



# American College of Chemosurgery

BULLETIN

co-editors June K. Robinson, M.D. • Neil Swanson, M.D.

The 1984 annual meeting of the American College of Chemosurgery was a great success with many innovative and controversial ideas presented at the scientific sessions. Abstracts of those presentations follow. The scientific program chairman of the 1984 meeting, Dr. Martin Braun, III, M.D., will serve in the same capacity for the 1985 meeting in Las Vegas on Thursday and Friday, December 5 and 6. Abstracts to be considered for presentation should be forwarded to Martin Braun III, M.D., University Medical Building, Suite 608, 2141 K Street, NW, Washington, D.C. 20037. This meeting will have advance registration for members and their guests.

## ABSTRACTS FROM THE 1984 MEETING

### Ocular Anatomy for the Mohs Surgeon

Jeffrey A. Binstock, M.D. *University of California, San Francisco, Medical School*

The anatomy of the orbital area was reviewed with emphasis on the eyelids, lacrimal system, and orbital septum. The orbicularis oculi muscle, the insertion of its superficial and deep heads onto the anterior and posterior lacrimal crests, and its intimate relation with the nasal lacrimal sac were detