD Surgery, Medical, Methods

Authors also discuss incidence and cause of injury. Describe general management and operative procedures in some detail.

12-4167 N
Paterson, D. C.

THE EARLY DIAGNOSIS OF CERVICAL CORD INJURIES.
Royal Adelaide Hospital, Paraplegic Unit (Australia). Aug. 1966. 4 p. ref. tables. figs.

WSC Diagnosis, Medical, Methods
OANBC Spinal Cord, Central, Nervous System, Anatomy/ Body, Biomedical Aspect
JN Injury/ Trauma, Accident
YCK Case Studies, Nature of Study, Study—Report Type
VN Epidemiology/ Etiology, Disciplines

Author describes 3 patients with multiple injuries in which signs of cervical injuries were overlooked initially, resulting in quadriplegia in one case. Describes mechanism of injury, clinical features, use of X ray in diagnosis. Emphasizes that diagnosis must be at least tentative in the emergency room if the patient is to receive proper treatment.
BIBLIOGRAPHY

12-4337 S
ROAD ACCIDENTS. See 03-4337 S

12-4514 S
Kimura, M.
ON THE TREATMENT OF SPINAL CORD INJURY:
Review and analysis of 2300 cases.
Tohoku Labour Accident Hospital, Orthopaedic Dept.,
Sendai (Japan), March 1964. 8 p. fig. photos. ref. tables.
Japanese Orthopaedic Association. Journal, Vol. 37,
March 1964, pp. 987–999.
Conference: Japanese Accident Medical Association,

WSE Therapeutic, Medical, Methods
OANBC Spinal Cord, Central, Nervous System,
Anatomy/Body, Biomedical Aspect
JN Injury/Trauma, Accident
YEF Data Statistics, Contents, Study—Report Type
NKFF Delay, Frequency/Time, Operating Conditions,
Physical Aspect
WSD Surgery

Operations were performed in 531 cases. Author
emphasizes that the final step of treatment is rehabilita-
tion. Describes surgical methods. Data statistics: fixa-
tion, reduction and/or laminectomy; type of injury
related to interval from injury to operation, results, and
operative findings.

12-4515 S
Freed, M. M./ Bakst, H. J./ Barrie, D. L.
LIFE EXPECTANCY, SURVIVAL RATES, AND
CAUSES OF DEATH IN CIVILIAN PATIENTS WITH
SPINAL CORD TRAUMA.
Boston Univ. School of Medicine, Massachusetts. July
1966. 4 p. ref. tables.
Archives of Physical Medicine and Rehabilitation,
Conference: American Congress of Physical Medicine and
Rehabilitation, 43rd annual, 24 Aug. 1965, Philadelphia,
Pennsylvania.

JN Injury/Trauma, Accident
NKFF Delay, Frequency/Time, Operating Conditions,
Physical Aspect
OANBC Spinal Cord, Central, Nervous System,
Anatomy/Body, Biomedical Aspect
JNP Consequences/Complications
YEF Data Statistics, Contents, Study—Report Type

243 cases with permanent neurological impairment.
Authors discuss and describe cases of death in this and
other series. Suggest that findings are of immediate
significance for those involved in the care of this type of
patient. Data statistics: occupation, mortality; age at the
time of injury; cause of death and relation to cord injury;
life expectancy; time; cardiac arrest and time of operation.

12-4538 N
Kuhlendahl, H.
DIE NEUROLOGISCHEN SYNDROME BEI DER
ÜBERSTRECKUNGSVERLETZUNG DER HALSWIR-
BELSAULE UND DEM SOG. SCHLEUDERTRAUMA.
THE NEUROLOGICAL SYNDROMES IN INJURIES
CAUSING HYPER—EXTENSION OF THE CERVICAL

13-2592 S
TRAFFIC INJURY IN BRISBANE. Report of a general
survey. See 01-2592 S

13-3712 S
Ransdell, H. T., Jr.
TREATMENT OF FLAIL CHEST INJURIES WITH A
PISTON RESPIRATOR.
Louisville Univ. School of Medicine, Dept. of Surgery,
Kentucky. 1965. 5 p. ref. tables.
Conference: American Association of the Surgery of

OAF Thorax, Anatomy/Body, Biomedical Aspect
JRG Treatment/Care, Recovery of Injured, Accidental
NKF Frequency/Time
XTI Resuscitators
YEF Data Statistics, Contents, Study—Report Type

Comparing two groups of patients during two different
time periods admitted to hospital with flail chest injuries,
largely resulting from automobile accidents. Thirty-nine
of the thirty-nine treated with traditional therapy, 47 with piston respira-
tor. There was 25% reduction in mortality in piston respira-
tor group. "Stiff lung" syndrome, congestion, or congestive
atelectasis, did not occur in any patient placed on piston
respirator in initial treatment. Tracheitis and Staphylo-
coccus pneumonia are replacing "stiff lung" syndrome as
major causes of death.

13-3713 S
EINE ANALYSE VON 827 UNFALLODESFÄLLEN.
[AN ANALYSIS OF 827 CASES OF FATAL ACCI-
DENTS.] See 24-3713 S

13-3723 S
Solheim, K.
CLOSED THORACIC INJURIES.
Uppsala Univ., Dept. of Pathology (Sweden). 1963. 5 p.
tables, figs., ref.
549–557.
Sponsor: Norges Almenvitenskapelige Forskningsrad,
Sweden.
Conference: Norwegian Surgical Association, 3 Nov.
1962, Oslo, Norway.

OAF Thorax, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing, Injury/Trauma, Accident
EA Age, People
EF Sex
JNX Multiple Severe Injuries
WSC Diagnosis, Medical, Methods
OALF Diaphragm, Respiratory Systems
Analyses 139 Oslo patients who arrived alive at hospital during ten-year period. Source of injury, frequency, treatment, and results are tabulated for 65 patients with pneumothorax. Pleural suction and exsufflation are usually adequate treatment of pneumothorax if correct diagnosis is made in time. All 64 patients who had hemothorax alone were treated with thoracocentesis. Some of the 44 fatalities in this group involved intrathoracic injuries. Review of literature stresses that because of high mortality, thoracic injuries should be given priority in patients with multiple injuries. "Wetlang" condition is described.

Ten patients with one or two fractured ribs were treated by intercostal procaine nerve block or adhesive strapping. Five patients with multiple unilateral rib fractures were treated by intercostal nerve block, and five with traumatic hemothorax or pneumothorax by closed thoracostomy tube drainage of the pleural space. In first group, arterial oxygen desaturation, reduced minimum ventilation, and decreased vital capacity and maximal voluntary ventilation were reduced. Patients with acute traumatic collapse of the lung showed arterial oxygen desaturation, reduced minimum ventilation, and decreased vital capacity. Pulmonary compliance, resistance and work in patients with multiple unilateral rib fractures appeared to be minimally affected by trauma.

BIBLIOGRAPHY

OAF Thorax, Anatomy/Body, Biomedical Aspect
JNE Contusion/ Crushing, Injury/Trauma, Accident
ECC Adults, Old Aged
YCC State-of-the-Art, Nature of Study, Study-Report Type
WSE Therapeutic, Medical, Methods

Discusses management of blunt chest trauma, including prevention of respiratory and circulatory failure, techniques of emergency handling of patient prior to arrival at hospital, and special treatment required by fractures of ribs, pneumothorax, hemothorax, flail chest, fractures of sternum, tears of trachea or main bronchus, traumatic rupture of diaphragm, and damage of heart and great vessels. Studies comparing mortality rates for penetrating and blunt chest injuries are cited.
AGRICULTURAL TRACTOR ACCIDENTS: A description of 14 tractor accidents and a comparison with road traffic accidents. See 13-3835 N

13-3835 N

JNE Contusion/Crushing
OAF Thorax, Anatomy/Body, Biomedical Aspect
OAK Cardiovascular System
OAL Respiratory System
VN Epidemiology, Disciplines
EA Age, People
YEF Data Statistics, Contents, Study—Report Type

Over a 14-year period, 385 patients had penetrating and 637 had nonpenetrating injuries. Mortality is related to causes of injury and shock on admission. Frequency and management of hemothorax, pneumothorax, rib fractures, flail chest, and tracheoesophageal, diaphragmatic, tracheobronchial, cardiovascular, and associated injuries are discussed. Common avoidable errors in management are discussed.

13-3836 N

McClanathan, J. E./ Brettschneider, L.

TRAUMATIC THORACIC AORTIC ANEURYSMS.
National Naval Medical Center, Naval Hospital, Dept. of Thoracic Surgery, Bethesda, Maryland. July 1965. 9 p. figs. tables. ref.


OAKC Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
IN Injury/Trauma, Accident
YCD Survey, Nature of Study, Study—Report Type
L Time
WSD Surgery, Medical, Methods
WSI Autopsy

Report reviews series of 14 cases, all with blunt deceleration injuries inflicted from 18 days to 11 years before surgery. Traumatic thoracic aortic rupture should be suspected in every case of horizontal deceleration chest injury with mediastinal widening. Reviews controversy in literature as to whether surgery should be employed for acute and chronic traumatic thoracic aneurysms. Partial left heart bypass and hypothermia are recommended.

13-3841 S

Lloyd, J. W./ Smith, A. C./ O'Conor, B. T.

CLASSIFICATION OF CHEST INJURIES AS AN AID TO TREATMENT.


JNE Contusion/Crushing, Injury/Trauma, Accident
WSE Therapeutic, Medical, Methods
OAF Thorax, Anatomy/Body, Biomedical Aspect
OAL Respiratory System
JNX Multiple Severe Injuries
YCK Case Studies, Nature of Study, Study—Report Type
OAI Head
JNH Fracture

Describes treatment of 121 patients, 33 of whom required intermittent positive–pressure respiration (IPPR). Patients should be classified by ventilatory capacity, not anatomical extent of injury. Mild injury should be treated by pain relief alone. Moderate injury may require tracheostomy. Measurements of pH, Pco2 and Po2 indicate whether IPPR is required. Six case reports are presented.

13-3859 N

Constantinescu, O.

A NEW METHOD OF TREATING THE FLAIL CHEST WALL.
May 1965. 7 p. figs. ref.


WSE Therapeutic, Medical, Methods
OAF Thorax, Anatomy/Body, Biomedical Aspect
OAFD Ribs
OAL Respiratory System

Provides state-of-the-art report for treatment of injury to rib panel, describing the author’s “anchor” type hook used to secure external plastic panel. Conditions for correct treatment of rib panel are given. Case reports are briefly cited for bilateral anterior sternocostal panels, anterolateral hemipanel, anterolateral and lateral panels, and posterior and posterolateral panels. Author finds apparatus is readily applicable and does not incur trauma, hazards, or complications.

13-3864 S

Reid, J. M./ Baird, W. L. M.

CRUSHED CHEST INJURY: Some physiological disturbances and their correction.
Glasgow Royal Infirmary, Univ. Dept. of Anaesthetics (Scotland). 24 April 1965. 3 p. tables. figs. ref.


OAF Thorax, Anatomy/Body, Biomedical Aspect
OAFD Ribs
JNH Fracture, Injury/Trauma, Accident
JNE Contusion/Crushing
OAL Respiratory System
OAK Cardiovascular System
YEF Data Statistics, Contents, Study—Report Type
L Time

Authors present 33 cases, describing 3 classes of injury by ability to maintain spontaneous respiration, type of treatment required, associated injuries, and state of consciousness. Age, pulmonary trauma on X ray, obstructive lung disease, head injury, bony thoracic injury, other injuries, renal or hepatic failure, tracheostomy, and survival are tabulated for each class.

13-3881 N

INJURY PRODUCED BY SEAT BELTS: Report of 2 cases. See 15-3881 N

13-3895 N

Alivisatos, C. N./ Bonello, C. H./ Avlamis, G. P./ Sarris, M. C./ Romanos, A. N.

TRAUMATIC CLOSED RUPTURE OF THE DIAPHRAGM.
Athens Univ., Propaedeutic Surgical Clinic (Greece). Oct. 1964. 4 p. ref. 

JNG Laceration/Openwound, Injury/Trauma, Accident
OALF Diaphragm, Respiratory System, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study-Report Type

Four cases are described, three from nonpenetrating injury and one involving strangulation of stomach following esophagomyotomy. Two cases had large avulsion of sternocostal insertion of diaphragm. Rupture of diaphragm should be suspected after injury of trunk or operation of diaphragm on basis of clinical or radiological data relative to chest or epigastrum.

13-3907 S
Cato, F. L./ Norman, W. D.
TRAUMATIC HEMOTHORAX: An analysis of 276 cases. Louisiana State Univ., School of Medicine, Dept. of Surgery/ Louisiana State Univ. Surgical Service, Charity Hospital, New Orleans. 1940. 6 p. figs. ref. 

JNG Laceration/Openwound, Injury/Trauma, Accident
JNE Contusion/Crushing
OAF Thorax, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study-Report Type
WSI Autopsy, Medical, Methods
WSC Diagnosis
JNK Hemorrhage
WSD Surgery

Cases of hemothorax following chest injuries have been analyzed with reference to incidence, symptomatology, diagnostic methods and therapeutic procedures. Cases were drawn from 1932 to 1936, and no DOA’s were included in study.

13-3909 N
Hebert, W. M./ Schlessinger, E./ Lewis, R./ Samson, P. C.
A REGIMEN FOR THE EARLY CARE OF THE PATIENT WITH CRUSHED CHEST. 
Highland Alameda County Hospital, Oakland, California/ San Joaquin General Hospital, Stockton, California. May 1964. 8 p. photos ref. 

L Time
OAF Thorax, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing, Injury/Trauma, Accident
WSE Therapeutic, Medical, Methods
OAFD Ribs
JNH Fracture
OAL Respiratory System

Classification for crushing injuries of chest is given. Conservative therapy is recommended for relatively minor but potentially serious injuries. For serious injuries necessitating surgery or intensive care, immediate and definitive care is discussed as opposed to protracted therapy, emphasizing importance of tracheostomy care. Thoracotomy and cardiac management are discussed. Organization of specialized teams for care of these patients is recommended.

13-3912 S
Garzon, A. A./ Amer, N. L./ Karlson, K. E.
TREATMENT OF PENETRATING WOUNDS OF THE CHEST. 
New York State Univ. College of Medicine, Brooklyn/ Kings County Hospital, New York. March 1964. 5 p. tables. ref. 

JNG Laceration/Openwound, Injury/Trauma, Accident
OAF Thorax, Anatomy/Body, Biomedical Aspect
WSE Therapeutic, Medical, Methods
YEF Data Statistics, Contents, Study-Report Type
VN Epidemiology, Disciplines
WSD Surgery

Reviews records of 301 consecutive patients admitted alive. Etiology of injury and age distribution are given. Cases are grouped by type of management; incidence of hypotension, length of hospitalization, amount of pleural drainage, indication for thoracotomy cases requiring laparotomy, associated injuries, and deaths are tabulated for each group. Experience of other authors is tabulated giving year, number of cases, total mortality, thoracic mortality, type of injury, incidence of thoracotomy, complications, and treatment.

13-3936 S
Göthman, B./ Högman, L.
CURRENT TREATMENT OF ACUTE THORACIC INJURIES. 
Centrallasarettet, Dept. of Surgery, Örebro (Sweden). 1964. 6 p. ref. 

OAF Thorax, Anatomy/Body, Biomedical Aspect
WSE Therapeutic, Medical, Methods
JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study-Report Type
VN Epidemiology/Etiology, Disciplines
EA Age, People
JNX Multiple Severe Injuries
YCK Case Studies, Nature of Study

Brief state-of—the-art report on six year study of Swedish treatment of 219 cases of acute thoracic injury. Traffic accidents were responsible for about half of the cases. Mortality, age, sex, length of hospitalization, causation, associated injuries, and specific nature of thoracic injuries are tabulated according to severity of injuries. Frequency of surgical procedures and other therapy for group with most severe injuries is discussed. Nine cases are presented in detail.

13-3999 N
Ker, H.
CLOSED TRAUMATIC RUPTURE OF THE DIAPHRAGM.
BIBLIOGRAPHY


JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
OALF Diaphragm, Respiratory System, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study—Report Type

Author gives 2 case reports and discusses problems in diagnosis and treatment.

13-4014 S

PATTERNS OF THORACIC INJURIES IN FATAL TRAFFIC ACCIDENTS. See 24-4014 S

13-4045 S

Codice, J. W. V., Jr./ Cabezón, J.

CHEST TRAUMA WITH PNEUMOTHORAX AND HEMOTHORAX.


Sponsor: George H. Humphreys, II, New York.

OAF Thorax, Anatomy/Body, Biomedical Aspect
JNG Laceration/Openwound/Penetrating, Injury/Trauma, Accident
JNE Contusion/Crushing/Blunt
VN Epidemiology/Etiology, Disciplines
JNX Multiple Severe Injuries
YEF Data Statistics, Contents, Study—Report Type
WSC Diagnosis, Medical, Methods
WSD Surgery
WSE Therapeutic
OAL Respiratory System

Describes etiology, clinical characteristics, treatment, complications, and incidence of death for 432 cases of penetrating trauma and 70 cases of blunt trauma. Initial treatment is for shock and respiratory embarrassment. Indications for exploratory surgery are uncontrolled bleeding, cardiac tamponade, diaphragmatic penetration, penetration of esophagus, trachea, or major bronchus, and imbedded foreign body in "dangerous" region.

13-4056 N

Thomson, N. B., Jr.

THORACIC INJURIES IN CHILDREN.


JN Injury/Trauma, Accident
OAF Thorax, Anatomy/Body, Biomedical Aspect
EC Children, People
WSBC Maintaining Airways, First Aid, Medical Methods
YCK Case Studies, Nature of Study, Study—Report Type
OAL Respiratory System


13-4067 N

Kempf, F. K./ Deister, J.

THRAXVERLETZUNGEN: Ihre Komplikationen und Behandlung. [THORACIC INJURIES: Their complications and therapy.]


JN Injury/Trauma, Accident
OAF Thorax, Anatomy/Body, Biomedical Aspect
JNP Consequences/Complications
WSE Therapeutic, Medical, Methods
VN Epidemiology/Etiology, Disciplines
YCK Case Studies, Nature of Study, Study—Report Type

Automotive accidents represent over 50% of authors' cases. The incidence of associated injuries is very high. Difficulty of adequate diagnosis is pointed out. Six selected case reports demonstrate importance of correct, early diagnosis.

13-4072 S

Schramel, R./ Kelham, H./ Creech, O., Jr.

ANALYSIS OF FACTORS AFFECTING SURVIVAL AFTER CHEST INJURIES.


Contract No: DA—49—007—MD—796.

Grant No: H—4429.


YEF Data Statistics, Contents, Study—Report Type
JNG Laceration/Openwound/Penetrating, Injury/Trauma, Accident
JNE Contusion/Crushing/Blunt
OAF Thorax, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines

Analyze 265 cases over 5—year period, with mortality of 7% for penetrating and 28% for nonpenetrating injuries. In penetrating injuries, presence of wounds of heart and great vessels and correct assessment of injury are two major factors in survival. Age and associated injuries are major factors for nonpenetrating injuries.

13-4077 N

Jenny, R. H.

VERLETZUNGEN DES THORAKALEN OSOPHAGUS. [INJURIES OF THE THORACIC ESOPHAGUS.]


JNG Laceration/Openwound/Penetrating, Injury/Trauma, Accident
which produced a WSE Therapeutic, Medical, Methods

Follow-up investigations carried out on 19 patients

A PROPOS DE 268 TRAUMATISMES THORACIQUES

OAL Respiratory System, Anatomy/Body, Biomedical Aspect

Humm, R.


JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident

OAF Thorax, Anatomy/Body, Biomedical Aspect

JNP Consequences/Complications

WSE Therapeutic, Medical, Methods

OAL Respiratory System

YEF Data Statistics, Contents, Study–Report Type

The author presents statistical data on 268 cases of closed thoracic trauma observed over four and one half years at the University Surgical Clinic, Geneva. He distinguishes between trauma which did not involve a loose lateral area ("stove-in" chest) (92%), and that which produced a "stove-in" chest moving abnormally on respiration (8%). The frequency of multiple trauma is pointed out (34% presented skull trauma and 32% fractures of the limbs, the shoulder or pelvic girdles). Finally, the evolution of these cases as a group, with an analysis of the deaths (9%) and a description of treatment, with a particular reference to the use of the Engstrom machine, is reviewed.

Rodewald, G./ Harms, H.


JNP Consequences/Complications, Injury/Trauma, Accident

JNX Multiple Severe Injuries

OAL Respiratory System, Anatomy/Body, Biomedical Aspects

Authors define severe chest injuries, and limit cases by exclusion of rare occurrences such as complete transection of lungs and injuries to the heart and great vessels. Follow-up investigations carried out on 19 patients about 2 to 3 years after the accident. Tabulation shows 4 ratings (severe, medium, light, and severe independent of accident) for immediate consequences, injury, clinical picture, follow-up examination: clinic observation, X ray, spirometry, blood gases, and ultimately the subjective appraisal of patient. Discuss blood–gas analysis irregularities, point out consequences independent of adequate spyrometric result.

BIBLIOGRAPHY

13-4091 N

Schäfer, E.

SPATRUPTUR DER SPEISERÖHRE NACH STU PfEM TRAUMA. [LATE RUPTURE OF THE ESOPHAGUS AFTER BLUNT TRAUMA.]


JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident

OAF Esophagus, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect

JNP Consequences/Complications

YCK Case Studies, Nature of Study, Study–Report Type

Literature survey. One case report. Rupture occurred three weeks after original trauma. Author presents hypothesis about the mechanism of rupture. Diagnosis discussed.

13-4119 S

FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964. See 21-4119 S

13-4125 S

Sherman, R. T.

EXPERIENCE WITH 472 CIVILIAN PENETRATING WOUNDS OF THE CHEST.


OAF Thorax, Anatomy/Body, Biomedical Aspect

JNG Laceration/Open wound/ Penetrating, Injury/Trauma, Accident

VN Epidemiology/Etiology, Disciplines

WSE Therapeutic, Medical, Methods

JNF Consequence/Complications

Author discusses etiology, management, late complications and results of treatment. Describes six major principles of treatment. Discusses data statistics: age, sex, race, and type of wound; etiology, results of tube thoracotomy and thoracentesis; late complications and mortality; type of treatment and mortality.

13-4129 N

Border, J. R./ Hopkinson, B. R./ Schenk, W. G.

MECHANISMS OF PULMONARY TRAUMA: An experimental study.


Grant No: HE 03181.

Sponsor: National Heart Institute, Maryland/ United Health Foundation of Western New York.

OAL Respiratory System

JNE Contusion/Crushing/Blunt

YCG Laboratory Experiment

Authors describe a type of thoracoabdominal trauma
without rib fractures. In patients with this injury initial X rays may be negative. Death from severe arterial hypoxia is not rare. This type of injury may be negative. Death from severe arterial hypoxia is not rare. This type of injury postulates that atelectasis is initially present in the condition. Suggest possibility that the lesion could be prevented by early and continued re-inflation of the atelectatic lung.

13-4130 N

Epstein, L. I./ Lempke, R. E.

RUPTURE OF THE RIGHT HEMIDIAPHRAGM DUE TO BLUNT TRAUMA.


Authors describe material and methods. Present and discuss findings. Postulate that atelectasis is initially present in the condition. Suggest possibility that the lesion could be prevented by early and continued re-inflation of the atelectatic lung.

13-4160 S

Gray, A. R./ Harrison, W. H., Jr./ Couves, C. M./ Howard, J. M.

PENETRATING INJURIES TO THE CHEST: Clinical results in the management of 769 patients.


Authors give 3 case reports and review 36 cases previously reported with respect to age, sex, agent, sensorium, associated injuries, time from injury to operation, symptoms at delayed operation, and result. Note the high incidence of associated injury to the pelvis, spine or brain. Note that the condition is often undiagnosed initially. Discuss the medical and non-medical consequences of a delay in diagnosis.

13-4161 S

Harrison, W. H., Jr./ Gray, A. R./ Couves, C. M./ Howard, J. M.

SEVERE NON-PENETRATING INJURIES TO THE CHEST: Clinical results in the management of 216 patients.


Authors analyze data. Describe and discuss symptoms, treatment, and results in cases with rib fractures, bronchial rupture, aortic aneurysm, traumatic myocardial injury, and penetrating heart and lung wounds. Data statistics: age; type of accident; annual distribution of thoracic fractures; distribution of rib fractures; distribution and combinations of injuries; type of thoracic injury. Four illustrative case histories.

BIBLIOGRAPHY

WSE Therapeutic, Medical, Methods
JNE Contusion/ Crushing/ Blunt, Injury/ Trauma, Accident
OAF Thorax, Anatomy/ Body, Biomedical Aspect
VN Epidemiology/ Etiology, Disciplines
YEF Data Statistics, Contents, Study–Report Type

Patients admitted to Grady Memorial Hospital (Atlanta, Georgia). In general, method of treatment was most conservative possible. Authors present and discuss findings. Mortality rate was 7 percent. Data statistics: mortality and age; type of accident; number and location of injuries; complications; number of ribs fractured; shock; associated injuries; empyema. Tabulate, for 8 fatal cases: age; survival time, ribs fractured; pneumothorax; shock; treatment.

13-4163 S

Johansson, L./ Silander, T.

TWENTY-ONE YEARS OF THORACIC INJURIES: A clinical study of 313 cases.


Authors analyze data. Describe and discuss symptoms, treatment, and results in cases with rib fractures, bronchial rupture, aortic aneurysm, traumatic myocardial injury, and penetrating heart and lung wounds. Data statistics: age; type of accident; annual distribution of thoracic fractures; distribution of rib fractures; distribution and combinations of injuries; type of thoracic injury. Four illustrative case histories.

13-4182 N

Taubert, E.

KLINIK UND FORSCHUNG; BEITRAG ZUR TRAUMATISCHEN ZWERCHFELLSRUPTUR. [CONTRIBUTION TO TRAUMATIC RUPTURE OF THE DIAPHRAGM.]


Authors describe general management in some detail. Present and analyze data. Note that mortality has decreased from 13% (1935) to 3.8% (1958). Data statistics: mortality; immediate complications; cause of injury; median hospital stay, type of treatment; nature of fatal injuries; hypotension on admission; shock unexplained by hemorrhage; associated injuries; empyema.

Discussion of mechanism of injury. Prolapse of abdominal organs. X rays and case histories. Mortality low, usually affected by associated injuries. Maximum delay from occurrence to detection in Taubert’s series is 17 years.

13-4337 S

ROAD ACCIDENTS. See 03-4337 S
13-4504 S
DIED IN HOSPITAL: A three-year study of deaths following trauma. See 21-4504 S

13-4513 S
ÜBER DIE RIPPENSERIENFRAKTUREN DURCH VERKEHRsunFALLE UND DEN DERZEITIGEN STAND IHREr BEHANDLUNG. [ON SERIAL RIB FRACTURES CAUSED BY TRAFFIC ACCIDENTS AND THE CURRENT STATUS OF THEIR TREATMENT. See 24-4513 S

13-4518 S
Keller, J. W./ Meckstroth, C. V./ Sanzenbacher, L./ Pace, W. G.
THORACIC INJURIES DUE TO BLUNT TRAUMA.
Ohio State Univ. Hospitals, Dept. of Surgery, Columbus/ Ohio State Univ., College of Medicine, Columbus. 1967. 6 p. figs. ref.
Conference: American Association for the Surgery of Trauma, 26th annual, 6–8 Oct. 1966, Santa Barbara, California.

JNE  Contusion/ Crushing/ Blunt, Injury/ Trauma, Accident
OAF  Thorax, Anatomy/ Body, Biomedical Aspect
YEF  Data Statistics, Contents, Study—Report Type
WSE  Therapeutic, Medical, Methods

Clinical study of 188 cases of severe thoracic injury. Authors discuss incidence, type of thoracic injury, associated injuries, diagnosis and treatment. Conclude that death is most often due to severe extrathoracic injuries, but that untreated thoracic damage may increase the mortality rate. Emphasize necessity of prompt diagnosis and treatment. Data statistics: mortality; type of thoracic injury; and associated injuries.

13-4520 S
Stevens, E./ Templeton, A. W.
TRAUMATIC NONPENETRATING LUNG CONTUSION.
Missouri Univ., Medical Center, Dept. of Radiology, Columbus, Aug. 1965. 6 p. figs. table. ref.

JNE  Contusion/ Crushing/ Blunt, Injury/ Trauma, Accident
OAE  Lungs, Respiratory System, Anatomy/ Body, Biomedical Aspect
YER  General Discussions, Contents, Study—Report Type

Clinical study of 20 patients. Authors found poor correlation between X-ray and clinical findings. Discuss characteristic patterns, mechanism and course of injury. Data statistics: frequency of clinical findings; frequency of two parenchymal infiltrative patterns.

13-4526 S
Johansson, L./ Silander, T.
THORAKSKADOR I TRAFIKEN. [CHEST INJURIES IN TRAFFIC ACCIDENTS.]
8 Dec. 1965. 6 p. ref., figs. tables.
Order No: STS 6331 (English translation).
TRAUMATIC RUPTURE OF THE AORTA WITH SPECIAL REFERENCE TO ROAD ACCIDENTS.

TRAUMATIC RUPTURE OF THE AORTA WITH SPECIAL REFERENCE TO ROAD ACCIDENTS.

TRAUMATIC RUPTURE OF THE AORTA WITH SPECIAL REFERENCE TO ROAD ACCIDENTS.

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TRAUMATIC RUPTURE OF THE AORTA WITH SPECIAL REFERENCE TO ROAD ACCIDENTS.

TRAUMATIC RUPTURE OF THE AORTA WITH SPECIAL REFERENCE TO ROAD ACCIDENTS.
14-3780 N
SOME COMPLICATIONS OF UPPER LIMB INJURIES.
See 17-3780 N

14-3798 S
THORACIC TRAUMA: Analysis of 1022 cases. See 13-3798 S

14-3828 S
Greendyke, R. M.
TRAUMATIC RUPTURE OF AORTA. Special reference to automobile accidents.
14 Feb. 1966. 4 p., figs., tables. ref.

OAKC Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSI Autopsy, Medical, Methods
JNB Fatal, Injury/Trauma, Accident
JKB Ejection, Accident Hazards
YEF Data Statistics, Contents, Study—Report Type
YCB Research, Nature of Study

42 cases of traumatic aortic rupture were found in 1259 autopsies performed in one county. Cites literature to demonstrate rise in occurrence. One of six victims of fatal auto accidents sustained aortic rupture. Rupture was twice as common in ejected occupants as in those not ejected. Gives frequency of various bone fractures associated with aortic rupture. Study suggests that rapid deceleration and application of varying gravity units of force determine whether aortic rupture will occur to automobile occupants involved in accidents.

14-3829 S
Wilson, R. F./ Bassett, J. S.
PENETRATING WOUNDS OF THE PERICARDIUM OR ITS CONTENTS.
Wayne State Univ. College of Medicine, Dept. of Surgery, Detroit, Michigan. 14 Feb. 1966. 6 p., tables. ref.

BIBLIOGRAPHY

JNG Laceration/Openwound, Injury/Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type
JNPK Blood Loss/Bleeding, Consequences

Authors emphasize valuable factors in diagnosis, prognosis, and treatment of 200 patients. Pericardietesis was used mainly as diagnostic and temporary therapeutic measure, and cardiorrhaphy was performed in 187 cases. Beck's triad, present in only 40%, was of limited diagnostic value. Twenty-two deaths were related primarily to bleeding, five to myocardial infarctions, and nine to combined bleeding, tamponade, and/or infarction.

14-3830 S
Maynard, A. de L./ Brooks, H. A./ Froix, C. J. L.
PENETRATING WOUNDS OF THE HEART.
Harlem Hospital Center, Dept. of Surgery, New York/ Columbia Univ. College of Physicians and Surgeons, New York. May 1965. 4 p., figs., tables. ref.

OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
JNG Laceration/Openwound, Injury/Trauma, Accident
L Time
JNK Hemorrhage
YEF Data Statistics, Contents, Study—Report Type
WSD Surgery, Medical, Methods

According to Medical Examiner's records in New York City, about 30% of those with penetrating heart wounds reach hospital alive. Of 64 such patients, 58 were subjected to surgery with 53 survivals and five deaths. "Delayed" or secondary hemorrhage is discussed with brief case reports. Attention is directed to clinicopathological complex of acute hemopericardium with tamponade plus massive hemothorax, the result of heart wound and laceration of internal mammary vessels.

14-3836 N
TRAUMATIC THORACIC AORTIC ANEURYSMS. See 13-3836 N

14-3846 S
Ricks, R. K./ Howell, J. F./ Beall, A. C., Jr./ De Bakey, M. E.
GUNSHOT WOUNDS OF THE HEART: A review.
Baylor Univ. College of Medicine, Cora and Webb Mading Dept. of Surgery, Houston, Texas/ Jefferson Davis General Hospital, Houston, Texas. June 1965. 3 p., tables. ref.
Grant No: HE-03137.
Contract No: DA-49-007-MD-2523.
Sponsor: Public Health Service/ Army Research and Development Command.

JNG Laceration/Openwound, Injury/Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YER General Discussion, Contents, Study—Report Type
JNB Fatal
WSD Surgery, Medical, Methods
BIBLIOGRAPHY

Describes 31 cases alive on arrival at hospital. Gives clinical condition, plan of treatment, associated organ injury, complications, and results of treatments. Recommends pericardiotomies as primary method of management.

14-3847 S
THE RECOGNITION AND MANAGEMENT OF PERIPHERAL ARTERIAL INJURIES. See 17-3847 S

14-3861 N
Cheng, H. C./ Rippstein, C. B./ Burns, H.

JNG Laceration/Open wound, Injury/Trauma, Accident
WSD Surgery, Medical, Methods
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study—Report Type

Presents case report of 14-year old boy with through-and-through gunshot wound of heart and lung. After emergency exploratory thoracotomy, wounds were repaired surgically and patient fully recovered. Perforated interventricular septum healed spontaneously.

14-3863 N
CLOSED TRAUMATIC RUPTURE OF COMMON FEMORAL ARTERY. See 17-3863 N

14-3876 N
Lui, A. H. F./ Glas, W. W./ Bercu, B. A.
STAB WOUND OF THE HEART WITH TAMPOONADE AND INTERVENTRICULAR SEPTAL DEFECT.

JNG Laceration/Open wound, Injury/Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
JNP Consequences
YCC State—of—the—Art, Nature of Study, Study—Report Type
WSD Surgery, Medical, Methods

Authors give detailed case report on infrequent injury and review similar injuries discussed by other authors. In this case, initial pericardiotomies was followed by surgical repair 4½ hours after admission. Several months later, persistent ventricular septal defect was repaired with aid of pump oxygenator. In general, period of observation prior to repair allows one to evaluate hemodynamic significance to left-to-right shunt, permits healing of small defects, and permits wound edges to become fibrotic.

14-3892 N
McKnight, J. T./ Meyer, J. A./ Neville, J. F., Jr.
NONPENETRATING TRAUMATIC RUPTURE OF THE THORACIC AORTA.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAKB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study—Report Type
WSD Surgery, Medical, Methods

Discusses occurrence and etiology of acute traumatic rupture of aorta, with two case reports and reference to earlier data. Of patients who arrive at hospital alive, 85% will live long enough for surgical intervention. Surgical procedure, difficulty of diagnosis and formation of false aneurism are discussed. Diagnostic value of a widened superior mediastinum is emphasized.

14-3893 N
Lucido, J. L./ Voorhees, R. J.
IMMEDIATE THORACOTOMY FOR WOUNDS OF THE HEART.
Conference: Southwestern Surgical Congress, 16th annual, 27–30 April 1964, Texas.

WSD Surgery, Medical, Methods
OAF Thorax, Anatomy/Body, Biomedical Aspect
OAKB Heart, Cardiovascular System
WU Testing/Measures
YCK Case Studies, Nature of Study, Study—Report Type
L Time
WSC Diagnosis

Clinical data on five successful cardiopathsies are tabulated with description of injury, surgical procedure, and postoperative information. Pericardial tamponade, diagnostic procedures, and management of injuries are discussed and heart wounds classified. Pericardiotomies not always satisfactory. Bias is claimed in statistics indicating high mortality rates for thoracotomy, because usually only critical patients are operated on.

14-3901 N
MANAGEMENT OF FRACTURE WITH VASCULAR INJURY. See 17-3901 N

14-3942 N
Samuel, E.
DECELERATION INJURIES OF HEART AND LUNG.

JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSD Surgery, Medical, Methods
YEF Data Statistics, Contents, Study—Report Type
JNP Consequences/Complications

Authors survey 23 cases of penetrating wounds of the aorta. Discuss etiology, location of injury, associated injuries, condition of patients, resuscitation, repair, and results. Conclude that attempted resuscitation and repair are mandatory. Clinical summary for each case in tabular form.

14-4032 S
Spencer, F. C./ Guerin, P. F./ Blake, H. A./ Bahnson, H. T.
A REPORT OF FIFTEEN PATIENTS WITH TRAUMATIC RUPTURE OF THE THORACIC AORTA.

JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
OAKC Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines
WSC Diagnosis, Medical, Methods
WSD Surgery

Report concerns authors' experience with 15 patients seen soon after aortic rupture or seen with aneurysm a long time after injury. 14 were victims of automobile accidents. Brief case histories of 7 patients seen soon after injury. These cases demonstrate aortic transection may be present with few external signs and that wide mediastinum on chest roentgenogram and history of injury are most helpful diagnostic aids. There is often time for reparative treatment. Table cites 43 cases of traumatic thoracic aneurysms collected from literature and states cause, duration, location, symptoms, size of aneurysm, operative procedure if any, and subsequent course.

14-4033 S
Strassmann, G.
TRAUMATIC RUPTURE OF THE AORTA.

JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
OAKC Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
WSD Surgery

Traumatic rupture of the aorta is more frequent than literature suggests. Study of 7,000 autopsies conducted between 1936 and 1942 yielded 72 cases of traumatic rupture and 24 of spontaneous rupture. Differences between the two types of lesions regarding occurrence, origin, and pathologic picture are discussed. 51 cases of traumatic rupture resulted from automobile accidents, the most frequent victims being pedestrians. In 59 cases of traumatic rupture, death occurred within one hour of injury.
Louisville Univ. School of Medicine, Dept. of Surgery, Kentucky/ Louisville General Hospital, Kentucky. June 1954. 2 p. graph. ref.


OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
JNE Contusion/ Crushing/Blunt, Injury/ Trauma, Accident
JNG Laceration/ Openwound/ Penetrating
YEF Data Statistics, Contents, Study—Report Type
WSD Surgery, Medical, Methods

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Compare treatment and mortality of two series of patients (108) with cardiac wounds. When more liberal indications for surgery were used in more recent series, operability rose to 90%, and total mortality decreased from 46% to 32%. Exploratory thoracotomy is said to be far safer than aspiration. Hospital's most important change in management of cardiac wounds has been to decrease extent of diagnostic procedures prior to surgery.

14-4048 N
Jahnke, E. J., Jr./ Fisher, G. W./ Jones, R. C.
Walter Reed General Hospital, Thoracic and Cardiovascular Surgery Service, Washington, D.C./ Walter Reed General Hospital, Cardiology Service, Washington, D.C. July 1964. 8 p. figs. tables. ref.


JNE Contusion/ Crushing/Blunt, Injury/ Trauma, Accident
OAKC Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSD Surgery, Medical, Methods
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
YCK Case Studies, Nature of Study, Study—Report Type

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Comprehensive case reports, brief review of the literature. Stresses the significance of a widened mediastinum. Discusses the value of preoperative forward aortograms.

14-4059 S
Zehnder, M. A.
AORTENRUPTUR BEI STUMPFEM THORAXTRAUMA: Retrospektive Auswertung der Kauistik und zukünftige chirurgische Möglichkeiten. [AORTIC RUPTURE IN BLUNT THORAX TRAUMAS: Retrospective evaluation of the casuistics and future surgical possibilities].

JNE Contusion/ Crushing/Blunt, Injury/ Trauma, Accident

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Authors discuss pathology, diagnosis, treatment, postoperative treatment, and prognosis for 47 cases. Present brief summary of each case.

14-4122 N
Kaulbach, W./ Krebs, H.
STERNUMFRAKTUR UND HERZTRAUMA. [FRACTURE OF THE STERNUM AND INJURY TO THE HEART].
BIBLIOGRAPHY

14-4157 S
Maguire, C. H./Griswold, R. A.
FURTHER OBSERVATIONS ON PENETRATING WOUNDS OF THE HEART AND PERICARDIUM.
Louisville Univ., Dept. of Surgery, Kentucky/ Louisville General Hospital, Kentucky. Nov. 1947. 6 p. figs. ref. tables.
JNG Laceration/Openwound/Penetrating, Injury/ Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study–Report Type
YEF Data Statistics, Contents

Authors review previous experience with 47 cases and report on 33 further cases. Describe and discuss pathology, diagnosis, and treatment. Present short résumé for each of 23 patients operated upon. Data statistics: cases admitted; time from injury to admission; operated cases; postoperative deaths; mortality.

14-4158 S
Ransdell, H. T., Jr./Glass, H., Jr.
GUNSHOT WOUNDS OF THE HEART: A review of twenty cases.
Louisville Univ., Dept. of Surgery, Kentucky/ Louisville General Hospital, Kentucky. May 1960. 5 p. figs. ref. tables.
JNG Laceration/Openwound/Penetrating, Injury/ Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
WSE Therapeutic, Medical, Methods

Authors describe and discuss findings. Discuss diagnosis and pathology. Recommend immediate operation and give detailed description of their treatment procedure. Data statistics: location and type of wound and treatment; type of tamponade. Tabulate, for each patient: race; sex; age; weapon; time from wound to admission; time from admission to operation; route in hospital; location of wound; type of wound; result; other injuries; wound entrance; wound exit; tamponade; time in hospital.

14-4159 N
BULLET TRANSECTION OF BOTH COMMON CAROTID ARTERIES WITH IMMEDIATE REPAIR AND SURVIVAL. See 12-4159 N

Authors show increasing trend of occurrence from 1945–1959. Etiology, complications and associated injury, and observations of EKG as affected by sternum injury (commotio cordis) discussed.

14-4165 N
Kleinert, H. E.
HOMOGRRAFT PATCH REPAIR OF BULLET WOUNDS OF THE AORTA: Experimental study and report of a case.
Louisville Univ., Dept. of Surgery, Kentucky. May 1958. 6 p. figs. ref. tables.
OAKB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
WSD Surgery, Medical, Methods
YCK Case Studies, Nature of Study, Study–Report Type
YCG Laboratory Experiment

Author describes case of successful repair and a study of experimentally produced aortic wounds in dogs. Concludes that a homograft patch should not be necessary. Reports pathological findings.

14-4197 S
ARTERIAL REPAIR DURING THE KOREAN WAR.
See 17-4197 S

14-4509 S
Bland, E. F./Beebe, G. W.
MISSILES IN THE HEART: A twenty–year follow–up report of World War II cases.
Massachusetts General Hospital, Boston/ National Research Council, Div. of Medical Sciences, Washington, D.C. 12 May 1966. 8 p. tables. figs. ref.
JNG Laceration/Openwound/Penetrating, Injury/ Trauma, Accident
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
YCL Evaluation/Effectiveness, Nature of Study

Clinical study of 40 cases. Authors conclude that actual risk from a retained fragment in the heart is minimal, but that the resulting psychic trauma can be disabling. Suggest removal of such fragments whenever possible, and maximum reassurance of the patient.

14-4522 S
Maynard, A. L./Avecilla, M. J./Naclerio, E. A.
The Management of Wounds of the Heart. A recent series of 43 cases with comment on pericarditis in hemopericardium.
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect
JNG Laceration/Openwound/Penetrating, Injury/ Trauma, Accident
JNP Consequences/Complications
WSD Surgery, Medical, Methods
Authors recommend surgical therapy in serious wounds of the heart. Discourage use of pericardiocentesis as definitive therapy. Describe surgical procedure. Data statistics: mortality; treatment; complications; necropsy findings; time of death.

14-4527 S
Zeldenrust, J./ Aarts, J. H.
TRAUMATISCHE AORTA–RUPTUUR BIJ VERKEERSONGEVALLEN. [TRAUMATIC AORTIC RUPTURE IN TRAFFIC ACCIDENTS.]
10 March 1962. 5 p. ref. figs.
Order No: STS 6329 (English translation).
YEF Data Statistics, Contents, Study–Report Type
JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect

Eighty–eight cases of aortic rupture and 28 of other aortic damage in 800 traffic accident fatalities. Authors describe and discuss victim’s mode of transportation, cause, pathology, pre—existing pathology, associated injuries, complications, diagnosis and effect of safety belts.

14-4528 S
Jensen, O. M.
TRAUMATISK AORTA-RUPTUR: En analyse af 68 fatale tilfælde. [TRAUMATIC AORTIC RUPTURE: An analysis of 68 fatal cases.]
1964. 5 p. ref. tables.
Order No: STS 6333 (English translation).
NKFF Delay, Frequency/Time, Operating Conditions, Physical Aspect
JN Injury/Trauma, Accident
OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
JNE Contusion/Crushing/Blunt

Cases examined at National Morgue of Jutland between 1920 and 1963. Author notes the increasing incidence of this injury. Believes higher driving speeds a likely explanation. Analyzes data and discusses origin of the injury, clinical findings, and treatment in surviving patients. Concludes most such patients are beyond therapeutic aid; future efforts should be concentrated on prophylactic measures. Data statistics: year of injury; age; sex; appearance, course of rupture; location of rupture; secondary lesions; external conditions (type of accident); survival time.

14-4533 S
17 LESIONS ARTÉRIELLES FÉMORO–POPLITÉES TRAITÉES PAR RECONSTRUCTION IMMÉDIATE. [17 FEMORO POPLITAL ARTERIAL LESIONS TREATED BY IMMEDIATE RECONSTRUCTION.]
See 17-4533 S

15-2592 S
TRAFFIC INJURY IN BRISBANE. Report of a general survey. See 01-2592 S

15-3701 S
Shirkey, A. L./ Wukasch, D. C./ Beall, A. C., Jr./ Gordon, W. B., Jr./ De Bakey, M. E.
SURGICAL MANAGEMENT OF SPLENIC INJURIES. Baylor Univ. College of Medicine, Cora and Webb Mading Dept. of Surgery/ Jefferson Davis General Hospital, Houston, Texas. Nov. 1964. 3 p. tables. ref.
Grant No: HE–03137.
Sponsor: Public Health Service/ Army.
YEF Data Statistics, Contents, Study–Report Type
OAJN Spleen, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
JNK Hemorrhage, Injury/Trauma, Accident
JNX Multiple Severe Injuries

Examines 125 cases with penetrating and 64 cases with blunt trauma to spleen during 17–year period. Mortality with penetrating injury was 18%. Because of associated injury, mortality rate with blunt trauma was 30%. The 43 blunt–trauma cases resulting from auto accidents suffered 30% mortality. Lists associated injuries for penetrating and blunt injuries, describes management of abdominal wounds and surgical techniques. Isolated splenic injuries cause death only through blood loss. Because the only treatment, splenectomy, is simple, the key to lowering mortality is early recognition. Because of dangers of delayed splenic rupture, all patients with history of trauma of left side of chest, left flank or left upper abdomen must be closely observed for minimum of two weeks.

15-3706 S
McClelland, R. N./ Shires, T.
MANAGEMENT OF LIVER TRAUMA IN 259 CONSECUTIVE PATIENTS.
Texas Univ., Southwestern Medical School, Dept. of Surgery, Dallas. Feb. 1965. 5 p. ref. tables.
JRG1 Professional/Physician, Treatment/Care, Recovery of Injured, Accident
OAJM Liver/Biliary Tract, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
JNP Consequences, Injury/Trauma
JNK Hemorrhage

Describe cases reviewed at hospital, 1953–1963, including 31 instances of blunt trauma with 25 resulting from automobile accidents. Methods of diagnosis are discussed, including results with peritoneal tap. Early exploration, use of optimal amounts of blood and electrolyte solutions, adequate drainage, suture and resection to control hemorrhage, and the use of antibiotics have decreased mortality from liver injury.

15-3709 S
Perry, J. F., Jr.
A FIVE–YEAR SURVEY OF 152 ACUTE ABDOMINAL INJURIES.
BIBLIOGRAPHY

Ancker Hospital, Dept. of Surgery/ Minnesota Univ. School of Medicine, Minneapolis. 1965. 5 p. tables. ref. Journal of Trauma, Vol. 5, 1965, pp. 53–61.

YEF Data Statistics, Contents, Study—Report Type
JNE Contusion/Crushing, Injury/Trauma, Accident
JNG Laceration/Openwound
OAE Abdomen, Anatomy/Body, Biomedical Aspect
OAJM Liver/Biliary Tract, Digestive System/Alimentary Tract
WSC Diagnosis, Medical, Methods

Describes 92 civilian hospital patients with blunt and 60 with penetrating trauma, including 73 blunt—trauma victims of traffic accidents. Lists numbers of penetrating and blunt injuries involving specific organs. Death occurred in 6.7% with penetrating wounds, 45.7% with blunt trauma. Recommends exploration of all patients with penetrating abdominal wounds or suspected abdominal visceral involvement after blunt trauma.

15-3710 S
CONCEALED HEMORRHAGE DUE TO PELVIC FRACTURE. See 24-3710 S

15-3720 S
Solheim, K.
CLOSED ABDOMINAL INJURIES.
Uppsala Univ., Dept. of Pathology (Sweden). 1963. 8 p. ref. tables, fig.
Sponsor: Norges Almenvitenskapelige Forskningsrad.
Conference: Norwegian Surgical Association, 3 Nov. 1962, Oslo, Norway.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type
EA Age, People
EF Sex
OAMB Kidneys, Urogenital System
OAJM Liver/Biliary Tract, Digestive System/Alimentary Tract
OAJN Spleen/Lymph Tracts
WSC Diagnosis, Medical, Methods
L Time
JNK Hemorrhage

Authors report on treatment and survival rates of 291 patients in Oslo. Gives mortality rates, overall and by type of injury; diagnostic and treatment procedures for injuries to different abdominal organs; and indications for exploratory laparotomy and Roentgen examination.

15-3741 S
PULMONALE UND ENTERALE KOMPLIKATIONEN NACH HIRNSCHADIGUNGEN. [PULMONARY AND ENTERAL COMPLICATIONS AFTER BRAIN INJURIES.] See 11-3741 S

15-3750 S
Oberniedermayr, A.
DIE STUMPFEN BAUCHVERLETZUNGEN IM KINDESALTER. [BLUNT ABDOMINAL INJURIES IN CHILDHOOD.]

5 Nov. 1963. 7 p. illus.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
EC Children, People
WSD Surgery, Medical, Methods
YEF Data Statistics, Contents, Study—Report Type
JNFL Shock, Consequences

Discusses 62,574 cases over three decades, including 36 cases of blunt injury to abdomen and 41 to the urogenital tract. Low frequency of this kind of injury and diagnosis of child as compared to adult are discussed. Case study is given of bilateral rupture of kidney.

15-3770 N
MASSIVE LIVER INJURY AND SHOCK. See 24-3770 N

15-3772 S
O'Brien, S. E./ Fyshe, T. G.
REPORT ON 41 CASES OF RUPTURE OF THE SPLEEN.
July 1961. 3 p. ref.

YCK Case Studies, Nature of Study, Study—Report Type
YEK Law/Code/Statute, Contents
OAJN Spleen, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
L Time
JNK Hemorrhage, Injury/Trauma, Accident

Authors describe symptoms and abdominal signs with case reports on five instances of delayed rupture. Of cases studied, six patients died. Injury is treacherous because start and amount of bleeding are unpredictable. In presence of hemorrhage and/or hematoma formation, prompt splenectomy is recommended.

15-3785 S
Nation, E. F./ Massey, B. D.
RENAL TRAUMA: Experience with 258 cases.
1963. 3 p.

YEF Data Statistics, Contents, Study—Report Type
OAJJ Kidneys, Urogenital System, Anatomy/Body, Biomedical Aspect
VN Epidemiology, Disciplines
WSD Surgery, Medical, Methods
WSE Therapeutic

Analyzes cases of renal injury due to external trauma during nine—year period, the etiology of trauma, type of injury and associated injuries, symptoms, treatment, and mortality. Excretory urography usually gives sufficient information for early urological management. Retrograde pyelography is done only if doubt remains concerning the status of the upper urinary tract. Emergency surgery for
renal injury should be performed only if there is continued hemorrhage.

15-3797 S
Sherman, R. T./ Parrish, R. A.
MANAGEMENT OF SHOTGUN INJURIES: A review of 152 cases.

JNG Laceration/Openwound, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study—Report Type
WSE Therapeutic, Medical, Methods
WSD Surgery, Medical, Methods
VN Epidemiology, Disciplines
OAI Head, Anatomy/Body, Biomedical Aspect
OAE Abdomen
OAF Thorax

Records of 152 patients with shotgun injuries and 382 with wounds produced by other firearms show mortality from shotgun wounds over twice that of other gunshot wounds. Shotgun wounds were separated into three types by range and observed pathology. Cases were analyzed by type and location of wounds, methods of management, results, and major secondary procedures.

15-3799 S
Root, G. T./ Christensen, B. H.
EARLY SURGICAL TREATMENT OF ABDOMINAL INJURIES IN THE TRAFFIC VICTIM.

JN Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
WSD Surgery, Medical, Methods
VN Epidemiology, Disciplines
L Time
YEF Data Statistics, Contents, Study—Report Type
JNX Multiple Severe Injuries

Review of 1,988 records of traffic victims. 45 deaths in series and 44% were associated with abdominal injuries. Authors urge early abdominal exploration in patients with significant symptoms. Data statistics: sex; number of accidents per month; type of accident; disposition of patients; type of injury; findings, treatment and results in patients with abdominal symptoms; number of deaths per type of injury.

15-3801 S
Mikesky, W. E./ Howard, J. M./ DeBakey, M. E.
INJURIES OF THE LIVER IN 300 CONSECUTIVE PATIENTS.

OAJM Liver, Digestive System/ Alimentary Tract, Anatomy/Body, Biomedical Aspect
JNX Multiple Severe Injuries, Injury/Trauma, Accident
VN Epidemiology, Disciplines
L Time
WSD Surgery, Medical, Methods
JNP Consequences
JNK Hemorrhage
WSI Autopsy
YEC Bibliography, Contents, Study—Report Type
YEF Data Statistics

Study is based on patients alive on admission to hospital. Agent, type, location, and path of injuries and associated injuries, surgical management and complications, and reduction of mortality between 1939 and 1954 are discussed. Decrease in mortality attributed to more adequate blood replacement, antibiotic therapy, and earlier, improved surgical care. Further progress will depend on refinements of hepatic debridement and resection to control hepatic hemorrhage. Major contributing causes of death are tabulated for 62 patients.

15-3819 S
Barnett, W. O./ Hardy, J. D./ Yelverton, R. L.
PANCREATIC TRAUMA: Review of 23 cases.

OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNG Laceration/Openwound, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study—Report Type

Study covers patients who underwent one or more abdominal operations during 10–year period. Patients were grouped according to blunt, penetrating, or surgical trauma. Type of injury, wounding agent, and operative procedure are given for blunt trauma. Penetrating injuries are discussed in more detail indicating operations utilized and additional injuries. Nature of injury and operation, complications, treatment, and results are given for surgical–trauma cases.

15-3823 N
Fahlund, G. T. R./ Smedley, W. P.
TRAUMATIC RUPTURE OF THE SPLEEN: A ten–year experience with 18 cases.

JNE Contusion/Crushing, Injury/Trauma, Accident
JNPL Shock, Consequences
OAJN Spleen, Digestive System/ Alimentary Tract, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study—Report Type
WSD Surgery, Medical, Methods
Blunt trauma occurred in thirteen cases, five due to automobile accidents. Causes listed in table. Possible results of such trauma are given, with three case reports.

15-3825 S
Hopson, W. B./ Sherman, R. T./ Sanders, J. W.
STAB WOUNDS OF THE ABDOMEN: 5-year review of 297 cases.
4 p. tables. ref.

JNG Laceration/Openwound, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type
VN Epidemiology, Disciplines
WSC Diagnosis, Medical, Methods
WSD Surgery

Clinical and operative findings analyzed. Patients, averaging 28.5 years of age, were divided into three groups based on presence of peritoneal penetration and visceral injury. Time from injury to admission and from admission to surgery is given. In 17% of the patients time from injury to admission in the hospital was over four hours; in 34% of the patients time from admission to surgery was over four hours. Early laparotomy was performed in all patients. Overall morbidity was 23%, and mortality was 1.3%. Stab wounds account for more than 50% of penetrating abdominal wounds in most series.

15-3826 N
Sturim, H. S.
SURGICAL MANAGEMENT OF TRAUMATIC TRANSECTION OF THE PANCREAS: Review of nine cases and literature review.
Washington Univ. School of Medicine, Dept. of Surgery, St. Louis, Missouri. March 1966. 6 p. tables. Ref.

WSD Surgery, Medical, Methods
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YCC State—of—the—Art, Nature of Study, Study—Report Type
YEE Reviews, Contents

Article contains case summarizations of 47 cases collected from literature covering the years 1827 to 1965. Very high incidence of recovery in cases from year 1905 on. New clinical material consists of nine cases handled on. New clinical material consists of nine cases handled.

15-3827 N
Sizer, J. S./ Wayne, E. R./ Frederick, P. L.
DELAYED RUPTURE OF THE SPLEEN: Review of the literature and report of six cases.
March 1966. 3 p. illus. ref.

JNE Contusion/Crushing, Injury/Trauma, Accident

15-3842 S
Tomskey, G. C./ Schottman, G. C./ Mardis, H. K.
INJURIES OF THE KIDNEY.
Louisiana State Univ., School of Medicine, Dept. of Urology, New Orleans, June 1965. 11 p. figs.

JNG Laceration/Openwound, Injury/Trauma, Accident
OAMB Kidneys, Urogenital System, Anatomy/Body, Biomedical Aspect
WSD Surgery, Medical, Methods
JNE Contusion/Crushing
WSC Diagnosis
YEF Data Statistics, Contents, Study—Report Type
YCK Case Studies, Nature of Study

Reviews diagnosis, treatment, and results of 207 patients with primary renal injury. Primary cause was penetrating wound in 44 patients and blunt trauma in 163. Recommends exploration of all penetrating wounds immediately after initial X—ray evaluations, and conservative management of nonpenetrating trauma except in event of uncontrollable hemorrhage, infection, or urinary extravasation. Five case reports illustrate conservative management.

15-3860 N
Dorton, H. E.
COMPLETE DIVISION OF THE COMMON BILE DUCT DUE TO BLUNT ABDOMINAL TRAUMA: Case report.
May 1965. 2 p. ref.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
OAJM Liver/Biliary Tract, Digestive System/Alimentary Tract
YCK Case Studies, Nature of Study, Study—Report Type

Article focuses on one case, giving symptoms and delay from time of injury to operation and describing technique of repair and clinical course.

15-3865 N
Mueller, C. B.
THE MECHANISM OF ACUTE RENAL FAILURE AFTER INJURY AND TRANSFUSION REACTION AND ITS PREVENTION BY SOLUTE DIURESIS.
New York State Univ., Upstate Medical Center, Dept. of Surgery, Syracuse. April 1965. 6 p. ref.
Grant No: A-01393. 
Sponsor: Public Health Service, Institute of Arthritis and Metabolism.

JN Injury/Trauma, Accident
OAMB Kidneys, Urogenital System, Anatomy/Body, Biomedical Aspect
YER General Discussions, Contents, Study—Report Type

After a brief state-of-the-art discussion mechanism of failure is given. Due to infrequency of occurrence, experimental models were employed to conclude that tubular obstruction by casts and cell debris causes “lower nephron nephrosis.” Solute diuresis and several actions of mannitol, including its clinical use in emergencies, are described.

15-3866 S
Wilcox, G. L.
NONPENETRATING INJURIES OF ABDOMEN CAUSING RUPTURE OF SPLEEN: Report of 100 cases. 
April 1965. 3 p.
Conference: Western Surgical Association, 72nd annual, Nov. 19-21 Nov. 1964, Colorado.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAJN Spleen/Lymph Tracts, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
OAE Abdomen
YEF Data Statistics, Contents, Study—Report Type
VN Epidemiology, Disciplines
WSC Diagnosis, Medical, Methods
WSD Surgery

Gives etiology of 100 patients with rupture of spleen resulting chiefly from automobile accidents. Mortality was 17%. Clinical diagnosis was based on history of injury, evidence of peritoneal irritation, and shock. Diagnostic aids listed are absence of bowel sounds, rise in white blood count, abdominal paracentesis, and X ray. Treatment is removal of spleen, even for smallest tears. Delayed primary rupture occurred in 19% of cases.

15-3867 N
Cornell, W. P. / Ebert, P. A. / Zuidema, G. D.
Johns Hopkins Univ. School of Medicine. April 1965. 2 p. figs.

JNG Laceration/Open wound, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
YER General Discussions, Contents, Study—Report Type
WSX X Ray

Study strongly suggests that surgery and its risks may be dispensed with through diagnosis as to penetration of peritoneal cavity by X ray using contrast material. X rays revealed that 14 of 24 cases did not require surgery.

15-3879 S
Hanna, W. A. / Bell, D. M. / Cochran, W.
LIVER INJURIES IN NORTHERN IRELAND. 
Feb. 1965. 5 p. chart, tables, ref. 

JNP Consequences, Injury/Trauma, Accident
OAJM Liver, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type
YCC State—of—the—Art, Nature of Study
L Time
WSI Autopsy, Medical, Methods

Present findings of 112 autopsies and in clinical series of 48 patients, comparing experience and conclusions with those of other authors. In autopsy series, authors consider frequency and type of trauma responsible for injuries and seriousness of problem. In clinical series, discuss results of treatment and possible deficiencies in management, recommending surgery for all cases and technique of Wagensteen for emergency major resection.

15-3881 N
Fisher, P.
INJURY PRODUCED BY SEAT BELTS: Report of 2 cases. 
May 1965. 2 p. ref. 

JN Injury/Trauma, Accident
DMDB Seat Belts, Restraint Systems, Auxiliaries/Accessories, Vehicle
YCK Case Studies, Nature of Study, Study—Report Type

Results given of extensive studies made on the use of restraining devices. Because of the increased use of restraining devices in automobiles, injuries attributable to the seat belt are more frequent.

Case report presented of two women injured in a Volkswagen, both wearing a three-point combination lap and diagonal belt. One received a misplaced fracture of the sternum, the other rib fractures and a ruptured spleen.

Author concludes full shoulder harness restraint is probably the best and recommends better, safer automobile design to enable proper installation of suitable restraining devices.

15-3882 S
THE PATHOLOGY OF PEDESTRIAN AUTOMOTIVE ACCIDENT VICTIMS. See 21-3882 S

15-3891 S
Fitzgerald, J. B. / Quast, D. C. / Beall, A. C., Jr. / De Baey, M. E.
SURGICAL EXPERIENCE WITH 103 TRUNCAL SHOT-GUN WOUNDS. 
Baylor Univ. College of Medicine, Cora and Webb Mading Dept. of Surgery, Houston, Texas/ Jefferson Davis General Hospital, Houston, Texas/ Ben Taub General Hospital, Houston, Texas. 1965. 7 p. tables, figs. ref. 
BIBLIOGRAPHY

Contract No: DA-49-007-MD-2523.
Grant No: HE-03137/ HE-5387.
Sponsor: Army Research and Development Command/ Public Health Service.

WSD Surgery, Medical, Methods
YEF Data Statistics, Contents, Study–Report Type
JNG Laceration/Openwound, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
L Time
JNX Multiple Severe Injuries
WSE Therapeutic

Patients alive on arrival at hospital were grouped by therapy: observation, observation and tube thoracostomy, general anesthesia with major procedure extrapleural or extraperitoneal, and general anesthesia with thoracotomy or laparotomy. For each group, authors tabulated average period of hospitalization, clinical shock on admission, volume of blood received, and operative procedure employed. Frequencies and mortality rates for major organs and organ systems injured, and frequencies of postoperative complications, initial and secondary operative procedures, and causes of death are given.

15-3899 N
Thal, A. P./ Wilson, R. F.
A PATTERN OF SEVERE BLUNT TRAUMA TO THE REGION OF THE PANCREAS.
Wayne State Univ., College of Medicine, Dept. of Surgery, Michigan/ Detroit Receiving Hospital, Michigan/ Dearborn Veterans Administration Hospital, Michigan. Oct. 1964. 4 p. figs. ref.
Grant No: AM 06385–02.
Sponsor: National Institutes of Health/ Michigan Heart Association/ Receiving Hospital Research Corp.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study–Report Type
WSC Diagnosis, Medical, Methods
JNK Hemorrhage

Etiology of injury to head of pancreas is discussed. Management consists of removal of damaged head of pancreas and repair of biliary system, if possible. Three case reports of injury sustained by steering wheel are given.

15-3902 N
Hartmen, S. W./ Greaney, E. M., Jr.
TRAUMATIC INJURIES TO THE BILIARY SYSTEM IN CHILDREN.
Los Angeles Childrens Hospital, Dept. of Surgery, California. Aug. 1964. 4 p. figs. ref.

OAJM Liver/Biliary Tract, Digestive System/ Alimentary Tract, Anatomy/Body, Biomedical Aspect
EC Children, People
IN Injury/Trauma, Accident
YCK Case Studies, Nature of Study, Study–Report Type
WSC Diagnosis, Medical, Methods

Give 5 case reports. Discuss delay in diagnosis and use of operative cholangiography.

15-3908 S
Killen, D. A.
INJURY OF THE SUPERIOR MESENTERIC VESSELS SECONDARY TO NONPENETRATING ABDOMINAL TRAUMA.
DeWitt Army Hospital, Surgical Service, Fort Belvoir, Virginia. May 1964. 4 p. tables. ref.

JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YCK Case Studies, Nature of Study, Study–Report Type
YCC State–of–the–Art
YEC Bibliography, Contents
WSD Surgery, Medical, Methods

Author discusses rarity of this injury, giving two case reports and summarizing literature. 1320 cases from 11 studies are tabulated by organs injured. The most frequently injured organs were spleen, kidney, and liver; major vessels most often injured were the vena cava, renal artery, and superior mesenteric artery and vein. A separate table shows reference, age, sex, mechanism of injury, time treated, operative findings and procedures, and complications for seven case reports found in the literature.

15-3914 S
Hermann, R. E./ Hubay, C. A.
Cleveland Clinic Foundation, Ohio/ Cleveland University Hospitals, Ohio. Feb. 1964. 3 p. tables. ref.

JNG Laceration/Openwound, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
OAJK Small Intestine, Digestive System/Alimentary Tract
YEF Data Statistics, Contents, Study–Report Type
VN Epidemiology, Disciplines

Fifty consecutive cases were studied. Age distribution, incidence of associated injuries, time from injury to operative repair and associated number of deaths, and mechanisms of perforation are tabulated. Morbidity associated with injuries was primarily due to infection or intestinal obstruction.

15-3915 S
BLUNT ABDOMINAL TRAUMA.
BIBLIOGRAPHY


JNE Contusion/Crushing, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
VN Epidemiology, Disciplines
JNX Multiple Severe Injuries
JNH Fracture
WSD Surgery, Medical, Methods
WSC Diagnosis

Reviews hospital records of twenty-nine patients with clinical or autopsy diagnoses of blunt abdominal trauma, discussing etiology of trauma. Tabulates types of abdominal injury, other soft tissue injuries, fractures, and surgery performed for twelve patients with multiple injuries. Diagnostic aids are discussed.

15-3929 N
Hurwitt, E. S., Silver, C. E.
**SEAT–BELT HERNIA: A ventral hernia following an automobile crash.**

DMDB Seat Belts, Restraint Systems, Auxiliaries/Accessories, Vehicle
OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing, Injury/Trauma, Accident
YCK Case Studies, Nature of Study, Study–Report Type

Authors describe a rare type of injury and assume that it will be more common in the future. Case report included.

15-3967 S
Nietlispach, L.
**BESONDERHEITEN BEIM STUMPFEN BAUCHTRAUMA. [SPECIAL FEATURES OF BLUNT ABDOMINAL TRAUMA.]**

OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing, Blunt, Injury/Trauma, Accident
WSD Surgery, Medical, Methods
YEF Data Statistics, Contents, Study–Report Type
JNP Consequences/Complications

Author's experience with 118 patients is discussed, giving details of frequency of various organ injuries, number of cases that had surgery, and complications. Case reports are discussed. Of the cases treated conservatively some had unrecognized organic injuries causing late complications.

15-3976 S
**DER TÖDLICHE VERKEHRSUNFALL AUS DER SICHT DES PATHOLOGEN. [THE FATAL TRAFFIC ACCIDENT FROM THE PATHOLOGIST'S VIEW-POINT.]** See 23-3976 S

15-3991 S
Maurer, G./ Schäfer, H.
**DAS STUMPF BAUCHTRAUMA. [BLUNT ABDOMINAL TRAUMA.]**

OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNE Contusion/Crushing/Blunt, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study–Report Type
VN Epidemiology/Etiology, Disciplines
WSC Diagnosis, Medical, Methods
JNK Hemorrhage

Of 71,800 surgical patients treated from 1957–1964, there were 217 cases of blunt abdominal trauma. Authors discuss etiology of trauma and give frequency of injuries to different organs. Discuss in detail injuries to spleen, liver, large and small intestine, and retroperitoneal organs; compare number of cases treated conservatively to number of surgical procedures, with indication of results.

15-4005 S
Moss, L. K./ Schmidt, F. E./ Creech, O., Jr.
**ANALYSIS OF 500 STAB WOUNDS OF THE ABDOMEN.**

OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNG Laceration/Openwound/Penetrating, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study–Report Type

Authors found incomplete correlation between preoperative clinical evaluation and findings at operation. Concluded that early abdominal exploration is the only reliable index of intraperitoneal penetration and injury.

All cases underwent abdominal exploration and were divided into four categories by degree and extent of injury. Data include: incidence of shock, peritonitis, evisceration, postoperative complications and mortality rate (for each category), incidence of age, sex, race, wounding agents, wound sites, organ injury, intraperitoneal penetration, intraperitoneal injury and etiology of shock (for entire group). Mortality rate was 1.1%.

15-4022 S
Wilson, H./ Sherman, R.
**CIVILIAN PENETRATING WOUNDS OF THE ABDOMEN. I. Factors in mortality and differences from military wounds in 494 cases.**
Authors conclude that civilian cases are not entirely comparable to those reported in military series. Recommend further studies of civilian series and appropriate revision of military standards of treatment. Data statistics: age, sex, race, and type of wound; mortality and type of wound (treated cases); mortality and laparotomy (no perforation found); value of X ray in diagnosis; accuracy of diagnosis and results (no laparotomy); etiology and mortality; number organs injured and mortality; organ injured and mortality; causes of death.

Covers 100 patients dead on arrival and 100 patients alive on admission to hospital, 97% and 70%, respectively, with multiple injuries, and 83.5% injured in motor vehicle accidents. Authors discuss method and type of injury, condition of survivors on admission, treatment, and results; they conclude, generally, that prognosis is poor. Suggest that the greatest opportunity for life saving procedures lies in prevention. Data statistics: type of trauma; abdominal organs injured and mortality; associated injuries and mortality.


OAE Abdomen, Anatomy/Body, Biomedical Aspect
JNX Multiple Severe Injuries
INPL Shock, Consequences/Complications

General discussion emphasizes that traffic, industrial, and agricultural accidents where abdominal injury is suspected require admission to hospital. Briefly reviews literature as to frequency of injury for various abdominal sites. Diagnosis and treatment are briefly indicated for some injuries.
15-4054 S
Kleinert, H. E./ Romero, J.
BLUNT ABDOMINAL TRAUMA: Review of cases admitted to a general hospital over a 10 year period.
Louisville Univ., School of Medicine, Dept. of Surgery, Kentucky/ Louisville General Hospital, Kentucky. 1961. 8 p. tables. ref.
JNE Contusion/Blunt, Injury/Trauma, Accident
OAE Abdomen, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study–Report Type
VN Epidemiology/Etiology, Disciplines
OAJM Liver/Biliary Tract
OAMB Kidneys, Urogenital System
OAJC Spleen/Lymph Tracts, Digestive System, Alimentary Tract
OAJS Reaction Time, Frequency/Time, Operating Conditions, Physical Aspect

15-4064 S
PELVIC FRACTURES: Associated intestinal and mesenteric lesions. See 16-4064 S

15-4073 S
Carlton, C. E., Jr./ Scott, R., Jr.
PENETRATING RENAL INJURIES: An analysis of 100 cases.
JNG Renal/Cyst, Injury/Trauma, Accident
OAMB Kidneys, Urogenital System, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
WSE Therapeutic
JNF Consequences/Complications

Authors recommend excretory urography and exploratory laparotomy as diagnostic procedures. Recommend surgical treatment. Note that hematuria was not found in 20%. Data statistics: mode of injury; incidence of hematuria; symptoms and physical findings; results of plain film of abdomen; results of excretory urography; types of treatment and complications; incidence of associated injuries.

15-4082 S
Ollinde, H. D. H.
NONPENETRATING WOUNDS OF THE ABDOMEN: A report of 47 cases with review of the literature.
JNE Contusion/Blunt, Injury/Trauma, Accident
YCC State–of–the–Art, Nature of Study, Study–Report Type
OAE Abdomen, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines

Reviews cases admitted to hospital over 5-year period, comparing frequency of causes with that found by other researchers. In this series, 4.3% were auto-pedestrian accidents and 48.9% were auto-collisions. Discusses injuries to various organ systems and to specific organs, factors affecting extent of injury, immediate management, indications for operations, anesthesia, and post-operative management.
THE SURGICAL MANAGEMENT OF 640 CONSECUTIVE LIVER INJURIES IN CIVILIAN PRACTICE.
Baylor Univ. College of Medicine, Cora and Webb Mading Dept. of Surgery, Houston, Texas/ Jefferson Davis General Hospital, Houston, Texas. June 1962. 3 p. tables. ref.
Grant No: HTS-5387.
Sponsor: Houston Heart Association, Texas/ Texas Heart Association; Public Health Service.

Study covers period 1939–1961. First 300 cases previously reported. Authors describe and discuss incidence, type of injury, associated injuries, management and surgical technique, results, causes of death, and complications. Attribute marked decrease in mortality rate to adequate use of massive whole blood transfusions and surgical intervention. Note that incidence of blunt trauma has increased. Correlate number of associate organs injured and mortality. Mortality highest for blunt trauma (as compared to stab wound and gunshot wound).

Study Belt Syndrome: Sigmoid colon perforation.
Army Hospital Ryukyu Islands, Dept. of Surgery. April 1967. 2 p. ref.

Discusses nature and mechanisms of intra-abdominal and pelvic visceral and mesenteric injuries incurred while wearing a seat belt. Case of perforation of sigmoid colon following seat belt injury is reported.

INTRA–ABDOMINAL INJURIES CAUSED BY AUTOMOBILE SEAT BELTS.
Christ Hospital, Dept. of Radiology, Cincinnati, Ohio. 4 Sept. 1967. 3 p. ref.

Discusses nature and mechanisms of intra-abdominal and pelvic visceral and mesenteric injuries incurred while wearing a seat belt. Case of perforation of sigmoid colon following seat belt injury is reported.

Authors review findings for 363 patients with abdominal trauma (91 with concomitant head injuries). Note coexistence of abdominal and head injuries is a particularly lethal combination. Discuss and describe factors in mismanagement of patients with such injuries. Data statistics (with respect to absence or presence of head injuries): incidence of coma and shock; incidence of shock in presence of associated injuries; frequency and results of paracentesis.

FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964. See 21-4119 S

INJURIES OF THE LIVER: A review of 111 cases.
Kings County Hospital Center, Brooklyn, New York/ New York State Univ., Brooklyn Downstate Medical Center, Dept. of Surgery. Jan. 1963. 7 p. tables. ref.

Shafman, G. W./ Gliedman, M. L./ Cappelletti, R. R.
INJURIES OF THE LIVER: A review of 111 cases.
Kings County Hospital Center, Brooklyn, New York/ New York State Univ., Brooklyn Downstate Medical Center, Dept. of Surgery. Jan. 1963. 7 p. tables. ref.
All patients were alive on admission to hospital. Authors discuss diagnosis, complications, associated injuries, treatment, and mortality. Analyze the relationship of mortality to various factors. Describe and discuss management procedures followed in this hospital. Emphasize importance of adequate resuscitation, diagnosis, and drainage. Data statistics: age; race; sex; mortality; degree, incidence of shock; number of organs injured; extra-abdominal injuries; hemoperitoneum; type, extent of liver injury; principal causes of death. Discussion follows article.

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15-4131 S
Sturim, H. S.
THE SURGICAL MANAGEMENT OF PANCREATIC INJURIES.
Washington Univ. School of Medicine, Dept. of Surgery, St. Louis, Missouri. 1965. 6 p. tables. ref.

15-4132 N
Williams, J. S./ Lies, B. A., Jr./ Hale, H. W., Jr.
THE AUTOMOTIVE SAFETY BELT: In saving a life may produce intra—abdominal injuries.
Rochester Univ., School of Medicine and Dentistry, New York/ New York State Univ., Buffalo, 1966. 7 p. tables. figs. ref.

15-4134 S
Thompson, R. J., Jr./ Hinshaw, D. B.
PANCREATIC TRAUMA: Review of 87 cases.
Loma Linda Univ., School of Medicine, Dept. of Surgery, California/ Los Angeles County Hospital, California. Jan. 1966. 5 p. charts. figs. ref. tables.

15-4146 S
Pridgen, J. E./ Herff, A. F., Jr./ Watkins, H. O./ Halbert, D. S./ d'Avila, R./ Crouch, D. M./ Prud'homme, J. L.
PENETRATING WOUNDS OF THE ABDOMEN: Analysis of 776 operative cases.

15-4147 S
Wilson, D. H.
INCIDENCE, ETIOLOGY, DIAGNOSIS, AND PROGNOSIS OF CLOSED ABDOMINAL INJURIES: A study of 265 consecutive cases.
BIBLIOGRAPHY


15-4149 S

Epidemiology/Etiology, Disciplines

WN Diagnosis, Medical, Methods

OAE Abdomen, Anatomy/Body, Biomedical Aspect

JNE Contusion/ Crushing/ Blunt, Injury/Trauma, Accident

NKFF Delay, Frequency/ Time, Operating Conditions, Physical Aspect

Author presents data and discusses findings. Discusses factors influencing diagnosis and prognosis in each type of closed abdominal injury. Suggests that further decrease in the mortality rate could be achieved by improved facilities for early diagnosis and use of recent improvements in resuscitation procedures. Data statistics: age; sex; type of accident and age; type of injury; treatment and mortality; final diagnosis of patients with abdominal wall injuries.

15-4196 S

Allen, R. B./ Curry, G. J.

ABDOMINAL TRAUMA: A study of 297 consecutive cases.


JNE Contusion/ Crushing/ Blunt, Injury/Trauma, Accident

JNG Laceration/ Openwound/ Penetrating

OAE Abdomen, Anatomy/ Body, Biomedical Aspect

NKFF Delay, Frequency/ Time, Operating Conditions, Physical Aspect

YEF Data Statistics, Contents, Study – Report Type

Authors analyze and discuss etiology, types of injuries, associated injuries, shock, selection of patients for operation, morbidity, mortality and important factors in management. Data statistics: age; sex; mortality; type of injury; type of accident; treatment; degree of shock; interval between admission and operation; duration of hospitalization.

15-4198 S

Zabinski, E. J./ Harkins, H. N.

DELAYED SPLENIC RUPTURE: A clinical syndrome following trauma; report of four cases with an analysis of one hundred and seventy–seven cases collected from the literature.


JNE Contusion/ Crushing/ Blunt, Injury/ Trauma, Accident

NKFF Delay, Frequency/ Time, Operating Conditions, Physical Aspect

Author analyzes and discusses data from 20–year period. Reviews mortality compared to closed rupture of the spleen. Notes a striking increase in the incidence of this injury and consistently high mortality. Stresses the difficulty and importance of early diagnosis and proper surgical management. Does not recommend the use of gauze packing. Data statistics: mortality; age; sex; location and cause of injury; treatment; interval between admission and operation; postoperative course; other injuries; time of death.

15-4504 S

DIED IN HOSPITAL: A three–year study of deaths following trauma. See 21-4504 S

15-4506 S

Hellstrom, G.

CLOSED INJURY OF THE LIVER: Analysis of a series of 300 cases.


OAJM Liver/ Biliary Tract, Digestive System/ Alimentary Tract, Anatomy/ Body, Biomedical Aspect

YEF Data Statistics, Contents, Study – Report Type

Authors analyze 70 cases in detail. Discuss incidence, initial injury, diagnosis, treatment, complications and mortality. Data statistics: age, sex; type of accident; length of latent period; pathologic changes.

15-4513 S

ÜBER DIE RIPPENSENFRAKTUREN DURCH VERKEHRsunFALLE UND DEN DERZEITIGEN
STAND IHREr BEHANDLUNG. [ON SERIAL RIB FRACTURES CAUSED BY TRAFFIC ACCIDENTS
AND THE CURRENT STATUS OF THEIR TREATMENT;] See 24-4513 S

15-4542 S

Hung, C. R./ Tsai, T. C./ Kao, T. C.

NONPENETRATING ABDOMINAL INJURY: A report of 98 cases.

Authors present and discuss data. Discuss mechanism of injury, condition of patients on admission, diagnosis, and treatment. Recommend early exploratory laparotomy on the basis of history of trauma and clinical findings. Data statistics: age and sex; causes of injuries; occupation; abdominal organ injured and mortality; extraabdominal injuries and mortality.

16-3790 S
Peltier, L. F.
COMPLICATIONS ASSOCIATED WITH FRACTURES OF THE PELVIS.
JNP Consequences, Injury/Trauma, Accident
JNH Fracture
JNK Hemorrhage
OADH Pelvis, Lower Extremity, Anatomy/Body, Biomedical Aspect
OAM Urogenital System
OALF Diaphragm, Respiratory System
YEF Data Statistics, Contents, Study—Report Type
WSD Surgery, Medical, Methods

Discussion based on 186 patients with fractures of pelvis, 60% of which had additional injuries. Fractures were classified according to whether they affected weight-bearing. Highest mortality rate was among patients with bilateral fractures of pubic rami, central dislocations of hip, and fractures of hemipelvis. Management of intraperitoneal and intrapelvic retroperitoneal hemorrhage is discussed, and other rare complications are briefly dealt with. Citations conclusions of other authors concerning specific injuries and hemorrhage complicating pelvic fractures.

16-3882 S
THE PATHOLOGY OF PEDESTRIAN AUTOMOTIVE ACCIDENT VICTIMS. See 21-3882 S

16-4034 N
Sullivan, C. R.
OADH Pelvis, Lower Extremity, Anatomy/Body, Biomedical Aspect
JNH Fracture, Injury/Trauma, Accident
WSE Therapeutic, Medical, Methods
JNP Consequences/Complications

Pelvic fracture per se is of less importance than the visceral damage almost invariably accompanying it. Text with illustrations describes five common complications.

16-4050 S
MASSIVE HEMORRHAGE FROM PELVIC FRACTURES. See 24-4050 S

16-4064 S
Moore, J. R.
PELVIC FRACTURES: Associated intestinal and mesenteric lesions.
Reports on 25 patients with intestinal perforation, with or without mesenteric laceration, and one with mesenteric laceration only. 58% mortality rate was partly because many accidents occurred at distant and relatively inaccessible sites. Reviews literature on pelvic injuries, emphasizing diagnosis of blunt intra-abdominal injury. Hemoglobin and hematocrit determinations, leukocyte counts, four-quadrant peritoneal tap, and radiographs cannot be relied upon for early diagnosis.

Authors discuss etiology of trauma, and show frequency of occurrence of specific types of pelvic fracture. Mechanism of injury to genitourinary tract is explained with sketches and X rays. Frequency of transection of uretra, rupture of bladder, and complications is given for male and female patients in sample. Therapy and urgency of proper diagnosis is discussed.

Authors present classification scheme for pelvic fractures and associated injuries. Describe and discuss diagnosis and treatment of pelvic fractures. Analyze 14/108 cases with associated injuries. Describe management procedures by means of 9 representative case reports. Data statistics: sex; age; race; cause of injury; type of pelvic fracture; type of associated injury; result; average length of hospital stay.

Authors review 35 cases. Correlate the type of fracture and type of abdominal injury. Describe and discuss major complications. Data statistics: associated injuries; type of fracture and type of accident.
Authors give state-of-the-art report associated with their findings. Discuss types of arterial injuries, with tables of amputation frequencies according to artery injured and interval between accident and surgery; evaluate diagnostic techniques, especially arteriography, and surgical and other therapies.

17-3708 S
Patman, R. D./ Poulos, E./ Sires, G. T.
THE MANAGEMENT OF CIVILIAN ARTERIAL INJURIES.
Texas Univ., Southwestern Medical School, Dept. of Surgery, Dallas. April 1964. 8 p. ref. figs. tables.

WSD Surgery, Medical, Methods
OAK Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study—Report Type
JNK Consequences, Injury/Trauma, Accident
JNP Hemorrhage

Analyze 271 arterial injuries in 256 patients seen over twelve years, tabulating locations and types of wounds. 48% in shock upon arrival at hospital. Mortality rate of 8.2%, and true amputation rate of 3.8%. Average blood replacement was 930 C.C. and average replacement with physiologic salt solution was 2,095 C.C. Detailed description of types of arterial injury in which lateral repair, replacement grafts, and end-to-end anastomosis is best repair technique. Only 18.6% of injuries to extremities were treated by ligation as definitive measure. Ancillary procedures are emphasized, including relief of associated vasospasm and indications for fasciotomy.

17-3721 S
FAT EMBOLISM IN FATAL AUTOMOBILE ACCIDENTS. See 25-3721 S

17-3722 S
FAT EMBOLISM STUDIED IN 100 PATIENTS DYING AFTER INJURY. See 25-3722 S

17-3724 S
MORTALITY RELATED TO VARIOUS METHODS OF TREATMENT OF FEMORAL SHAFT FRACTURES. See 25-3724 S

17-3728 S
AUTOPSY FINDINGS IN 127 PATIENTS FOLLOWING FATAL TRAFFIC ACCIDENTS. See 22-3728 S

17-3780 N
Grogono, B. J. S.
SOME COMPLICATIONS OF UPPER LIMB INJURIES.

17-3789 S
CENTRAL ACETABULAR FRACTURES: A review of thirty-five cases. See 16-3789 S

17-3835 N
AGRICULTURAL TRACTOR ACCIDENTS: A description of 14 tractor accidents and a comparison with road traffic accidents. See 18-3835 N
17-3847 S
Goldman, B. S./ Firor, W. B./ Key, J. A.
THE RECOGNITION AND MANAGEMENT OF PERIPHERAL ARTERIAL INJURIES.
Toronto General Hospital, Div. of Cardiovascular Surgery (Canada)/ Ontario Heart Foundation (Canada)/ Toronto Univ., Dept. of Surgery (Canada). 1965. 7 p. tables. figs.

17-3863 N
Fraser, G. A.
CLOSED TRAUMATIC RUPTURE OF COMMON FEMORAL ARTERY.
Poole General Hospital, Dept. of Surgery, Dorset (England). April 1965. 4 p. illus. ref.

17-3901 N
Miller, D. S./ Gilbert, R. L.
MANAGEMENT OF FRACTURE WITH VASCULAR INJURY.

17-3921 S
Dencker, H.
SHAFT FRACTURES OF THE FEMUR: A comparative study of the results of various methods of treatment in 1,003 cases.
Goteborg Univ., Dept. of Surgery (Sweden). 1965. 7 p. tables. ref.

17-3930 S
Lucas, G. L./ Wirka, H. W.
ORTHOPEDIC PROBLEMS IN AGRICULTURAL TRAUMA.
BIBLIOGRAPHY

17-3937 S
Stören, G.

17-3944 S
Hjelmstedt, A./ Sundstrom, R.

17-3946 S
FAT EMBOLISM: Fat absorption from the site of injury. See 25-3946 S

17-3965 S
Kapandji, A./ Alexandre, J.-H./ Frain, Ph./ Boury, G.

17-4013 N
Anyan, W. G./ Goldner, J. L./ Clippinger, F. W.

17-4027 S
Gibson, J. M. C.

17-4037 S
Boury, G./ Plummerault, J./ Alexandre, J. H.
ÉTUDE ANALYTIQUE DE 122 FRACTURES DIA- PHYSAIRES DE JAMBE CHEZ L’ADULTE. [ANALYTIC
CAL STUDY OF 122 DIAPHYSIAL LEG FRACTURES IN ADULTS.

JNH Fracture, Injury/Trauma, Accident  
OADE Leg, Lower Extremity, Anatomy/Body, Biomedical Aspect  
JNP Consequences/Complications  
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect

Authors give frequency of cases by sex and age; tabular correlation of site of fracture (upper third, middle, lower third of leg) with type of fracture (transverse, oblique, spiral, multiple). Discuss therapy: orthopedic (conservative) treatment, and osteosynthesis (bolting, nailing, plates, etc.). All categories are discussed giving time for recovery, and results.

17-4071 S  
Grant No: RG 7181.  
Sponsor: Mississippi Heart Association/ National Institutes of Health.  

JNG Laceration/Openwound/Penetrating, Injury/Trauma, Accident  
OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect  
WSE Therapeutic, Medical, Methods  
WSD Surgery, Medical, Methods  
YEF Data Statistics, Contents, Study—Report Type  
YCK Case Studies, Nature of Study

Series reflects changes in management of arterial injuries over five years with current emphasis on early direct repair. Cases are classified according to complete division, incomplete division, puncture wounds, contusions, and arteriospasm and kinking. Cites injury, interval before evaluation, pathology, operative procedure, and result for each case.

17-4074 S  
THE MANAGEMENT OF SKELETAL FRACTURES IN THE PATIENT WITH A HEAD INJURY. See 11-4104 S  

17-4197 S  

OAKCB Arteries, Blood Vessels, Cardiovascular System, Anatomy/Body, Biomedical Aspect  
WSD Surgery, Medical, Methods  
YEF Data Statistics, Contents, Study—Report Type
A 10-year series of 168 pedestrians fatally injured in traffic accidents in Oslo is discussed. These account for 65% of traffic fatalities during same period. Distribution by age and sex, survival period, frequency of injury according to body areas and mortality, and effect of multiple injuries on survival period are tabulated. Intoxication among fatally-injured pedestrians is discussed.

14 case reports are given. Tractor accidents are shown to have much higher mortality and serious-injury rates than road–traffic accidents, with 25% mortality in injury with overturned tractor. Injuries are of crush type most frequently to trunk. Typical tractor–accident victim is described. Safety frames are recommended.

A 10-year series of 168 pedestrians fatally injured in traffic accidents in Oslo is discussed. These account for 65% of traffic fatalities during same period. Distribution by age and sex, survival period, frequency of injury according to body areas and mortality, and effect of multiple injuries on survival period are tabulated. Intoxication among fatally–injured pedestrians is discussed.

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18-3828 S

**TRAUMATIC RUPTURE OF AORTA.** Special reference to automobile accidents. See 14-3828 S

18-3835 N

**AGRICULTURAL TRACTOR ACCIDENTS: A description of 14 tractor accidents and a comparison with road traffic accidents.**

18-3891 S

**SURGICAL EXPERIENCE WITH 103 TRUNCAL SHOT-GUN WOUNDS.** See 15-3891 S

18-3908 S

**INJURY OF THE SUPERIOR MESENTERIC VESSELS SECONDARY TO NONPENETRATING ABDOMINAL TRAUMA.** See 15-3908 S

18-3912 S

**TREATMENT OF PENETRATING WOUNDS OF THE CHEST.** See 13-3912 S

18-3967 S

**BESONDERHEITEN BEIM STUMPFEN BAUCHTRAUMA. [SPECIAL FEATURES OF BLUNT ABDOMINAL TRAUMA.]** See 15-3967 S

18-4002 S

**THE COMATOSE INJURED PATIENT.** See 11-4002 S

18-4003 N

**RESEARCH ON ACCIDENTAL TRAUMA IN THE ARMED SERVICES: A summary of the research program of the Commission on Accidental Trauma.**

14-3846 S

**GUNSHOT WOUNDS OF THE HEART: A review.** See 14-3846 S

18-3790 S

**COMPLICATIONS ASSOCIATED WITH FRACTURES OF THE PELVIS.** See 16-3790 S

18-3785 S

**PENAL TRAUMA: Experience with 258 cases.** See 15-3785 S

16-3790 S

**COMPLICATIONS ASSOCIATED WITH FRACTURES OF THE PELVIS.** See 16-3790 S

18-3798 S

**THORACIC TRAUMA: Analysis of 1022 cases.** See 13-3798 S

18-3801 S

**INJURIES OF THE LIVER IN 300 CONSECUTIVE PATIENTS.** See 15-3801 S

18-3802 S

**Solheim, K. PEDESTRIAN DEATHS IN OSLO TRAFFIC ACCIDENTS.**


18-3828 S

**TRAUMATIC RUPTURE OF AORTA. Special reference to automobile accidents.** See 14-3828 S

18-3891 S

**SURGICAL EXPERIENCE WITH 103 TRUNCAL SHOT-GUN WOUNDS.** See 15-3891 S

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**INJURY OF THE SUPERIOR MESENTERIC VESSELS SECONDARY TO NONPENETRATING ABDOMINAL TRAUMA.** See 15-3908 S

18-3912 S

**TREATMENT OF PENETRATING WOUNDS OF THE CHEST.** See 13-3912 S

18-3967 S

**BESONDERHEITEN BEIM STUMPFEN BAUCHTRAUMA. [SPECIAL FEATURES OF BLUNT ABDOMINAL TRAUMA.]** See 15-3967 S

18-4002 S

**THE COMATOSE INJURED PATIENT.** See 11-4002 S

18-4003 N

**RESEARCH ON ACCIDENTAL TRAUMA IN THE ARMED SERVICES: A summary of the research program of the Commission on Accidental Trauma.**


**McFarland, R. A. RESEARCH ON ACCIDENTAL TRAUMA IN THE ARMED SERVICES: A summary of the research program of the Commission on Accidental Trauma.**

14-3846 S

**GUNSHOT WOUNDS OF THE HEART: A review.** See 14-3846 S

18-3790 S

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18-3801 S

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18-3891 S

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18-3908 S

**INJURY OF THE SUPERIOR MESENTERIC VESSELS SECONDARY TO NONPENETRATING ABDOMINAL TRAUMA.** See 15-3908 S

18-3912 S

**TREATMENT OF PENETRATING WOUNDS OF THE CHEST.** See 13-3912 S

18-3967 S

**BESONDERHEITEN BEIM STUMPFEN BAUCHTRAUMA. [SPECIAL FEATURES OF BLUNT ABDOMINAL TRAUMA.]** See 15-3967 S

18-4002 S

**THE COMATOSE INJURED PATIENT.** See 11-4002 S

18-4003 N

**McFarland, R. A. RESEARCH ON ACCIDENTAL TRAUMA IN THE ARMED SERVICES: A summary of the research program of the Commission on Accidental Trauma.**


Nonbattle injuries were found to present a serious problem to the Armed Services. "Private motor vehicles result in more fatalities than any other single cause." Author describes the research sponsored in the last ten years by the Commission. Projects were of the following types: epidemiological studies and surveys; studies relating to host factors (personal characteristics of drivers involved in accidents); studies relating to host–agent interrelationships; studies relating to host–agent–environ-
ment interrelationships; countermeasure research. Describes two countermeasures which substantially reduced the accident rate, and some other practical application of research results.

18-4007 S
Garrett, J. W./ Braunstein, P. W.
THE SEAT BELT SYNDROME.
May 1962. 10 p. photos. tables. ref.

YW Seat Belts, Restraint Systems, Auxiliaries/Accessories, Vehicle
YCK Case Studies, Nature of Study, Study-Report Type

Authors studied 2,778 accident-involved automobiles in which at least one occupant was wearing a seat belt. Concluded that seat belts did not significantly increase the frequency or severity of injuries. Found less than 1% of instances of belt failure among 3,325 users. Data statistics: accident type and injuries (with and without belts); highest impact speed; lower torso injuries; type of belt failure.

18-4009 S
Gissane, W./ Bull, J.
INJURIES FROM ROAD ACCIDENTS.
Birmingham Accident Hospital, Road Injuries Research Group (England). April 1962. 5 p. tables. illus. ref.

IN Injury/Trauma, Accident
VN Epidemiology/Etiology, Disciplines
EA Age, People
EF Sex

Details of 350 fatalities. Authors note the severity and multiplicity of these injuries and the high incidence of brain injuries. Discuss the need and some possible mechanisms for prompt and efficient treatment. Describe modifications of vehicle design which might reduce frequency and severity of some types of accidents. Data statistics: mode of transportation, types of injuries and complications; age; sex; survival time.

18-4022 S
CIVILIAN PENETRATING WOUNDS OF THE ABDOMEN. I. Factors in mortality and differences from military wounds in 494 cases. See 15-4022 S

18-4028 S
SURGICAL CONSIDERATIONS OF NON-PENETRATING ABDOMINAL INJURIES. See 15-4028 S

18-4044 S
LE LESIONI DELLA MILZA NEI TRAUMI CHIUSI ED APERTI DELL’ADDOME: Considerazioni su 91 casi. [LESSONS OF THE SPLEEN IN CLOSED AND OPEN TRAUMAS OF THE ABDOMEN: Considerations on 91 cases.] See 15-4044 S

18-4047 S
CLOSED ABDOMINAL INJURIES: An analysis of 168 consecutive cases with particular reference to diagnostic problems. See 15-4047 S

18-4051 S
LESIONS ASSOCIATED WITH CLOSED LIVER INJURY: A clinical study of 192 fatal cases. See 15-4051 S

18-4058 N
Ponka, J. L./ Antoni, R. O.

JN Contusion/Crushing/Blunt, Injury/Trauma, Accident
JG Laceration/Open wound/Penetrating
OAE Abdomen, Anatomy/Body, Biomedical Aspect
OAF Thorax
WSE Surgery, Medical, Methods

General findings from 275 cases of thoraco-abdominal trauma between 1953 and 1956 are discussed. Possibility of involvement of multiple organs with both penetrating and nonpenetrating injuries is emphasized. Establishment of adequate airway and maintenance of circulation is first consideration and must be assured before X rays are taken. Essentials for management of chest and upper abdominal injuries are presented, and teamwork by members of different surgical specialties is emphasized.

18-4061 S
Kunz, H./ Domanig, E., Jr./ Howanietz, L.
DIE URSAKEN POSTOPERATIVER TODESFÄLLE. [THE CAUSES OF POST OPERATIVE DEATHS.]

JNB Fatal, Injury/Trauma, Accident
JNP Consequences/Complications
WSD Surgery, Medical, Methods
WSC Diagnosis
VN Epidemiology/Etiology, Disciplines
WSI Autopsy/Pathology

2,596 cases of post–operative death are discussed. In the period 1957–1960, of 357 cases there were 101 in which surgical procedure was needed to treat severe injuries. Trends of the frequencies of various causes of death are shown and discussed, 215 cases were caused by pulmonary embolism.

18-4064 S
PELVIC FRACTURES: Associated intestinal and mesenteric lesions. See 16-4064 S

18-4072 S
ANALYSIS OF FACTORS AFFECTING SURVIVAL AFTER CHEST INJURIES. See 13-4072 S
18-4073 S
PENETRATING RENAL INJURIES: An analysis of 100 cases. See 15-4073 S

18-4081 S
A PROPOS DE 268 TRAUMATISMES THORACIQUES FERMES. [APROPOS OF 268 CLOSED CHEST INJURIES. See 13-4081 S

18-4084 S
THE SURGICAL MANAGEMENT OF 640 CONSECUTIVE LIVER INJURIES IN CIVILIAN PRACTICE. See 15-4084 S

18-4085 S
COMPLICATED PELVIC FRACTURES (WITH CASE REPORTS). See 16-4085 S

18-4092 S
CONSIDERAZIONI STATISTICHE E DI TERAPIA SU 517 TRAUMATIZZATI CRANO-ENCEFALICI. [STATISTICAL AND THERAPEUTIC CONSIDERATIONS ON 517 PATIENTS WITH CRANIOCEREBRAL INJURIES.] See 11-4092 S

18-4106 S
UNRECOGNIZED ABDOMINAL TRAUMA IN PATIENTS WITH HEAD INJURIES. See 15-4106 S

18-4108 S
ASSOCIATED INJURIES IN HEAD INJURED PATIENTS. See 11-4108 S

18-4126 S
INJURIES OF THE LIVER: A review of 111 cases. See 15-4126 S

18-4133 S
Izant, R. J., Jr./ Hubay, C. A.

JN Injury/Trauma, Accident
EC Children, People
JNB Fatal
VN Epidemiology/Etiology, Disciplines
YEF Data Statistics, Contents, Study–Report Type

From 5,646 child accidents treated in an emergency ward, authors project data to estimate national rate of 15,000,000/year. Discuss prevention. Data statistics: number of children treated and total number of patients; age distribution of patients; type of injury; mechanisms of injury (detailed with respect to motor vehicles); hospital admissions and service.

18-4149 S
MAJOR ABDOMINAL INJURIES ASSOCIATED WITH PELVIC FRACTURES. See 16-4149 S

18-4160 S
PENETRATING INJURIES TO THE CHEST: Clinical results in the management of 769 patients. See 13-4160 S

18-4172 N
Brunius, U./ Lindgren, S.

JN Injury/Trauma, Accident
DMDB Seat Belts, Restraint Systems, Auxiliaries/Accessories, Vehicle
DMDC Shoulder Harnesses

Study done in Sweden. Authors found no injuries produced or aggravated by use of safety belts. Conclude that maximum protection is offered in front-end collisions and turnover accidents; belt proved useful in 6 out of 10 cases. Data statistics: protective effect of belt; type of collision; speed of vehicle, 8 case histories.

18-4337 S
ROAD ACCIDENTS. See 03-4337 S

18-4500 S
FACTORS IN THE MORTALITY OF CLOSED HEAD INJURIES. See 22-4500 S

18-4518 S
THORACIC INJURIES DUE TO BLUNT TRAUMA. See 13-4518 S

21-3713 S
EINE ANALYSE VON 827 UNFALLTODESFÄLLEN. [AN ANALYSIS OF 827 CASES OF FATAL ACCIDENTS.] See 24-3713 S

21-3723 S
CLOSED THORACIC INJURIES. See 13-3723 S

21-3748 S
MÖGLICHKEITEN UND GRENZEN ÄRZTLICHER HILFELEISTUNGEN AM UNFALLORT. [POSSIBILITIES AND LIMITATIONS OF MEDICAL ASSISTANCE AT THE SCENE OF A DISASTER.] See 02-3748 S

21-3757 N
Testart, J.
LA MORT PAR EMBOLIE PULMONAIRE (II). [DEATH FROM PULMONARY EMBOLISM (II).]
General state-of-the-art report: (a) reflex vaso-constriction, (b) pulmonary arterial hypertension, (c) pulmonary arterial obstruction: infarction, (d) pharmacology—experiments with various drugs, (e) analogy with the action of certain hormones. Concludes that embolism normally occurs as a mechanical blocking of the arterioles.

From 1958 through 1962, authors observed 94 cases with 104 occurrences of pulmonary embolism. Only observations within 24 hours of occurrence are discussed in this report. Clinical symptoms are classified as light, medium, or severe. A relatively high incidence of alterations on the EKG is verified within the first 24 hours. An analysis is made to demonstrate some correlation between various irregularities in the EKG and severity of embolism and also to the time of first EKG recorded. Sample EKG's are discussed. The frequency of the S1Q3 type of change is compared to findings of other researchers.

Authors conclude that the condition is often unrecognized and usually inadequately treated. Discuss diagnosis and management.
Gissane, W.
THE BASIC SURGERY OF MAJOR ROAD INJURIES.

Author describes and discusses incidence, causes, and nature of road injuries. Presents data from 350 necropsies. Discusses injuries to the respiratory system, hemorrhagic shock, multiple injuries, head injuries and open wounds, with particular reference to diagnosis and priority of treatment. Concludes that mortality rate can be reduced by prompt treatment. Describes three-tiered scheme proposed in the Interim Report of the Accident Services Review Committee. Emphasizes the need for comprehensive accident departments. Data statistics: mode of travel; sites of severe injuries; time of death.

Tonge, J. J., O'Reilly, M. J. J., Davison, A., Derrick, E. H.
FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964.
Institute of Forensic Pathology, Dept. of Health, Brisbane (Australia)/ Queensland Institute of Medical Research (Australia). 21 Nov. 1964. 10 p. fig. tables. ref.

Authors present data on 2214 fatalities, derived from necropsies and police records, discuss implications. Data statistics: mode of transportation; year of accident; sex; actual and expected number of fatalities; number of vehicles, fatalities; deaths by time of day; distribution of abdominal injuries; distribution of injuries to neck, spine, pelvis; distribution of upper and lower limb fractures; total number of injuries; total number of victims; injuries per victim; uncomplicated extradural and subdural hemorrhage; cervical fracture; multiple fractures of lower limbs; pneumonia; fat embolism; traumatic asphyxia; blood alcohol levels; burning and drowning; ejection. When large numbers are involved, data are tabulated by mode of transportation and/or period in which accident occurred.

Gorham, L. W.
A STUDY OF PULMONARY EMBOLISM: Part I. A clinicopathological investigation of 100 cases of massive embolism of the pulmonary artery; diagnosis by physical signs and differentiation from acute myocardial infarction.
New York Hospital–Cornell Medical Center, Dept. of Pathology, July 1961. 8 p. ref. tables.

Authors present data on 2214 fatalities, derived from necropsies and police records, discuss implications. Data statistics: mode of transportation; year of accident; sex; actual and expected number of fatalities; number of vehicles, fatalities; deaths by time of day; distribution of abdominal injuries; distribution of injuries to neck, spine, pelvis; distribution of upper and lower limb fractures; total number of injuries; total number of victims; injuries per victim; uncomplicated extradural and subdural hemorrhage; cervical fracture; multiple fractures of lower limbs; pneumonia; fat embolism; traumatic asphyxia; blood alcohol levels; burning and drowning; ejection. When large numbers are involved, data are tabulated by mode of transportation and/or period in which accident occurred.
21-4504 S  
**BIBLIOGRAPHY**

NKF  Frequency/Time, Operating Conditions, Physical Aspect  
YEF  Data Statistics, Contents, Study—Report Type  

Author studied autopsy and clinical records of 100 patients. Reviews the literature. Lists and describes 12 physical signs which are pathognomonic. Data statistics: clinical and pathological analysis; survival time; age; incidence of diagnostic clues; physical signs.

21-4504 S  
Van Wagoner, F. H.  
**DIED IN HOSPITAL: A three—year study of deaths following trauma.**  

WSC  Diagnosis, Medical, Methods  
WSD  Surgery  
WSI  Autopsy/Pathology  
VN  Epidemiology/Etiology, Disciplines  
YEF  Data Statistics, Contents, Study—Report Type  
JNB  Fatal, Injury/Trauma, Accident  

606 male soldiers, injured in various types of accidents, who were seen alive at the hospital by a physician and died within two weeks of admission. Author analyzes data and concludes that at least 1/6 of patients would have survived with adequate diagnosis and treatment. Speed in reaching medical attention did not seem to be significant. Data statistics: age; type of accident; interval between injury and treatment; type of treatment; adequacy of treatment.

21-4515 S  
**LIFE EXPECTANCY, SURVIVAL RATES, AND CAUSES OF DEATH IN CIVILIAN PATIENTS WITH SPINAL CORD TRAUMA.** See 12-4515 S

21-4519 S  
Dewese, M. S./ Hunter, D. C., Jr.  
**A VENA CAVA FILTER FOR THE PREVENTION OF PULMONARY EMBOLISM.**  
The Univ. of Michigan, Medical School, Dept. of Surgery, Ann Arbor, May 1963. 9 p. figs. ref. tables.  
Conference: Western Surgical Association, 70th annual, 29 Nov.—1 Dec. 1962, St. Louis, Missouri.

WSE  Therapeutic, Medical, Methods  
INPO  Occlusion/Thrombosis/Clot, Consequences/Complications, Injury/Trauma, Accident  
OALE  Lungs, Respiratory System, Anatomy/Body, Biomedical Aspect  
YEF  Data Statistics, Contents, Study—Report Type  

Clinical study of 24 selected patients. Authors discuss rationale for procedure and selection of patients. Describe operative technique. Discuss results. Conclude, in selected patients, procedure may be superior to ligation. List, for each patient: age; sex; primary diagnosis; date of phlebitis onset; anticoagulant therapy; x-ray evidence; operative technique; postoperative course; clinical findings related to lower extremities. Data statistics: postoperative pulmonary emboli; patency of filter. 2 case histories.

22-3705 S  
**AN ANALYSIS OF 950 FATAL INJURIES.** See 25-3705 S

22-3715 S  
**MÖGLICHKEITEN EINER INTENSIVIERUNG DER ERSTEN HILFE FÜR UNFALLVERLETZTE IN STÄDTEN MIT LANDLICHER UMGBUNG.** [POSSIBILITIES FOR INTENSIFYING FIRST AID FOR ACCIDENTS IN CITIES WITH A RURAL ENVIRONMENT.] See 03-3715 S

22-3727 S  
Gissane, W./ Bull, J.  
**A STUDY OF 183 ROAD DEATHS IN AND AROUND BIRMINGHAM IN 1960,** Birmingham Accident Hospital, Road Injuries Research (England), 1961. 5 p. table.  
Sponsor: Automobile Association.

DE  Motor Vehicles, Vehicle  
DEB  Motor Cycles  
WSI  Autopsy, Medical, Methods  
EM  Pedestrians, People  
DBB  Bicycles, Nonpowered  
JNX  Multiple Severe Injuries, Injury/Trauma, Accident  
EA  Age  

Etiology of trauma is related to sites of severe injuries, fractures, major soft—tissue injuries, and complications. Skull fractures, brain injuries, and severe blood loss have the highest frequency. Of 97 pedestrians killed, 57 were 65 years old or over. Of 34 motorcyclists, 19 were not wearing crash—helmets, and 14 of these sustained severe brain injuries. Points out car design features responsible for some injuries. Concludes that detailed study of necropsy material would be invaluable for research into injuries of all types.

22-3728 S  
Perry, J. F., Jr./ McClidian, R. J.  
**AUTOPSY FINDINGS IN 127 PATIENTS FOLLOWING FATAL TRAFFIC ACCIDENTS,** Ancker Hospital, Dept. of Surgery, St. Paul, Minnesota/Ancker Hospital, Dept. of Pathology, St. Paul, Minnesota/Minnesota Univ. School of Medicine, Minneapolis. 1964. 3 p. table.  

WSI  Autopsy, Medical, Methods  
DE  Motor Vehicles, Vehicle  
L  Time  
NK  Operating Conditions, Physical Aspect  
OAI  Head, Anatomy/Body, Biomedical Aspect  
OADH  Pelvis, Lower Extremity  
JNH  Fracture, Injury/Trauma, Accident  
OAE  Abdomen  
YEF  Data Statistics, Contents, Study—Report Type
Describe autopsy findings on 127 traffic accident victims who were transported to hospital from 1957–1963. Victims divided into pedestrians, auto occupants, and motorcycle or bicycle riders. Criteria for classifying injuries given. Recommend hospitalizing for observation all accident victims with suspected head injuries, since this was the primary cause of death in all three groups of patients. Article suggests that if data included patients who died at scene of accident, the incidence of cardiovascular injuries would be greater. Recommend exploratory laparotomy of patients with suspected abdominal injuries.

22-3737 S
Kowalski, L./Thier, W.
BERICH T ÜBER 5900 SCHÄDEL–Hirn–Traumen.
[REPORT ON 5900 CRANIOCEREBRAL TRAUMAS.]
March 1964. 4 p. tables. ref.

JN Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
OANBB Brain, Central, Nervous System
WSI Autopsy, Medical Methods
YEF Data Statistics, Contents, Study–Report Type
JNH Fracture
WSC Diagnosis
WSE Therapeutic

In a 15 year period, the Surgical Clinic at the University of Freiburg treated 5,000 patients with head and brain trauma. Mortality has remained about the same, while the frequency of occurrence has increased. Etiology of this injury and diagnosis and therapy are discussed. Frequencies of specific injury sites and of different therapies are discussed. Associated injuries and causes of death are tabulated. Central respiratory paralysis, intracranial pressure and hemorrhage, pneumonia and fat embolism account for 88 of 106 fatalities.

22-3738 S
BESONDERE KREISLAUFREAKTIONEN IM AKUTEN STADIUM DER SCHÄDEL–HIRN–TRAUMEN.
[SPECIAL CIRCULATORY REACTIONS IN THE ACUTE STAGE OF CRANIOCEREBRAL INJURIES.]
See 11-3738 S

22-3739 S
Frowein, R. A./ Euler, K. H./ Karimi-Nejad, A.
GENZEN DER WIEDERBELEBUNG BEI SCHWEREN HIRNTRAUMEN.
[LIMITS OF RESUSCITATION IN SERIOUS BRAIN TRAUMAS.]
17 Nov. 1964. 3 p. figs. ref.

JN Injury/Trauma, Accident
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
WSBCR Resuscitation, Maintaining Airways, First Aid, Medical, Methods
JNPM Anoxia/Hypoxia, Consequences
YEF Data Statistics, Contents, Study–Report Type

Authors measured arterial and various PO2 in patients who suffered trauma to the brain. Survival cases and fatalities shown separately, and cases with and without supply of oxygen to the respiratory system, are tabulated. Fatal cases revealed in the first days after the trauma an inadequate oxygen pressure in the arterial blood supply to the brain, regardless of oxygen supplied to his respiration. Discuss limitations to resuscitative efforts in view of inadequate brain circulation caused by hypertension in brain.

22-3740 S
KOMPLIKATIONEN NACH SCHWEREM GEDECKTEM SCHÄDELHIRNTRAUMA IM KLINISCHEN UND MORPHOLOGISCHEN BEFUNDF. [CLINICAL AND MORPHOLOGICAL FINDINGS IN COMPLICATIONS FOLLOWING SEVERE CLOSED CEREBROCRANIAL TRAUMA.]
See 02-3740 S

22-3743 S
DER SCHÄDELVERLETZTE AUS DER SICHT DES ARZTES AM UNFALLORT. [SKULL INJURIES AS SEEN BY THE PHYSICIAN AT THE SITE OF THE ACCIDENT.]
See 03-3743 S

22-3744 S
DAS SCHICKSAL DES AM UNFALLORT ÄRZTLICHER WIEDERBELEUTGEBER, SCHÄDELHIRENVERLETZTER. [THE OUTCOME OF THE CEREBROCRANIAL INJURY GIVEN MEDICAL CARE AT THE ACCIDENT SITE.]
See 03-3744 S

22-3746 S
DAS AKUTE, SUBAKUTE UND CHRONISCHE SUBDURALE HEMATOM. [THE ACUTE, SUBACUTE AND CHRONIC SUBDURAL HEMATOMA.]
See 11-3746 S

22-3748 S
MÖGLICHKEITEN UND Grenzen ärztlicher HILFELEISTUNGEN AM UNFALLORT. [POSSIBILITIES AND LIMITATIONS OF MEDICAL ASSISTANCE AT THE SCENE OF A DISASTER.]
See 02-3748 S

22-3754 S
ERSTE BEHANDLUNG DER VERLETZUNGSSFOLGEN BEI STRASSENVERKEHRSUNFÄLLEN. [FIRST TREATMENT OF THE COMPLICATIONS OF INJURY WITH TRAFFIC ACCIDENT.] See 23-3754 S

22-3763 S
DIE BEDEUTUNG DER LUTASPIRATION ALS TODESURSACHE BEI UNFÄLLEN. [THE SIGNIFICANCE OF ASPIRATION OF BLOOD AS CAUSE OF DEATH IN Accidents.] See 23-3763 S

22-3765 S
Broggi, G./ De Nunno, T.
RILIEVI STATISTICI IN 400 CASI DI TRAUMATTIZZATI CRANICI ACUTI GRAVI. [STATISTICAL DATA ON 400 CASES OF GRAVE ACUTE CRANIAL INJURIES.]
Selection from 100 cases of skull injury in Turin, 1958–1962. Diagrams reflect negative and positive symptoms. Each diagram shows evolution in time of patients reflecting disturbances at various levels of disintegration. Authors conclude that the conditions of confusion, convulsion, and degree of coma do not allow precise evaluation of damage to nervous structures. Evolution of fatalities and surgical cases is shown separately.

Reports findings on 2,714 cases of head injury from 1939 to 1942, with a gross mortality rate of 11%. Location and severity of brain injury and age of patient are most important factors influencing mortality. Presence and amount of blood in cerebrospinal fluid is more important than skull fracture as prognostic sign.

Reports findings on 2,714 cases of head injury from 1939 to 1942, with a gross mortality rate of 11%. Location and severity of brain injury and age of patient are most important factors influencing mortality. Presence and amount of blood in cerebrospinal fluid is more important than skull fracture as prognostic sign.
incidence of tracheostomy are tabulated. Arterial oxygen saturation is related to days of hospitalization, and relation of arterial carbon dioxide tension to survival. Postmortem examinations of 88 patients with cranio-cerebral injuries showed greater incidence of pulmonary edema, congestion, atelectasis, and bronchopneumonia in patients without tracheostomy.

22-3974 S
Freytag, E.
AUTOPSY FINDINGS IN HEAD INJURIES FROM FIREARMS.

22-3976 S
Archives of Pathology, Postmortem examinations; of 88 patients with relation of arterial carbon dioxide tension to survival. Incidence of tracheostomy are tabulated. Arterial oxygen saturation is related to days of hospitalization, and cerebral injuries showed greater incidence of pulmonary edema, congestion, atelectasis, and bronchopneumonia in patients without tracheostomy.

22-3974 S
Frowein, R. A.
BEDEUTUNG UND BESONDERHEITEN DER ERSTEN HILFE BEI SCHWEREN SCHÄDEL–HIRNVERLETZUNGEN. [IMPORTANCE AND FEATURES OF FIRST AID IN SEVERE CRANIOCEREBRAL INJURIES.]

22-3976 S
Archives of Pathology, Postmortem examinations; of 88 patients with relation of arterial carbon dioxide tension to survival. Incidence of tracheostomy are tabulated. Arterial oxygen saturation is related to days of hospitalization, and cerebral injuries showed greater incidence of pulmonary edema, congestion, atelectasis, and bronchopneumonia in patients without tracheostomy.
Authors found that experimental cerebral concussion in 34 cats caused a marked increase in intracranial pressure. Present evidence supports the concept that the rise in pressure is due to cerebrovascular congestion, which in turn is caused by cerebral vasomotor paresis.

224501 S
ROAD ACCIDENTS. See 03-4337

224500 S
Lewin, W.
FACTORS IN THE MORTALITY OF CLOSED HEAD INJURIES.
Radcliffe Infirmary, Oxford, Accident Service (England).
6 June 1953. 6 p. tables. ref.
1299-1244.

OAI Head, Anatomy/Body, Biomedical Aspects
JNF Concussion, Injury/Trauma, Accident
JNP Consequences/Complications
OAF Thorax
JNK Hemorrhage
JNX Multiple Severe Injuries
YEF Data Statistics, Contents, Study--Report Type

1,000 patients. Author describes and discusses principal causes of death, emphasizing that some are preventable or amenable to treatment. Data statistics: mortality; type of brain injury, complications, other injuries.

224501 S
THE INCIDENCE AND SIGNIFICANCE OF SHOCK IN HEAD INJURY. See 24-4501 S

224503 N
White, J. C.
CARE OF THE SEVERELY INJURED PATIENT: Neurosurgical Injuries.
Massachusetts General Hospital, Neurosurgical Service,
American Medical Association, Journal, Vol. 165, No. 15,
14 Dec. 1957.
Conference: American Medical Association, 106th annual,
7 June 1957, New York.

OAI Head, Anatomy/Body, Biomedical Aspect
OAN Nervous System
JNX Multiple Severe Injuries, Injury/Trauma, Accident
WSE Therapeutic, Medical, Methods
WSD Surgery
OANBC Spinal Cord, Central
YER General Discussions, Contents, Study--Report Type

Author describes care of the patient with acute cranioencephalic injuries during the critical period (at accident scene and in the hospital). Discusses principal causes of death and the early diagnosis of potentially fatal conditions. Lists factors requiring primary consideration in this type of patient.

224504 S
DIED IN HOSPITAL: A three-year study of deaths following trauma. See 214504 S

224517 S
Freytag, E.
AUTOPSY FINDINGS IN HEAD INJURIES FROM BLUNT FORCES.
Maryland Univ., Baltimore, Div. of Forensic Medicine,
April 1963. 6 p. ref. tables. charts.
Archives of Pathology, Vol. 75, April 1963, pp. 402--413.

JNE Contusion/ Crushing/Blunt, Injury/Trauma, Accident
WSI Autopsy/Pathology, Medical, Methods
YEF Data Statistics, Contents, Study--Report Type
OAI Head, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines

...1,367 cases. Author analyzes gross pathological findings in cranium and brain. Concludes that secondary lesions in midbrain and pons are the most causative factor in death in head injuries. Discusses midbrain hemorrhages in infants, epidural bleeding, subdural bleeding, subarachnoid hematomas and brain contusions. Found alcohol consumption in 23% cases. Data statistics: gross pathological findings in cranium and skull; causes of death; length of survival; age; race; sex; type of accident; presence of alcohol in the blood at the time of accident.

224521 S
Campbell, E. / Whitfield, R. D./ Grizzard, V. T.
MORTALITY IN HEAD INJURIES.
Albany Hospital, Neurosurgical Service, New York/
Albany Medical College, Dept. of Surgery, New York. 1
Oct. 1950. 3 p. fig. tables. ref.
New York State Journal of Medicine, Vol. 50, 1 Oct.
1950, pp. 2273--2276.
Conference: Medical Society of the State of New York.
144th annual, 12 May 1950.

JNB Fatal, Injury/Trauma, Accident
OAI Head, Anatomy/Body, Biomedical Aspect
YEF Data Statistics, Contents, Study--Report Type
YCC State--of--the--Art, Nature of Study
JNP Consequences/Complications
WSE Therapeutic, Medical, Methods
XTL Airway Maintenance, Medical, Equipment

718 cases. Authors review general principles of management. Emphasize strict maintenance of clear airway. Conclude that 15 of the 60 fatalities were probably preventable. Data statistics: mortality; primary causes of death; complications.

224536 S
KLINISCHE ERFAHRUNGEN IN DER NEUROCHIRURGISCHEN KLINIK ZURICH BEI AKUTEN SCHÄDEL-HIRN-VERLETZUNGEN. [CLINICAL EX-
PERIENCES IN THE NEUROCHIRURGISCHE KLINIK ZURICH WITH ACUTE SKULL AND BRAIN INJURIES.] See 11-4536 S

22-4540 S
ACUTE, SUBACUTE AND CHRONIC SUBDURAL HEMATOMA. See 11-4540 S

23-2592 S
TRAFFIC INJURY IN BRISBANE. Report of a general survey. See 01-2592 S

23-3703 S
DIE KLINISCHE BEDEUTUNG DER TRAUMATISCHEN FETTEMBOLIE. [THE CLINICAL SIGNIFICANCE OF TRAUMATIC FAT EMBOLISM.] See 25-3703 S

23-3712 S
TREATMENT OF FLAIL CHEST INJURIES WITH A PISTON RESPIRATOR. See 13-3712 S

23-3713 S
EINE ANALYSE VON 827 UNFALLTODESFÄLLEN. [AN ANALYSIS OF 827 CASES OF FATAL ACCIDENTS.] See 24-3713 S

23-3715 S
MÖGLICHKEITEN EINER INTENSIVIERUNG DER ERSTEN HILFE FÜR UNFALLVERLETZTE IN STÄDten MIT LÄNDLICHER UMGBUNG. [POSSIBILITIES FOR INTENSIFYING FIRST AID FOR ACCIDENTS IN CITIES WITH A RURAL ENVIRONMENT.] See 03-3715 S

23-3723 S
CLOSED THORACIC INJURIES. See 13-3723 S

23-3729 S
Hansen, V. G.

YCC State–of–the–Art, Nature of Study, Study–Report Type
JNPJ Aspiration, Consequences, Injury/Trauma, Accident

Reviews literature covering about 5,000 cases. Reports of aspiration as contributing cause of death vary from 2% to 52%; as sole cause, from 0 to 34%. Contradiction is attributed to differing autopsy criteria and inadequate attention by some researchers to fat embolism.

23-3737 S
BERICHt ÜBER 5900 SCHÄDEL–HIRN–TRAUMEN. [REPORT ON 5900 CRANIOCEREBRAL TRAUMAS.] See 22-3737 S

23-3739 S
GRENZEN DER WIEDERBELEBUNG BEI SCHWEREN HIRNTRAUMEN. [LIMITS OF RESUSCITATION IN SERIOUS BRAIN TRAUMAS.] See 22-3739 S

23-3741 S
PULMONALE UND ENTERALE KOMPLIKATIONEN NACH HIRNSCHÄDIGUNGEN. [PULMONARY AND ENTERAL COMPLICATIONS AFTER BRAIN INJURIES.] See 11-3741 S

23-3743 S
DER SCHÄDELVERLETZTE AUS DER SICHT DES ÄRZTES AM UNFALLORT. [SKULL INJURIES AS SEEN BY THE PHYSICIAN AT THE SITE OF THE ACCIDENT.] See 03-3743 S

23-3744 S
DES Schicksals des am Unfallort ärztlich versorgten Schädelhirnverletzten. [THE OUTCOME OF THE CEREBROCRANIAL INJURY GIVEN MEDICAL CARE AT THE ACCIDENT SITE.] See 03-3744 S

23-3748 S
MÖGLICHKEITEN UND GRENZEN ÄRZTLICHER HILFLEISTUNGEN AM UNFALLORT. [POSSIBILITIES AND LIMITATIONS OF MEDICAL ASSISTANCE AT THE SCENE OF A DISASTER.] See 02-3748 S

23-3754 S
Carstensen, E./ Ewerwahn, W. J.

JRGI Professional/Physician, Treatment/Care, Recovery of Injured, Accident
YCC State–of–the–Art, Nature of Study, Study–Report Type
YEF Data Statistics, Contents
WSBC Maintaining Airways, First Aid, Medical, Methods
JNPJ Aspiration/Dehydration, Consequences, Injury/Trauma
OAI Head, Anatomy/Body, Biomedical Aspect

A brief state–of–the–art report, mentioning the etiology of trauma in Hamburg. Autopsy records for 131 traffic fatalities were studied. 43% of deaths had occurred on the scene or en route to the hospital, 33% within the first 24 hours in the hospital.

Brain injury is the most frequent lethal injury. 58 of the 83 victims with head injury had aspirated blood to a certain degree. Authors conducted an experiment, physicians going to the scene of accidents to find how and if aspiration of blood and its consequences could be reduced. Special physician’s car arrived at scene of accident after an average delay of 4.6 minutes. In 50% of the calls, they were at the scene prior to arrival of the ambulance.

BIBLIOGRAPHY

22-4540 S to 23-3754 S
From October 22, 1956 to November 10, 1956, Hamburg had 1928 traffic accidents (about 100/day), with 738 injured persons and 8 fatalities. Physician's car went to 150 calls in this period, 110 of which were traffic accidents, 26 seriously injured. Of these, 21 were unconscious, four had symptoms of fractured bases of the skull, one died on the scene and three died within 12 hours. All four had aspirated massive amounts of blood.

Aspiration is said to get to the alveoli in first few seconds or minutes of occurrence, and intubation to maintain airways or suction for clearing trachea is not adequate to prevent complications. Author's opinion is that physician on the scene of accident is not necessary.

### BIBLIOGRAPHY

23-3763 S

Camerer, J.

**DIE BEDEUTUNG DER BLUTASPIRATION ALS TODESURSACHE BEI UNFALEN. [THE SIGNIFICANCE OF ASPIRATION OF BLOOD AS CAUSE OF DEATH IN ACCIDENTS.]**

18 June 1943, 2 p.


**JNPJ** Aspiration, Consequences, Injury/Trauma, Accident

**WSI** Autopsy, Medical, Methods

**YEF** Data Statistics, Contents, Study—Report Type

Discusses aspiration of blood, giving skull fracture as frequent cause of bleeding. Autopsy findings, lung conditions, occurrence and distribution of blood in airways are discussed. 100 autopsies in cases of blunt trauma leading to death within three hours showed aspiration of blood as cause of death in 34. Erroneous correlation between cause of death and skull fracture is cited.

23-3767 S

Holczabek, W.

**TODESURSACHEN BEI FRSCHEN THORAXVERLETZUNGEN. [DEATHS CAUSES IN RECENT THORACIC INJURIES.]**


**JNB** Fatal, Injury/Trauma, Accident

**OAF** Thorax, Anatomy/Body, Biomedical Aspect

**WSI** Autopsy, Medical, Methods

**YEF** Data Statistics, Contents, Study—Report Type

Author stresses importance of autopsy toward the discovery of new diagnostic and therapeutic methods. With reference to blunt thoracic trauma, author points to four common causes of error in autopsy: (1) undamaged exterior thoracic surface with internal organic trauma, (2) unbroken ribs, (3) external closed contusions which can lead to fatal hemorrhages but which are underestimated as cause of deaths, (4) failure to identify fractured ribs or underestimating the severity of multiple rib fractures.

In trauma victims who survived the accident for some time, the main causes of death are direct or indirect consequences of fractured ribs: fat embolism in lungs, reduced ventilation due to pneumo or hemothorax, crushed lungs, pulmonary edema, and aspiration of blood. Blood loss is also a major cause of death. Rare causes of death are discussed. A paragraph gives various references to cases of traumatic rupture of the aorta and survival times (up to 10 days). In author's own material, of 1,589 cases of blunt trauma to the thorax, there were 75 incidences of ruptured aorta (mortality 100%; survival time up to two days, 57% died immediately; 33% survived one hour).

23-3768 S

Lauppi, E.

**DIE ASPIRATION BEI OPPERN DES STRASSENVERKEHRS. [THE ASPIRATION IN VICTIMS OF TRAFFIC ACCIDENTS.]**

1954. 4 p. tables.


**JNPJ** Aspiration, Consequences, Injury/Trauma, Accident

**WSI** Autopsy, Medical, Methods

**WSBC** Maintaining Airways, First Aid

**YEF** Data Statistics, Contents, Study—Report Type

A state—of—the—art review. Aspiration of blood or stomach contents was diagnosed in 300 victims of traffic accidents who died within 48 hours of the accident. Of the 43 cases (14%) in which aspiration was considered sole cause of death, 29 died on the scene of the accident and the rest within 6 hours. Some case reports.

23-3777 N

**FIRST AID TREATMENT, DIAGNOSIS AND RADIOLOGY OF MAXILLOFACIAL INJURIES.** See 02-3777 N

23-3806 S

Davis, C. M.

**INHALED FOREIGN BODIES IN CHILDREN: An analysis of 40 cases.**

1966. 3 p. figs. tables. ref.


**EC** Children, People

**JNPJ** Aspiration, Dehydration, Consequences, Injury/Trauma, Accident

**YEF** Data Statistics, Contents, Study—Report Type

**OAL** Respiratory Systems, Anatomy/Body, Biomedical Aspect

Study material covers period of ten years. Foreign objects were coughed up at hospital in two cases, 37 were removed at bronchoscopy, and one required bronchotomy. Author tabulates nature and radiopacity of foreign bodies, age distribution with an indication of the number of cases in which probable diagnosis was suggested by clinical history, and radiological appearance of lung fields. Diagnosis may be missed in patients with respiratory symptoms without indication of their underlying cause in the clinical history.

23-3812 N

LeJeune, F. E., Jr.

**FOREIGN BODIES IN THE TRACHEOBRONCHIAL TREE AND ESOPHAGUS.**

Dec. 1966. 7 p. illus. ref.

Major types of foreign bodies found in tracheobronchial tree and esophagus, proper procedure for roentgenographic observation, and techniques for removal of foreign bodies are discussed.

23-3889 S
AIRWAY FOREIGN BODY FATALITIES IN CHILDREN.
Weston, J. T.

OAL Respiratory System, Anatomy/Body, Biomedical Aspect
EC Children, People

Details of autopsy findings in fifteen Philadelphia cases, with average age of twenty-five months. Most objects were lodged in larynx, with three instances of mechanical compression of epiglottis by objects in pharynx, two instances of complete obstruction of trachea. No death was attributable to aspiration of regurgitated gastric contents. Most cases arrived dead at hospital five to fifteen minutes after occurrence.

23-3883 N
Herrero, F. A./Walton, B. E./Jurkiewicz, M. J.
THE MANAGEMENT OF THE AIRWAY AND VENTILATION IN TRAUMA.
Geisinger Medical Center, Dept. of Anesthesiology, Danville, Pennsylvania. Nov. 1964. 11 p. ref.

YER General Discussions, Contents, Study—Report Type
JN Injury/Trauma, Accident
WSEC Therapeutic, Medical, Methods
WSC Diagnosis

Non-specific coverage of concepts of artificial respiration and conditions in which ventilatory assistance is indicated. Advantages and disadvantages of various types of mechanical ventilators and desirable characteristics of pressure—cycled respirator are discussed. Blood—gas studies, Rafford nomogram, pressures, wave form, and cardiac output are described. Discuss management of airway and ventilation in trauma according to specific injuries to head, chest, larynx, and thorax.
BIBLIOGRAPHY

23-3947 S
SEVERE CRANIOCEREBRAL TRAUMA AND RESPIRATORY ABNORMALITIES. See 22-3947 S

23-3964 N
ZUR ERSTVERSORGUNG SCHWERSTER SCHÄDEL-HIRNTRAUMEN. [ON FIRST AID IN VERY SEVERE CRANIOCEREBRAL TRAUMAS.] See 11-3964 N

23-3974 S
BEDEUTUNG UND BESONDERHEITEN DER ERSTEN HILFE BEI SCHWEREN SCHÄDEL--HIRNVERLETZUNGEN. [IMPORTANCE AND FEATURES OF FIRST AID IN SEVERE CRANIOCEREBRAL INJURIES.] See 22-3974 S

23-3976 S
Fischer, H.

JNB Fatal, Injury/Trauma, Accident
WSI Autopsy/Pathology, Medical, Method
VN Epidemiology/Etiology, Disciplines
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
JNX Multiple Severe Injuries
YEF Data Statistics, Contents, Study--Report Type

Author discusses etiology of trauma. Frequency of injuries to skull, brain, upper extremities, lower extremities, pelvis, vertebrae, various abdominal and thoracic organs, is given for the various categories of victims in motor vehicle accidents. Frequency of deaths within 24 hours, 48 hours, one week, two to four weeks after the accident is given. Causes of death as related to time of survival are also tabulated. A literature survey on aspiration as cause of death is discussed.

23-3979 S
NARKOSE UND-INTUBATION AM UNFALLORT UND AUF DEM TRANSPORT IN DAS KRANKENHAUS. [ANESTHESIA AND INTUBATION AT THE SITE OF ACCIDENT AND TRANSPORTATION TO THE HOSPITAL.] See 03-3979 S

23-3983 S
ERFahrungen mit dem Kölnner Notfall-Arztwagen aus Unfallchirurgischer Sicht. [EXPERIENCES WITH THE COLOGNE EMERGENCY AMBULANCE FROM THE VIEWPOINT OF ACCIDENT SURGERY.] See 03-3983 S

23-3984 S
ÄRZTLICHE AUFGABEN BEIM TRANSPORT VON SCHWERVERLETZTEN MIT HUBSCHRAUBERN. [TASKS OF THE PHYSICIAN IN THE TRANSPORTATION OF SERIOUSLY INJURED PERSONS BY HELICOPTER.] See 04-3984 S

23-4014 S
PATTERNS OF THORACIC INJURIES IN FATAL TRAFFIC ACCIDENTS. See 24-4014 S

23-4036 N
Glass, W. M./ Goodman, M.
UNSUSPECTED FOREIGN BODIES IN THE YOUNG CHILD'S ESOPHAGUS PRESENTING WITH RESPIRATORY SYMPTOMS.
North Shore Hospital, Dept. of Otolaryngology, Long Island, New York/ Long Island Jewish Hospital, Dept. of Otolaryngology, Long Island, New York. April 1966. 6 p. figs. tables. ref.
The Laryngoscope, Vol. 76, April 1966, pp. 605--615.
Conference: American Laryngological, Rhinological and Otological Society, Inc., Eastern Section, and New York Academy of Medicine, Section on Otolaryngology; joint meeting, 6 Jan. 1966, New York, New York.

OAJI Esophagus, Digestive System/Alimentary Tract, Anatomy/Body, Biomedical Aspect
WSC Diagnosis, Medical, Methods
OAL Respiratory System
EC Children, People

Article emphasizes that esophageal foreign bodies may lead to symptoms which are primarily respiratory rather than esophageal in nature. Nine cases of children under three years old are presented.

23-4045 S
CHEST TRAUMA WITH PNEUMOTHORAX AND HEMOTHORAX. See 13-4045 S

23-4046 N
COMBINED RENAL AND RESPIRATORY FAILURE AFTER TRAUMA.
Glasgow Royal Infirmary, Artificial Kidney Unit (England)/ Glasgow Royal Infirmary, Respiratory Emergency Unit (England), 21 Dec. 1963. 4 p. tables, figs. ref.

JN Injury/Trauma, Accident
OAL Respiratory System, Anatomy/Body, Biomedical Aspect
OAMB Kidneys, Urogenital System
YCK Case Studies, Nature of Study, Study--Report Type

Provides case report of 20-year--old male with most intense and lengthy catabolism with acute tubular necrosis on record who survived. Patient sustained multiple injuries including visceral and pulmonary confusions following a fall. Although having no thoracic bony injuries, he needed 33 days of intermittent positive--pressure ventilation. Highly efficient artificial kidney was used. Article refers briefly to literature on renal and respiratory complications.

23-4057 N
ACUTE RENAL FAILURE FOLLOWING EXTENSIVE TRAUMA. See 24-4057 N
Cover 70 cases with physiological studies on seven. Most common cause of death was respiratory failure. Found cardiac deficit in 4 of 7 patients. Authors discuss mortality, management of ventilation, cardiac function and pathophisiology. Conclude that mechanical ventilation helps the patient by decreasing energy expenditure and so reducing oxygen need. Data statistics: nature of injury; location of unstable area of chest wall; delay in diagnosis and mortality; Shock and mortality; associated major injuries; methods of management and mortality; major complications; causes of death.

23-4146 S

PENETRATING WOUNDS OF THE ABDOMEN: Analysis of 776 operative cases. See 15-4146 S

23-4337 S

ROAD ACCIDENTS. See 03-4337 S

23-4502 S

ACUTE HEAD INJURY: A review of one thousand cases. See 11-4502 S

23-4504 S

DIED IN HOSPITAL: A three-year study of deaths following trauma. See 21-4504 S

23-4513 S

ÜBER DIE RIPPENSERIENFRAKTUREN DURCH VERKEHRSUNFÄLLE UND DEN DERZEITIGEN STANDIHIER BEHANDLUNG. [ON SERIAL RIB FRACTURES CAUSED BY TRAFFIC ACCIDENTS AND THE CURRENT STATUS OF THEIR TREATMENT.] See 24-4513 S

23-4534 S


24-2592 S

TRAFFIC INJURY IN BRISBANE. Report of a general survey. See 01-2592 S

24-3701 S

SURGICAL MANAGEMENT OF SPLENIC INJURIES. See 15-3701 S

24-3702 S

ARTERIAL INJURIES OF THE BASE OF THE NECK. See 12-3702 S

24-3710 S

Braunstein, P. W./ Skudder, P. A./ Mccarroll, J. R./ Musolino, A./ Wade, P. A. CONCEALED HEMORRHAGE DUE TO PELVIC FRACTURE.
between accident and death. Another tabulation presents medical care would have prevented fatal outcome. One hundred and twenty-two cases of lethal fat embolism are tabulated by age, sex, type of fracture, other conditions observed at autopsy, and time elapsed.

Authors compare an autopsy study in 1959 of 200 fatally injured pedestrians with a study in 1963 of 500 pedestrians struck down by automobiles but not fatally injured. 45% of the fatal group and only 4% of the nonfatal group had pelvic fractures. Warns that pelvic fractures may be a cause of severe and often unrecognized retroperitoneal hemorrhage.

In a period of nine years, 131,625 emergency cases were seen. Etiology and mortality, age distribution of fatal cases, and frequency of traffic and non-traffic fatalities listed by the type of injury involved are given.

In a period of nine years, 131,625 emergency cases were seen. Etiology and mortality, age distribution of fatal cases, and frequency of traffic and non-traffic fatalities listed by the type of injury involved are given. Causes of death are tabulated. Incidence of head and brain injury is highest, second is fat embolism, followed by death from loss of blood.

One hundred and twenty—two cases of lethal fat embolism are tabulated by age, sex, type of fracture, other conditions observed at autopsy, and time elapsed between accident and death. Another tabulation presents diagnosis, age, accident description, condition admission, time of survival and concurrent injuries for special cases of injuries to the heart and great vessels. Emphasizes conditions where better first aid and/or medical care would have prevented fatal outcome.

Graph reflects time—related mortality curve (in % of total population of fatalities on y axis, and time to death on x axis) for traffic accidents and non—traffic cases.
24-3770

Atik, M.

MASSIVE LIVER INJURY AND SHOCK.
Louisville Univ. School of Medicine, Kentucky. Feb. 1966. 2 p. ref.
Grant No: HE-09431.
Sponsor: National Institutes of Health.

Author presents clinical material and experimental data to indicate that retention of devitalized liver tissue, rather than loss of functional liver parenchyma, is responsible for severity of shock associated with massive liver injury. Recommendations include partial or total hepatic lobectomy to remove devitalized tissue.

24-3772

REPORT ON 41 CASES OF RUPTURE OF THE SPLEEN. See 15-3772

24-3784

THE MANAGEMENT OF HEAD INJURIES COMPLICATED BY MAJOR EXTRACRANIAL TRAUMA. See 11-3784

24-3787

HEMORRHAGIC SHOCK AND FAT EMBOLISM: A clinical and experimental study. See 25-3787

24-3790

COMPLICATIONS ASSOCIATED WITH FRACTURES OF THE PELVIS. See 16-3790

24-3796


THE EFFECT OF DIGITALIZATION IN IRREVERSIBLE HEMORRHAGIC SHOCK.
Louisville Univ. School of Medicine, Dept. of Surgery, Louisville, Kentucky, 1963. 6 p. tables. ref. figs.
Sponsor: Kentucky Heart Association.

Author presents clinical material and experimental data to indicate that retention of devitalized liver tissue, rather than loss of functional liver parenchyma, is responsible for severity of shock associated with massive liver injury. Recommendations include partial or total hepatic lobectomy to remove devitalized tissue.

24-3792

CAUSES OF SHOCK WITH HEAD INJURY. See 11-3792

24-3798

THORACIC TRAUMA: Analysis of 1022 cases. See 13-3798

24-3801

INJURIES OF THE LIVER IN 300 CONSECUTIVE PATIENTS. See 15-3801

24-3804

Sambhi, M. P./ Weil, M. H./ Udhoji, V. N.

ACUTE PHARMACODYNAMIC EFFECTS OF GLUCOCORTICOIDS: Cardiac output and related hemodynamic changes in normal subjects and patients in shock.
Southern California Univ. School of Medicine, Shock Research Unit/ Southern California Univ. School of Medicine, Dept. of Medicine/ Los Angeles County Hospital, California, 1965. 5 p. figs. ref. tables.
Grant No: H–5570.

Cardiac output and intravascular pressure were measured before and after large doses of glucocorticosteroids were administered intravenously to nine normal and nine unselected subjects and nine patients in shock. Pharmacologic effects, their possible underlying mechanisms, and implications for treatment of shock are discussed.

24-3809

Weil, M. H./ Shubin, H./ Rand, W.

EXPERIENCE WITH A DIGITAL COMPUTER FOR STUDY AND IMPROVED MANAGEMENT OF THE CRITICALLY ILL.
Southern California Univ. School of Medicine, Shock Research Unit/ Los Angeles County General Hospital, California, 28 Nov. 1966. 6 p. ref. figs.

WNB Models/Modeling, Systems Analysis/Operations Research, Methods

OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect

YNL Shock, Consequences, Injury/Trauma, Accident

YCB Research, Nature of Study, Study–Report Type

89
Describes the Shock Research Unit and computer system, including reliable operation unattended by specialized computer personnel. Information on patient condition is obtained by sensing devices including pressure transducers, electrodes for EKG, thermistors, an optical densitometer to determine cardiac output, and a unit to measure urine flow. Signals are coded, checked, and printed out for the attending physician. As often as every five minutes, cardiac output, peripheral vascular resistance, appearance and mean circulation time of dye, central blood volume, and total work of the heart are automatically reported. Plasma volume, red blood cell mass, pH, Pco2, and Po2 are determined. Arterial and venous pressures, heart and respiratory rate, temperature, and urine output may be obtained every minute.

Limitations of present system are discussed. Data will be used for simulation studies, statistical analyses, construction of mathematical models of basic pathophysiology, and techniques for using models to simulate and predict the effects of treatment.

24-3810 N
Shubin, H./ Weil, M. H.
EFFICIENT MONITORING WITH A DIGITAL COMPUTER OF CARDIOVASCULAR FUNCTION IN SERIOUSLY ILL PATIENTS.
Southern California Univ., School of Medicine, Shock Research Unit/ Los Angeles County General Hospital, California. Sept. 1966. 5 p. ref. figs. tables.

24-3822 N
Weil, M. H./ Shubin, H./ Rosoff, L.
FLUID REPLETION IN CIRCULATORY SHOCK: Central venous pressure and other practical guides.
Southern California Univ., School of Medicine, Shock Research Unit/ Southern California Univ., School of Medicine, Dept. of Medicine/ Southern California Univ. School of Medicine, Dept. of Surgery/ Los Angeles County Hospital, California. 24 May 1965. 7 p. figs. ref. American Medical Association Journal, Vol. 192, No. 6, 24 May 1965, pp. 84–90.

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YER General Discussions, Contents, Study–Report Type
Discuss measurement of central venous pressure and its importance for evaluating patient in shock. Measurement of central blood pressure provides diagnosis for "pseudoshock" of heart failure. Pulse rate, hemoglobin and hematocrit values do not reflect severity or cause of shock and fail as dependable guides for the bedside physician. Management of shock is discussed. Case report is given.

24-3829 S
PENETRATING WOUNDS OF THE PERICARDIUM OR ITS CONTENTS. See 14-3829 S

24-3832 S
Longerbeam, J. K./ Vannix, R./ Wagner, W./ Joergenson, E.
CENTRAL VENOUS PRESSURE MONITORING: A useful guide to fluid therapy during shock and other forms of cardiovascular stress.

WSE Therapeutic, Medical, Methods
JNPL Shock, Consequences, Injury/Trauma, Accident
WUPD Blood Pressure, Physiological, Testing/Measures
JNP Consequences
YER General Discussions, Contents, Study–Report Type

Historical review contains summary of technical advances in cannulation of central venous system and monitoring. Anatomy of subclavian area and authors' technique successfully employed on 115 patients are described in detail. Central venous pressure is rarely a linear function of blood volume but relates to rate of venous return compared with myocardial competency.

24-3838 S
Wilson, J. N.
RATIONAL APPROACH TO MANAGEMENT OF CLINICAL SHOCK.
Conference: Central Surgical Association, 22nd annual, 4–6 March 1965, Milwaukee.

WSE Therapeutic, Medical, Methods
JNPL Shock, Consequences, Injury/Trauma, Accident
YCD Survey, Nature of Study, Study–Report Type
YEF Data Statistics, Contents
YEG Tables/Graphs
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect
WUPD Blood Pressure, Physiological, Testing/Measures
YCK Case Studies

Chief problem in management of shock is to identify accurately the circulatory defect present. Sequence in management is establishment of adequate respiratory
support, ruling out of hypovolemia, evaluation of cardiac insufficiency, and consideration of decreased vascular tone. Three types of clinical shock are hypovolemia, cardiac insufficiency, and deficient vascular tone. Each type has a unique combination of physiologic characteristics which can be identified at the bedside with light reflection oximetry and central venous pressure monitoring. Paper is based on observations of 52 patients, and detailed data on 13 is presented in charts.

24-3842 S
INJURIES OF THE KIDNEY. See 15-3842 S

24-3844 S
Shubin, H./ Weil, M. H.
THE MECHANISM OF SHOCK FOLLOWING SUICIDAL DOSES OF BARBITURATES, NARCOTICS AND TRANQUILIZER DRUGS, WITH OBSERVATIONS ON THE EFFECTS OF TREATMENT.
Southern California Univ. School of Medicine, Shock Research Unit/ Los Angeles County Hospital, California. June 1965. 6 p. figs. tables, ref.
Grant No: HE–05570/ HE–07811.

JNPL Shock, Consequences, Injury/ Trauma, Accident
PCCC Suicide, Typologies/ Clinical Diagnosis, Personality, Psychological Aspect
YEG Tables/ Graphs, Contents, Study– Report Type
YEF Data Statistics
WUPD Blood Pressure, Physiological, Testing/ Measures, Methods
OAK Cardiovascular System, Anatomy/ Body, Biomedical Aspect

Describe mechanism of shock and treatment in fifteen potential suicide cases, five of whom died. Hypotension and clinical features of shock were attributable to either an absolute reduction in plasma volume or a relative hypovolemia in relation to an expanded vascular bed.

The hemodynamic findings were compared with those of a control group, and the significance level of the difference was established. The effect of infusion of a large amount of crystalloids on the cardiac output, arterial pressure, venous pressure, and urinary flow were tested. Serial measurements in relation to treatment in time after admission (from one-half hour to 32 hours) are given for metaraminol and levarterenol.

24-3866 S
NONPENETRATING INJURIES OF ABDOMEN CAUSING RUPTURE OF SPLEEN: Report of 100 cases. See 15-3866 S

24-3879 S
LIVER INJURIES IN NORTHERN IRELAND. See 15-3879 S

24-3882 S
THE PATHOLOGY OF PEDESTRIAN AUTOMOTIVE ACCIDENT VICTIMS. See 21-3882 S

24-3890 N
Wilson, J. N.
TREATMENT OF TRAUMATIC SHOCK.
St. Joseph’s Hospital, Dept. of Research, Denver, Colorado. 1965. 8 p. tables, fig.

WSE Therapeutic, Medical, Methods
JNPL Shock, Consequences, Injury/ Trauma, Accident
WU Testing/ Measures, Methods
OAK Cardiovascular System, Anatomy/ Body, Biomedical Aspect

Evaluating cause of shock in a given patient as a basis for corrective therapy, hemodynamic criteria to classify shock are discussed. Functional tests are indicated for hypovolemia, cardiac insufficiency, and deficient vascular tone. An order of examination is advised to reach diagnosis. Use of vasopressor drugs and observation of urinary output are mentioned.

24-3891 S
SURGICAL EXPERIENCE WITH 103 TRUNCAL SHOT-GUN WOUNDS. See 15-3891 S

24-3896 S
Smith, L. L./ Muller, W./ Hinshaw, D. B.
THE MANAGEMENT OF EXPERIMENTAL ENDO-TOXIN SHOCK: The circulatory effects of Levarterenol, Hydrocortisone, Phenoxylbenzamine, Hydrochloride, and blood volume expansion.
Loma Linda Univ., School of Medicine, Dept. of Surgery, Los Angeles, California/ Loma Linda Univ., School of Medicine, Surgical Research Laboratory, Los Angeles, California. Oct. 1964. 4 p. graphs. ref.
Grant No: HE–4639.
Sponsor: National Heart Institute.

WSI Autopsy, Medical, Methods
JNPL Shock, Consequences, Injury/ Trauma, Accident
WSDF Experimental, Surgery
YCG Laboratory Experiment, Nature of Study, Study– Report Type
OAK Cardiovascular System, Anatomy/ Body, Biomedical Aspect
WU Testing/ Measures

Shock associated with infection is a serious complication with high mortality. Laboratory experiments with 30 dogs provided information regarding effect of vasopressors and corticosteroids on cardiovascular system in experimental endotoxin shock, which resembles septic shock. Hepatic outflow obstruction appears to be cause of acute hepatic congestion and portal hypertension observed after administration of endotoxin. Pharmacologic doses of corticosteroids improved blood pressure, cardiac output, and survival. Plasma– volume expansion with dextran was most beneficial overall method.

24-3897 S
Lillehei, R. C./ Longerbeam, J. K./ Bloch, J. H./ Manax, W. G.
THE NATURE OF IRREVERSIBLE SHOCK: Experimental and clinical observations.
BIBLIOGRAPHY

Grant No: 02941.
Sponsor: Army Medical Research and Development Command/ Minnesota Heart Association.

JNPL Shock, Consequences, Injury/Trauma, Accident
YCG Laboratory Experiment, Nature of Study, Study—Report Type
YEF Data Statistics, Contents
YEG Tables/Graphs
OAK Cardiovascular System, Anatomy/Body, Biomedical Aspect

Poor response to blood or blood infusion is criterion for irreversible shock, frequently caused by infection with gram-negative bacteria. Through laboratory experiments involving hundreds of dogs, authors observed shock induced by hemorrhage, bacterial endotoxins, epinephrine, and myocardial failure. Authors deduce "unitarian" theory of nature of shock, i.e., hemodynamic disturbance of peripheral vascular system in both its reversible and irreversible manifestations. Period of reversible shock lasts 2–3 hours in dog, regardless of original insult. Authors currently use hydrocortisone or phenoxycbenzamine to remedy disturbed peripheral circulation in treating shock from all causes.

CONTROLLED HYPOTENSION IN THE MANAGEMENT OF SEVERE HEMORRHAGE.

JNK Hemorrhage, Injury/Trauma, Accident
WUPD Blood Pressure, Physiological, Testing/Measures, Methods
WSE Therapeutic, Medical
L Time
YCK Case Studies, Nature of Study, Study—Report Type

Discuss use of trimethaphan camphorsulfonate to produce controlled normovolemic hypotension. Case reports of five patients include one with ruptured aorta, another with multiple pelvic injuries. Bleeding was markedly reduced with application of trimethaphan. Normovolemic hypotension appeared to be tolerated well.

METABOLIC CHANGES ASSOCIATED WITH HEMORRHAGIC SHOCK.

Assuming that hypovolemia is not the only factor determining length of survival in non-hemorrhagic hypovolemic shock, experiment compared survival time of dogs subjected to similar levels of hypovolemia hemorrhagic and non-hemorrhagic hypovolemia-inducing techniques. Techniques included occlusion of portal vein, simultaneous occlusion of portal vein and hepatic artery, and acute hemorrhage. Total interruption of hepatic irrigation was followed by significant decrease in survival time compared to reduced hepatic flow.
THE EFFECT OF HYPERBARIC OXYGENATION (OHP) ON THREE FORMS OF SHOCK—TRAUMATIC, HEMORRHAGIC, AND SEPTIC.
Maryland Univ. School of Medicine, Dept. of Surgery, Clinical Shock Unit, Baltimore/ Maryland Univ. School of Medicine, Dept. of Surgery, Research Laboratories, Baltimore. 1964. 6 p. figs. ref. Journal of Trauma, Vol. 4, 1964, pp. 652—663.
Sponsor: Army Research and Development Command/ Public Health Service.

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24-3940 S
Blair, E./ Henning, G./ Esmond, W. G./ Attar, S./ Cowley, R. A./ Michaelis, M.
The Effect of Hyperbaric Oxygenation (OHP) on Three Forms of Shock—Traumatic, Hemorrhagic, and Septic.

24-3952 N
Wolfson, L. J.
Blood Loss in Trauma.

24-3954 N
Peterson, C. G./ Haugen, F. P.
Hemorrhagic Shock and the Nervous System.
Grant No: NB—02082.
Sponsor: National Institutes of Health/ Public Health Service/ Oregon Heart Association.

24-3958 N
Yasargil, E. C.
Schockbegriff im Wandel der Zeiten und heute. III: Richtlinien zur systematischen Behandlung des Schocks und der Fettembolie. [Concept of Shock in the Past and Today. 3. Directions for the Systematic Treatment of Shock and Fat Embolism.]

24-3968 N
Lindenschmidt, T. O.


24-3970 N
Wolfson, L. J.
Blood Loss in Trauma.

24-3972 N
Lindegren, T. O.

Author discusses urinary flow, venasection, pulse and BP control, determination of blood loss, pain relief drugs, oxygen supply, X rays, intubation, tracheostomy, drainage of the pleura, emergency thoracotomy, laparoscopy, and laparotomy as diagnostic measures and controls, then presents various kinds of therapy, including those for conditions of fat-embolism.
discusses his own experience. The condition of shock in diabetes is discussed.

24-4005 S
ANALYSIS OF 500 STAB WOUNDS OF THE ABDOMEN, See 15-4005 S

24-4014 S
PATTERNS OF THORACIC INJURIES IN FATAL TRAFFIC ACCIDENTS.

JNB Fatal, Injury/Trauma, Accident
OAF Thorax, Anatomy/Body, Biomedical Aspect
VN Epidemiology/Etiology, Disciplines
OAL Respiratory System
OACK Blood Vessels, Cardiovascular System
YEF Data Statistics, Contents, Study–Report Type

Analysis of 585 traffic deaths showed 294 with significant thoracic injuries. Authors present and discuss data. Data statistics: types of thoracic injuries; thoracic injuries in 29 cases of sternal fracture; thoracic injuries in 30 cases of ruptured diaphragm; location of thoracic great vessel injury in 58 cases.

24-4020 S
Clarke, R./ Topley, E./ Fisher, M. R./ Davies, J. W. L.
EXTENT AND TIME OF BLOOD-LOSS AFTER CIVILIAN INJURY.

JN Injury/Trauma, Accident
JNK Hemorrhage
NKFP Period, Frequency/Time, Operating Conditions, Physical Aspect
OAR Blood, Body Fluids, Anatomy/Body, Biomedical Aspect
WU Testing/Measures, Methods

Total blood loss in 140 patients. Repeated estimations of blood volume in 75 patients. Authors describe and discuss blood loss from different sites of injury. Discuss measurement and clinical assessment of blood loss, Tablestone and graph blood loss, according to time, for selected injuries.

24-4022 S
CIVILIAN PENETRATING WOUNDS OF THE ABDOMEN, See 15-4022 S

24-4043 N
Cook, F. W./ Haller, J. A., Jr.
PENETRATING INJURIES OF THE SUBCLAVIAN VESSELS WITH ASSOCIATED VEINOUS COMPLICATIONS.

24-4045 S
CHEST TRAUMA WITH PNEUMOTHORAX AND HEMOTHORAX, See 13-4045 S

24-4050 S
Hauser, C. W./ Perry, J. F., Jr.
MASSIVE HEMORRHAGE FROM PELVIC FRACTURES.

OADH Pelvis, Lower Extremity, Anatomy/Body, Biomedical Aspect
JNH Fracture, Injury/Trauma, Accident
JNK Hemorrhage
WSD Surgery, Medical, Methods
WSE Therapeutic

Clinical study of 196 patients. Significant hemorrhage from pelvic fracture found in 1/3 of patients. Authors recommend hypogastric artery ligation. Data statistics: age; sex; cause of injury; mortality; type of fracture and mortality; blood loss and mortality; associated injuries and mortality.

24-4125 S
EXPERIENCE WITH 472 CIVILIAN PENETRATING WOUNDS OF THE CHEST, See 13-4125 S

BIBLIOGRAPHY
### BIBLIOGRAPHY

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<td>INJURIES OF THE LIVER: A review of 111 cases.</td>
<td>See 15-4126 S</td>
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<td>24-4134 S</td>
<td>THE INCIDENCE OF MORBID–ANATOMICAL EVIDENCE OF SHOCK–KIDNEY AND OTHER RENAL DISORDERS IN UNSELECTED AUTOPSY MATERIAL.</td>
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<td>24-4084 S</td>
<td>THE SURGICAL MANAGEMENT OF 640 CONSECUTIVE LIVER INJURIES IN CIVILIAN PRACTICE.</td>
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<td>24-4090 S</td>
<td>ARZTLICHE VERSORGUNG SCHWERVERLETZTER AM UNFALLORT UND AUF DEM TRANSPORT. [TREATMENT BY PHYSICIAN OF THE SEVERELY INJURED, AT THE SCENE OF THE ACCIDENT AND DURING TRANSPORTATION.]</td>
<td>See 03-4090 S</td>
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<td>24-4106 S</td>
<td>UNRECOGNIZED ABDOMINAL TRAUMA IN PATIENTS WITH HEAD INJURIES.</td>
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<td>24-4119 S</td>
<td>FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964.</td>
<td>See 21-4119 S</td>
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**OBM** Metabolism, Problems, Biomedical Aspect  
**JN** Injury/Trauma, Accident  
**WSD** Surgery, Medical, Methods  
**JNPL** Shock, Consequences/Complications  
**OAMB** Kidneys, Urogenital System, Anatomy/Body  

Extensive description of biochemical and physiological responses and discussion of therapeutic implications.  
Part I. Author discusses the whole patient: the wound, body water electrolytes, energy production and cellular metabolism. Tabulates plasma electrolyte values following loss of blood in patients with and without shock.

**24-4112 N**  
Clowes, G. H. A., Jr.  
METABOLIC RESPONSES TO INJURY. Part II: Acid–base balance.  
South Carolina Medical College, Charleston. 1963. 8 p. figs. ref. tables.  

**24-4119 S**  
FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964. See 21-4119 S

**24-4156 S**  
Heyer, H. E.  
A CLINICAL STUDY OF SHOCK OCCURRING DURING ACUTE MYOCARDIAL INFARCTION: An analysis of 58 cases.  
Baylor Medical Center, Dept.'s of Internal Medicine, Dallas, Texa/ Texas Univ, Dallas, Southwestern Medical School, Oct. 1961. 6 p. charts. ref. tables.  

**24-4157 N**  
Clowes, G. H. A., Jr.  
METABOLIC RESPONSES TO INJURY. Part I: The production of energy.  
South Carolina Medical College, Charleston. 1963. 7 p. tables, figs.  
statistics: (in total group) sex; mortality; incidence of shock; (in patients with shock) mortality by age group; type of onset of shock; mortality and time elapsed before treatment; mortality and congestive failure; results of digitalization. Given 3 illustrative case reports.

24-4160 S

PENETRATING INJURIES TO THE CHEST: Clinical results in the management of 769 patients. See 24-4160 S

24-4195 S

Sako, Y./ Arzt, C. P./ Howard, J. M./ Bronwell, A. W./ Inui, F. K.

A SURVEY OF EVACUATION, RESUSCITATION, AND MORTALITY IN A FORWARD SURGICAL HOSPITAL.

Army Medical Service Graduate School, Surgical Research Team in Korea, April. 1955. 5 p. tables. ref.


WSBCR Resuscitation, Maintaining Airways, First Aid, Medical, Methods

JRB Transportation, Recovery of Injured, Accident

NKF Delay, Frequency/Time, Operating Conditions, Physical Aspect

WSD Surgery

VN Epidemiology/Etiology, Disciplines

YEF Data Statistics, Contents, Study–Report Type

Authors analyze data from a series covering Jan. 1952 to Aug. 1953 and a similar series from World War II. Conclude that in both wars one of the most important causative factors in death was body region struck. Note a lower overall case mortality rate in the Korean War group, attributed to the greater amounts of blood given. Data statistics: case mortality rates; type of wound; mode of evacuation; time intervals for phases of care; blood transusions and time of transfusion; cause of death; major amputations; comparison with similar injuries in World War II.

24-4196 S

ABDOMINAL TRAUMA: A study of 297 consecutive cases. See 24-4196 S

24-4337 S

ROAD ACCIDENTS, See 03-4337 S

24-4501 S

Campbell, E./ Whitfield, R. D.

THE INCIDENCE AND SIGNIFICANCE OF SHOCK IN HEAD INJURY.


OAI Head, Anatomy/Breath, Biomedical Aspect

JNPL Shock, Consequences/Complications, Injury/Surgery, Accident

JNK Hemorrhage

JNH Fracture

YEG Tables/Graphs, Contents, Study–Report Type

YEF Data Statistics

YCK Case Studies, Nature of Study

718 patients with acute head injuries. Authors conclude that shock is neither an essential nor a prominent feature of cerebral concussion. Suggest the possibility that in many acute brain injuries factors are set in motion which tend to overcome hypotension. Data statistics: mortality; type of head injury; associated injuries; incidence of shock. 2 illustrative case histories.

24-4504 S

DIED IN HOSPITAL: A three–year study of deaths following trauma. See 24-4504 S

24-4510 S

Udhoji, V. N./ Weil, M. H.

CIRCULATORY EFFECTS OF ANGIOTENSIN, LEVATRENOL AND METARAMINOL IN THE TREATMENT OF SHOCK.

Southern California Univ., School of Medicine, Dept. of Medicine/ Southern California Univ., School of Medicine, Dept. of Surgery/ Southern California Univ. School of Medicine, Shock Research Unit/ Los Angeles County Hospital, California, 5 March 1964. 5 p. figs. ref. tables. ref.


Grant No.: HE–5570.


JNPL Shock, Consequences/Complications, Injury/Trauma, Accident

WSE Therapeutic, Medical, Methods

WUP Physiological, Testing/Measures

Laboratory and clinical study of 12 patients. Authors found significantly lower cardiac output and urine flow and a disproportionate increase of peripheral vascular resistance when angiotensin was compared to the other drugs. Question rationale for use of angiotensin. Data statistics: heart rate, central venous pressure; arterial blood pressures; cardiac output; urine flow; peripheral vascular resistance. Brief description of laboratory methods and findings.

24-4513 S

Salem, G./ Strauhberger, E.

ÜBER DIE RIPPENFRAKTUREN DURCH VERKEHRSUNFÄLLE UND DEN DERZEITIGEN STAND IHRER BEHANDLUNG. [ON SERIAL RIB FRACTURES CAUSED BY TRAFFIC ACCIDENTS AND THE CURRENT STATUS OF THEIR TREATMENT].


JNH Fracture, Injury/Trauma, Accident

OAFD Ribs, Thorax, Anatomy/Breath, Biomedical Aspect

JNPI Fat Embolism, Consequences/Complications

OAL Respiratory System

OAE Abdomen

JNP Consequences/Complications

YEF Data Statistics, Contents, Study–Report Type
causes of death listed. High incidence of fat embolism and exsanguination (heart and liver).

Authors discuss therapy, complications, and injuries of abdominal organs.

SHOCK AND PULMONARY EMBOLISM.

Del Guercio, L. R.

JNPO Occlusion/Thrombosis/Clot, Injury/Trauma, Accident
JNPL Shock
WUP Physiological, Testing/Measures, Methods
YER General Discussions, Contents, Study–Report Type
OALE Lungs, Respiratory System, Anatomy/Body, Biomedical Aspect

BIBLIOGRAPHY

168 cases reported (1955–61). 37 fatals discussed, causes of death listed. High incidence of fat embolism and exsanguination (heart and liver).

Authors discuss therapy, complications, and injuries of abdominal organs.

BEITRAG ZUR SCHOCKBEKÄMPFUNG AUF DER AUTOBAHN. [CONTRIBUTION TO THE THERAPY OF SHOCK ON THE HIGHWAY.] See 02-4523 N

Kuhne, H./Kremser, K. H.
DIE KLINISCHE BEDEUTUNG DER TRAUMATISCHEN FATTEMBOLIE. [THE CLINICAL SIGNIFICANCE OF TRAUMATIC FAT EMBOLISM.]
Chirurgischen Universitätsklinik Frankfurt (Germany). Dec. 1957. 6 p. ref. tables.

YEF Data Statistics, Contents, Study–Report Type
JNPI Fat Embolism, Consequences, Injury/Trauma, Accident
WSI Autopsy, Medical, Methods
JNH Fracture

According to 643 autopsy records, of the 95% of traffic fatalities with signs of fat embolism in the lungs, 59% have massive fat in lungs and 23% involve the large circulatory system. Of 55,122 hospital admissions over 10 years, 2,956 had fractures and 115 died from the consequences of their injuries. Autopsies of all of these showed fat embolism in lung; only seven were so diagnosed while alive. In 18 cases, fat embolism was the sole cause of death.

FITTS, W. T., Jr./Lehr, H. B./Bittner, R. L./Spelman, J. W.
AN ANALYSIS OF 950 FATAL INJURIES.


JN Injury/Trauma, Accident
WSI Autopsy, Medical, Methods
YEF Data Statistics, Contents, Study–Report Type
ECC Old Aged, Adults, People
JNH Fracture
OADH Pelvis, Lower Extremity, Anatomy/Body, Biomedical Aspects
JNX Multiple Severe Injuries
OAI Head

Analysis of cause of death in all 950 cases involving fatal injury in Philadelphia during 1961. Data from all 41 of city's hospitals. Mean age of group was 65 years. 5% of injuries involved occupants of motor vehicles. Describes vehicles, first-aid equipment, and communication system of police and fire department. 74% of injured were transported to hospital by police vehicles; 5% by fire department vehicles. Average of fifteen minutes between report of injury and patient's arrival at hospital. Whether complete autopsy was conducted made significant difference in the primary cause of death assigned. Case reports included. Errors in diagnosis, management, or both contributing to 51 deaths are described.

ANCALYSIS OF 827 CASES OF FATAL ACCIDENTS. See 24-3713 S

APPENDIX TO UNFALLVERLETZTE IN STADT MIT LANDLICHER UMGEBUNG. [POSSIBILITIES FOR INTENSIFYING FIRST AID FOR ACCIDENTS IN CITIES WITH A RURAL ENVIRONMENT.] See 03-3715 S

REVIEW OF AUTOBUS ACCIDENTS IN CITIES WITH A RURAL ENVIRONMENT. See 25-3721 S

Analysis of cause of death in all 950 cases involving fatal injury in Philadelphia during 1961. Data from all 41 of city's hospitals. Mean age of group was 65 years. 5% of injuries involved occupants of motor vehicles. Describes vehicles, first-aid equipment, and communication system of police and fire department. 74% of injured were transported to hospital by police vehicles; 5% by fire department vehicles. Average of fifteen minutes between report of injury and patient's arrival at hospital. Whether complete autopsy was conducted made significant difference in the primary cause of death assigned. Case reports included. Errors in diagnosis, management, or both contributing to 51 deaths are described.

L Time

Of the 112 victims studied, average age was 65; 50 control cases where death had not resulted from automobile accidents were also examined. Clinical data from hospitals were obtained. Findings indicate absence of pulmonary fat embolism in six patients without skeletal fracture, absence or minor embolism in 57 patients dead upon arrival of physician, and pulmonary embolism in 42 of the 49 patients alive upon admission to hospital. Of these 42, nine had fat embolism as primary cause of death. Table shows etiology, survival time, clinical impression of cause of death, fracture sites, and severity of embolism for these nine cases.
25-3722 S
Emson, H. E.
FAT EMBOLISM STUDIED IN 100 PATIENTS DYING AFTER INJURY.
Birmingham Accident Hospital, Pathology Dept. (England). Jan. 1958. 4 p. fig. tables. ref.

25-3724 S
Dencker, H.
MORTALITY RELATED TO VARIOUS METHODS OF TREATMENT OF FEMORAL SHAFT FRACTURES.
Göteborg Univ., Dept. of Surgery, Göteborg (Sweden). Nov. 1965. 5 p. ref. figs.

25-3726 N
Evarts, C. M.
DIAGNOSIS AND TREATMENT OF FAT EMBOLISM.
Cleveland Clinic Foundation, Ohio. 1965. 3 p. tables. figs.

25-3729 S
Kessler, M./Leibe, H./Kamprad, F.
ERFAHRUNGEN MIT DEM PRÄPARAT ”LIPOSTABIL” BEI DER BEHANDLUNG DER FETTEMBOLIE.
BIBLIOGRAPHY

Brief state--of--the--art report, with one case report on severe fat embolism. A significant improvement of the patient's condition was achieved after therapy with Lipostabil subsequent to negative response to conventional treatment. Authors refer to favorable results published by other researchers.

25-3773 S
Wertzberger, J. J.
FAT EMBOLISM: An analysis of cases seen at University of Kansas Medical Center from 1951 to 1962.
Kansas Univ. School of Medicine, Kansas City. Dec. 1964. 7 p. figs.

*JNPI Fat Embolism, Consequences, Injury/Trauma, Accident
WSC Diagnosis, Medical, Methods
WSI Autopsy
YEF Data Statistics, Contents, Study--Report Type
YCK Case Studies, Nature of Study*

Reports on 52 cases, 49 diagnosed at autopsy, with 4 case reports. Describes clinical manifestations and criteria for pathologist's diagnosis of fat embolism, discussing problem of differential diagnosis. Stresses importance of laboratory tests such as chest X rays, EKG, and search for fat droplets in urine. Describes preventive measures and supportive care for established cases. Review of literature.

25-3775 N
Teare, R. D./ Bowen, D. A. L./ Druty, R. A. B.
ACUTE PEPTIC ULCERATION AND CEREBRAL FAT EMBOLISM AFTER FRACTURE.
St. George's Hospital, Dept. of Forensic Medicine, London (England)/ Central Middlesex Hospital, Dept. of Morbid Anatomy and Histology, London (England), Nov. 1962. 2 p. ref.

*OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect
JNPI Fat Embolism, Consequences, Injury/Trauma, Accident
JNH Fracture
YCK Case Studies, Nature of Study, Study--Report Type*

Report on three cases where cerebral fat embolism followed skeletal injuries led to fatal peptic ulceration. Describe possible pathogenesis as discussed in literature.

25-3784 N
THE MANAGEMENT OF HEAD INJURIES COMPLICATED BY MAJOR EXTRACRANIAL TRAUMA. See 11-3784 N

25-3786 S
Adler, F./ Peltier, L. F.
THE EFFECT OF SUBLINGUAL POTASSIUM HEPARIN (CLARIN) ON THE SERUM LIPASE ACTIVITY OF PATIENTS FOLLOWING FRACTURES.
Kansas Univ. Medical Center, James B. Weaver Laboratory for Orthopedic Research, Kansas City. May 1964. 2 p. fig. ref.
*Journal of Trauma, Vol. 4, May 1964, pp. 390--393.*
Grant No: HE--03592--07.
Sponsor: Public Health Service.

*JNPI Fat Embolism, Consequences, Injury/Trauma, Accident
YEF Data Statistics, Contents, Study--Report Type
WSE Therapeutic, Medical, Methods
YCH Field Experiment, Nature of Study*

Serum lipase level is a reliable aid in the diagnosis and prognosis of the chemical phase of fat embolism. Authors compared serum lipase level for seven days in two groups of patients with extracapsular fractures of the hip. Sixteen of the 21 patients receiving heparin had an early significant elevation of the serum lipase activity. Fourteen of the 26 who did not receive heparin had a delayed significant lipase elevation. In 11 healthy subjects, no rise in lipase activity was noted after heparin administration. Heparin was administered sublingually in order to test its lipolytic rather than anticoagulant properties.

25-3787 S
Morton, K. S./ Gujar, M. P.
HEMORRHAGIC SHOCK AND FAT EMBOLISM: A clinical and experimental study.
British Columbia Univ., Trauma Research Unit, Vancouver, Sept. 1964. 3 p. tables, ref.
Grant No: 9360--04.
Sponsor: Canadian Dept. of National Defense, Defense Research Board.

*JNPI Fat Embolism, Consequences, Injury/Trauma, Accident
JNPL Shock
YCG Laboratory Experiment, Nature of Study, Study--Report Type
YEF Data Statistics, Contents
YCH Field Experiment*

A review of 22 clinical cases revealed a clinically recognizable fat--embolism syndrome. Appearance of syndrome could not be related to prolonged hypotension or a need for massive transfusion. Authors conclude from experimental study with rats that the clinical syndrome and experimental pulmonary fat embolism are unrelated to hypovolemic hypotension.

25-3791 S
Lowenfels, A. B./ Barbieri, R./ Hartmen, R./ Lord, J. W., Jr.
EXPERIMENTAL ARTERIAL FAT EMBOLISM.
Grant No: H--5114(C1).
Sponsor: Public Health Service.

*JNPI Fat Embolism, Consequences, Injury/Trauma, Accident*
Project was designed to test effects of 5- to 50-micron droplets of neutral fat injected into arterial system of dogs. Lethal amount by intra-arterial route is about one-tenth that by intravenous injection. When administered intravenously for a one-hour period immediately after fat injection, heparin offered no significant protection.

Short literature review with four case reports. Discusses the Pelletier theory of chemical phase of fat embolism, which seems to contraindicate the use of heparin.

1131-labeled triolein was injected into one hind extremity of one group of dogs with and another without fracture of the femur. Resorption of fat from injection site proved to be extremely slow. Absorption rate was not influenced by bone fracture. Fat is not transported by lymphatic system.

Schockbegriff im Wandel der Zeiten und heute. [Concept of shock in the past and today.] See 24-3958 N

Über pulmonale fettembolie nach Traumen mit verschieden langer Überlebenszeit. [On pulmonary fat embolism after injuries with different periods of survival.] Universität München, Institut für Gerichtliche Medizin und Versicherungsmedizin (Germany). 22 May 1964. 4 p. tables, graphs, ref.
Prince Henry Hospital, Sydney (Australia) / Prince of Wales Hospital, Sydney (Australia), 13 July 1963, 3 p. ref.  

JNPI Fat Embolism, Consequences/Complications, Injury/Trauma, Accident  
WSE Therapeutic, Medical, Methods  
YCK Case Studies, Nature of Study, Study–Report Type

Author reports five consecutive cases successfully treated with alcohol given intravenously. Discusses incidence, clinical picture, diagnosis and management.

25-4062 N  
Kaulbach, W.  
**HERZSCHÄDIGUNG BEI FETTEMBOLIE. [HEART DAMAGE IN FAT EMBOLISM].**  
Heidelberg Univ., Chirurgischen Klinik (Germany). 1960. 6 p. figs. ref.  

JN Injury/Trauma, Accident  
JNPI Fat Embolism, Consequences/Complications  
OAKB Heart, Cardiovascular System, Anatomy/Body, Biomedical Aspect  
WSC Diagnosis, Medical, Methods

Four cases of fat embolism and their effects on EKG are discussed. EKG's at various intervals after trauma demonstrate overload of right heart, Pericarditis associated in one case. Author recommends EKG as diagnostic aid for fat embolism.

25-4094 N  
Henkel, J. H./ Smith, J. L./ Pories, W. J./ Burget, D. E.  
**FAT EMBOLISM: Diagnostic challenge of a potentially lethal clinical entity.**  
Air Force Hospital Wright–Patterson, Dept. of Surgery, Wright–Patterson AFB, Ohio. April 1967. 5 p. ref.  

WSC Diagnosis, Medical, Methods  
JNPI Fat Embolism, Consequences/Complications, Injury/Trauma, Accident  
JNP Consequences/Complications  
WSE Therapeutic  
YCK Case Studies, Nature of Study, Study–Report Type

Gives case report and brief historical background on knowledge of fat embolism, describing symptoms and treatment. Complications are controlled by such measures as sedation, tracheal suction, and maintenance of normothermia. Heparin and ethyl alcohol should help decrease sequelae of capillary plugging and release of toxic fatty acids.

25-4119 S  
**FATAL TRAFFIC ACCIDENTS IN BRISBANE FROM 1935 TO 1964.** See 21-4119 S

25-4153 N  
LeQuire, V. S./ Shapiro, J. L./ LeQuire, C. B./ Cobb, C. A., Jr./ Fleet, W. F., Jr.  
**A STUDY OF THE PATHOGENESIS OF FAT EMBOLISM BASED ON HUMAN NECROPSY MATERIAL AND ANIMAL EXPERIMENTS.**  
Vanderbilt Univ., School of Medicine, Dept. of Anatomy, Nashville, Tennessee/ Vanderbilt Univ., School of Medicine, Dept. of Pathology, Nashville, Tennessee/ Vanderbilt Univ., School of Medicine, Dept. of Surgery, Nashville, Tennessee. Sept.–Oct. 1959. 9 p. illus. ref. tables.  

Grant No: PHS 1570/ Senior Research Fellowship SF 54. Sponsor: Public Health Service/ Middle Tennessee Heart Association/ Eli Lilly Foundation, Indiana.

WSI Autopsy/Pathology, Medical, Methods  
JNPI Fat Embolism, Consequences/Complications, Injury/Trauma, Accident  
VN Epidemiology/Etiology, Disciplines  
YCG Laboratory Experiment, Nature of Study, Study–Report Type

Authors describe and present results of histochemical tests on autopsy material and decompression experiments with rabbits. Propose that pulmonary fat emboli may result from traumatized depts, and that tissue injury initiates a process of colloidal instability of plasma lipids and increase of plasma lipids followed by aggregation and localization by the pulmonary vasculature.

25-4168 S  
Henn, R. H. E./ Spann, W.  
**UNTERSUCHUNGEN IBER DIE HäUFIGKEIT DER CEREBRALEN FETTEMBOLIE NACH TRAUMA MIT VERSCHIEDEN LÄNGER ÜBERLEBENSZEIT, [STUDIES ON THE FREQUENCY OF CEREBRAL FAT EMBOLISMS FOLLOWING INJURY WITH VARIOUSLY LONG SURVIVAL TIME].**  
Dec. 1965. 6 p. charts. ref.  

NKF Frequency/Time, Operating Conditions, Physical Aspect  
JNPI Fat Embolism, Consequences/Complications, Injury/Trauma, Accident  
OANBB Brain, Central, Nervous System, Anatomy/Body, Biomedical Aspect  
NKFF Delay  
YEF Data Statistics, Contents, Study–Report Type

Author discusses cerebral fat embolism as cause of death. Brief literature review is made pointing out sample size and frequency of fat embolism in each article. Author's own material obtained from 140 autopsies (trauma cases only) examined for fat embolism in the brain, of which 86 also had the lungs examined for fat deposits. Method and criteria are described. Age distribution and survival time are plotted. Number and severity of cerebral fat embolism are plotted as a function of survival time, and compared to same data for pulmonary fat embolism. Frequency of injury to heart, major vessels, and other vital organs, is correlated to fat embolism in brain and lungs. Frequency of brain purpura is given as a function of the survival time. Frequency of cerebral fat embolism by age is given. Brain purpura and clinical
symptoms not always sufficient to diagnose cerebral fat embolism.

25-4534 S
Camurati, C./ Pelliccioni, S.

31-3877 N
Kernahan, D. A.

31-3910 N
Kernahan, D. A.
Medical Services Journal, Canada, Vol. 20, April 1964, pp. 315–351.

31-4337 S
ROAD ACCIDENTS. See 03-4337 S

25-4513 S
ÜBER DIE RIIPPENSERIFRATUREN DURCH VERKEHRSUNFÄLLE UND DEN DERZEITI\nGEN STAND IHRER BEHANDLUNG. [ON SERIAL RIB FRACTURES CAUSED BY TRAFFIC ACCIDENTS AND THE CURRENT STATUS OF THEIR TREAT\nMENT.] See 24-4513 S

31-2631 N

DE Motor Vehicles, Vehicle
J Accident
VM Biomedical Sciences, Disciplines
YEC Bibliography, Contents, Study—Report Type

Contains 16 chapters on various subjects related to medical aspects of traffic safety, including alcohol and traffic accidents, medical assessment and driver licensure. Three chapters contain citations dealing specifically with motor vehicle accident trauma, and the post—traumatic phase of the accident. II. Statistical Papers: XI. Emergency Care, First Aid and Ambulance Services; XII. Medical and Surgical Problems of Traffic Accidents.

31-3831 N
Waters, W. R.

31-4337 S
ROAD ACCIDENTS. See 03-4337 S
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Disaster First aid. Organization and scope of the accident. First treatment after admission to accident. First treatment at the scene of an accident. First aid at the accident site. Medical First aid at the accident site.


Determination in commercial FLIGHTS. Automatic indirect blood shock.

Effects of flying on patients with flying on scheduled commercial flying. Effects of an accident flying squad. Organization and flying. Medical criteria due to pelvic fracture.

Canadian armed forces forces during 1959. Epidemiology of Forces. Autopsy findings in head Inhaled Foreign bodies in children.

Unsuspected Foreign bodies in the body of the young child's Airway Foreign bodies. Airway Foreign body fatalities in children.


Fractures of the pelvis. Fractures of the shaft of the Seat-belt fractures of the spine and sternum following automobile accident.


Major abdominal INJURIES associated with pelvic forward surgical HOSPITAL. A survey of evacuation, traffic accident INJURIES for the ten-year period of the emergency HOSPITAL. The trauma patient vs. the comatose INJURED patient. Experience about shocked and INJURED patient. Methods of shock on the HIGHWAY. Contribution to the severely INJURED, at the scene of the accident. Care of the severely INJURED patient. A five-year survey, of traffic accident INJURIES for the ten-year period of the severity and shock index of head INJURIES. Road Accidents. Essential

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complications of
intra-venous and
tamponade and
accidents. The
cranio-cerebral
injuries, Statistical and
abdominal
major road
injuries, The basic surgery
injuries, The early diagnosis
injuries, The evaluation and therapy
injuries, The late prognosis in injuries
injuries, The management of civilian
tartaric
injuries, The surgical management of
injuries of thoracic
with head injuries, Unrecognized abdominal
care to back injuries, Vehicle accidents.
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accident care. Urgency of
cerebrovascular injury, due care at the
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The annual INJURY of 15,000,000 children.
of multiple INJURY produced by seat belts.
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of liver acute INJURY to the head. Analysis of
and sternal bruises.
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chest injuries INJURY, Crushed
response to INJURY, Metabolic
response to INJURY with head INJURY, Causes of shock
brain INJURY, Continuous recording of the
closed head INJURY, Disability arising from
after civilian INJURY, Extent and time of blood-loss
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dying after INJURY, Fat embolism studied in 100
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abdominal INJURY, Nonpenetrating
spinal cord INJURY, On the treatment of
after head INJURY, Rehabilitation
Closed chest INJURY, Symptoms and therapy of
INJURY, The etiology of acute brain
Shock in INJURY, The incidence and mechanisms
severe head INJURY, The long-term prognosis
with a head INJURY, The management of skeletal
whiplash INJURY, The neurological syndromes
Acute head INJURY, Treatment of the patient
Respiratory INJURY, Insufficiency. The transport of
interest of intervertebral medical in the
tamponade and the small INJURY, The medical syndromes
Seal seat belts. intra-venous and indication of impact,
and Intra-abdominal injuries caused by
Intra-articular INJURY, Transfusion of
Intra-venous INJURY, and intra-articular
Intra-cerebral vascular lesions
Intubation at site of accident
INJURY, Intubation in first and emergency
INJURY, Investigation about the adequacy
Northern deficit and IRREVERSIBLE hemorrhagic shock.

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University of JENA. Proceedings of the symposium
of commercial jet aircraft. The patient
of the KIDNEY. Injuries
of the physician’s during the KOREAN war. Arterial repair
of the LARYNGEAL and traqueal injuries.
the LARYNX and cervical trauma.
the LARYNX and upper traquea.
the LATE posttraumatic headache.
the LATE prognosis in severe head
LATE rupture of the esophagus after
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Early versus LATE treatment of facial fractures.
the LEADERSHIP. Opportunity for
the community with diaphragm injury.
the LESIONS associated with closed chest
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arterial LESIONS treated by immediate
with posttraumatic headache.
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the aero medica LIFESAVING plan, HELP. A civilian
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the Management of LIVER, Closed injury
the Management of LIVER, Long-term progression of severe head
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the Blood LIVER in trauma.
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the LUNG contusion. Traumatic
the LUNG, Deceleration injuries
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the MAJOR road injuries.
the MANAGEMENT in Vietnam.
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the MANAGEMENT of cervical spine
the MANAGEMENT of civilian arterial
the MANAGEMENT of experimental
the MANAGEMENT of facial fractures
the MANAGEMENT of fracture with
the MANAGEMENT of head injuries
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operations of MEDICAL evacuation and transport.

trachoma. The MANAGEMENT of the airway and
and improved MANAGEMENT of the critically ill.
First MANAGEMENT of the critically injured. 02-3814 N
Emergency MANAGEMENT of traumatic and multifaceted surgical MANAGEMENT of through-and-through
anechastic MANAGEMENT of trauma. 1964. 01-4114 S
Surgical MANAGEMENT of traumatic 15-3826 N
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service for MANITOBAs. Provincial wide
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cardiac MASSAGE for circulatory arrest.
fractures. MASSIVE hemorrhage from pelvic
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necropsy MATERIAL and animal experiments.
autoptic MATERIAL. The incidence of morbid
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diuresis. The MECHANISM of acute renal failure
The MECHANISM of shock following

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about MECHANISMS of shock in head injury.

research. MEDICAL aspects of automatic crash
limitations of MEDICAL assistance at the scene of
given MEDICAL care at the accident site.

for the MEDICAL care of victims of traffic
or MEDICAL care. Ambulance service
ambulatory MEDICAL care. Yale studies

flights. MEDICAL criteria for passenger flying
operations of MEDICAL evacuation and transport.
Aerial MEDICAL evacuation with special
in civil MEDICAL evacuations. Helicopters

emergency. MEDICAL facilities and services. The
town. MEDICAL first aid at the site of an
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The MEDICAL self-help training program.
Emergency MEDICAL service system-analysis of
Emergency MEDICAL services in the small
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emergency MEDICAL services. Suggestions for
early MEDICAL treatment in cases of
doctors. MEDICINE in South Vietnam today.
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shock. METABOLIC changes associated with
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and METARANIMOL in the treatment of
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patient. METHODS of assessment of blood loss
various METHODS of treatment of febrile
MINIMAL equipment for ambulances

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vehicle. MOBILE operating room and emergency of
the MOBILE operating room, Toyota-go.
The MOBILE operating room of the
with the MOBILE unit of the surgical
Efficient MONITORING with a digital computer
pressure MONITORING. Central

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secondary MORPHOLOGICAL brain changes after
Clinical and MEDICAL and MORTALITY in a forward surgical
MORTALITY in head injuries 24-4195 S
influencing MORTALITY in head injury.
in the MORTALITY of closed head injuries.
fractions. MORTALITY related to various
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MOUTH-TO-MOUTH resuscitation in

After MULTIPLE injuries. 02-4152 N
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the NATURE of irreversible shock.
of femoral NECK fracture. Over-all statistical
Fatal NECK injuries caused by use of
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and the NONPENETRATING system. Hemorrhagic
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trauma. 1964. ONE year's experience in the

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Mobile OPERATING room and emergency
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time.

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frequency of cerebral

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| OAK  | Cardiovascular System          |
|      | OAKB | Heart                        |
| OAKC | Blood Vessels                  |
| OAKD | Veins                         |
| OAKD | Capillaries                   |
| OAL  | Respiratory System             |
| OALB | Lungs                         |
| OALE | Trachea/ Bronchi              |
| OALF | Pleura                        |
| OALG | Diaphragm                     |
| OALH | Mediastinum                   |
| OAM  | Urinary System                |
| OAMB | Kidneys                       |
| OAMC | Bladder                       |
| OAMD | Male Genital Organs           |
| OAME | Female Genital Organs         |
| OAN  | Nervous System                |
| OANB | Central                       |
| OANB | Brain                         |
| OANC | Spinal Cord                   |
| OANB | Autonomic                     |
| OAND | Nerve                         |
| OAO  | Musculo-Skeletal System       |
| OAOA | Bones                         |
| OAOB | Vertebrae/ Spine              |
| OAOB | Muscles                       |
| OAOA | Joints                        |
| OAOB | Ligaments                     |
| OAP  | Connective Tissues/ Integument Systems |
| OAPS | Skin/ Hair/ Nails             |
| OAOQ | Endocrine System              |
| OAR  | Body Fluids                   |
| OARC | Lymph                         |
| OARD | Cerebrospinal                 |
| OARE | Saliva                        |
| OARE | Teeth                         |
| OARG | Gastric                       |
| OARH | URINE                         |
| OARI | Sweat                         |
| OBR  | Problems                      |
| OBB  | Diseases/ Pathological        |
| OBC  | Toxicology                    |
| OBD  | Accident                      |
| OBCD | Poison                        |
| OBM  | Metabolism                    |
| OBP  | Public Health/ Hygiene        |

| W   | METHODS                     |
| WB  | Historical                  |
| WE  | Experimental                |
| WEF | Field                       |
| WEG | Laboratory                  |
| WEL | Mathematical                |
| WMD | Analysis                    |
| WME | Statistical/ Probability    |
| WMB | Design                      |
| WMC | Factorial                   |
| WMMB| Covariance/ Correlation     |
| WMBD| Regression                  |
| WMEB| Least Square                |
| WMBF| Variance                    |
| WMEC| Nonparametric               |
| WMD | Test                        |
| WME | Distribution                |
| WMEF| Stochastic                  |
| WMEG| Sampling                    |
| WMEH| Estimation                  |
| WMEI| Decision Making/ Game       |
| WMEF| Optimization                |
| WNB | Systems Analysis/ Operations Research/ Models/ Modeling |
| WS  | Medical                     |
| WSB | First Aid                   |
| WSE | Splinting                   |
| WSC | Diagnosis                   |
| WSD | Surgery                     |
| WSB | Plastic                     |
| WSB | Geriatric                   |
| WSE | Pediatric                   |
| WSD | Medical                     |
| WEE | Experimental                |
| WSE | Amputation                  |
| WSF | Therapeutic                 |
| WSG | Anesthesia                  |
| WSH | Autopsy/ Pathology          |
| WSM | X-Ray                       |
| WSP | Testing/ Measures           |
| WSB | Parameters                  |
| WSP | Physiological               |
| WUP | Pulse Rate                  |
| WUP | Respiratory Rate            |
| WUP | Blood Pressure              |
| WUP | Blood Flow/ Cardiac Output  |
| WUP | EEG                         |
| WUP | EKG                         |

| N   | PHYSICAL ASPECT             |
| NK  | Operating Conditions        |
| NPC | Pressure                    |
| NKE | Acceleration/ Deceleration  |
| NKF | Frequency/ Time             |
| NKFB| Reactions Time              |
| NKFD| Latency                     |
| NKFF| Delay                       |
| NKFP| Period                      |
| NL  | Phenomena                   |
| NLD | Impact                      |
| NLG | Distance/ Range             |
| NLB | Mileage                     |
| NLH | Sound                       |
| NLPC| Ultrasonic/ Supersonic      |

| O   | EDUCATIONAL ASPECT         |
| QC  | Principles                 |
| QO  | Teaching/ Training         |
| QE  | Equipment/ Material        |
| QF  | Education Measurements     |
| QG  | Education                  |
| QGE | Safety                      |
| QGM | Medical                     |
| QGF | First Aid (Red Cross)      |
| QGM | Comprehensive              |
| QGM | Comprehensive/ Physician   |
| QNI | Teachers/ Instructors      |

| S   | SOCIOECONOMIC ASPECT       |
| SB  | Social                     |
| SBB | Behavior/ Mores            |
| SBC | Population/ Demography     |
| SBD | Politics                   |
| SBE | Public Opinion             |
| SE  | Economics                  |
| SCB | Macroeconomics             |
| SCS | Microeconomics/ Price Theory |
| SCD | Economic Behavior          |
| SCE | Cost/ Benefits             |
| SCF | Cost Effective             |
| SCC | Budgets/ Budgeting         |
| SIC | Finance                    |
| SF  | Measures                   |
| SFB | Safety                      |
| SFC | Service                    |
| SFD | Community Support          |

| V   | DISCIPLINES                |
| VK  | Social Sciences            |
| VLE | Engineering               |
| VME | Biomedical Sciences        |
| VFM | Biomechanics               |
| VN  | Epidemiology/ Etiology     |
| VQ  | Information/ Communication |
| VR  | Law                        |
| VU  | Human Engineering/ Ergonomics |

| I   | SERVICES                   |
| IE  | Communications             |
| IF  | Vehicle                    |
| IFC | Service Stations           |
| IFG | Towing                     |
| IH  | Parking                    |
| IM  | Road Maintenance           |
| IO  | Hospital                   |
| IOP | (See also Hospital Care, JRG) |
| IQ  | Ambulance                  |

| Y   | STUDY-REPORT TYPE          |
| VC  | Nature of Study            |
| VCB | Research                   |
| VCC | State-of-the-Art           |
| VCD | Survey                     |
| VCE | Theoretical                |
| VCF | Systems Study              |
| VCG | Laboratory Experiment      |
| VCH | Field Experiment           |
| VCI | Design                     |
| VCK | Future/ Projection         |
| VCL | Case Study                 |
| VCL | Evaluation/ Effectiveness  |

| E   | Contents                   |
| YEB | Proceedings                |
| YEC | Bibliography               |
| YED | Abstracts                  |
| YEE | Reviews                    |
| YEF | Data Statistics            |
| YEG | Tables/ Graphs             |
| YEH | Diagrams/ Plans            |
| YEI | Photographs/ Illustrations|
| YEJ | Hearings                   |
| YEK | Law/Code/ Statute          |
| YEL | Patent                     |
| YEM | Instructions/ Specifications |
| YEN | Standards                  |
| YEO | Maps                       |
| YEP | Flow Charts                 |
| YEQ | Biographies                |
| YER | General Discussions        |
| YES | Computer Programs          |

| ENVIRONMENT | K SPACE                      |
| KB          | Terrain/ Habitat            |
| KB          | Flat                        |
| KB          | Flint                       |
| KBB         | Hilly                       |
| KBF         | Mountains                   |
| KBH         | Desert                      |
| KBL         | Vegetation                  |
| KBK         | Cultivated                  |
| KLM         | Rural                       |
| KLM         | Suburban                    |
| KLA         | Urban/ Town/ City           |
| KLC         | Zoning/ Land Usage          |
| KLB         | Residential                 |
| KLC         | School/ Hospital            |
| KLD         | Farm                        |
| KLE         | Park/ Resort                |
| KLF         | Business                    |
| KLI         | Industrial                  |

| TIME         | (See also Frequency/ Time, NKF) |
| L            |
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DBB  Bicycles, Nonpowered, Vehicle
     22-3727 S  A Study of 183 Road Deaths In and Around

DDC  Airborne, Power Vehicle, Vehicle
     04-4018 N  Some Problems Encountered in the Aerial
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DDCB  Airplanes, Airborne, Power Vehicle, Vehicle
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     04-4178 N  Patrolling the Roads with Aircraft.

DDCD  Helicopters, Airborne, Power Vehicle, Vehicle
     01-4095 N  Medicine in South Vietnam Today, Part 5.
     01-4183 N  Combat Casualty Management in Vietnam.
     01-4193 N  The Bloody Lanes.
     04-3977 N  Transport by Helicopter of Severely
     04-3984 S  Tasks of the Physician in the
     04-4093 N  Helicopters in Civil Medical Evacuations.
     04-4110 N  A Civilian Aeromedical Lifesaving Plan.
     04-4173 N  The Use of the Helicopter as a Means of
     04-4187 N  Helicopters Expand Hospital Service Area.

DE  Motor Vehicles, Vehicle
     01-3726 S  Injuries in Traffic Accidents.
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     03-3714 S  First Aid at Scene of Accident and First
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     22-3728 S  Autopsy Findings in 127 Patients Following
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DEB  Motor Cycles, Motor Vehicles, Vehicle
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DEC  Passenger, Motor Vehicle, Vehicle
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DEH  Special Purpose, Motor Vehicles, Vehicle
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     03-3979 S  Anesthesia and Intubation at the Site of
     03-3982 S  First Aid at the Accident Site with
     03-3983 S  Experiences with the Cologne Emergency

DEHLM  Ambulances, Special Purpose, Motor Vehicles, Vehicle
     (See Also Ambulance, Services, IQ)
     01-3834 N  Present Status of Ambulance Service in
     01-3866 N  Provincial Wide Ambulance Service for
     01-3962 N  Ambulance Service Transportation or
     01-4024 S  Ambulance Services and Traffic Casualties.
     02-3874 N  Ambulance Design and Equipment for
     03-3900 N  Flying Squad.

DEHM  Medical Units, Special Purpose, Motor Vehicles, Vehicle
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     03-4512 N  Experiences with the Mobile Unit of the
     03-4525 N  Mobile Operating Room and Emergency
     03-4531 N  An Outline of the Mobile Operating Room,
     03-4539 N  Report on the Clinomobile.

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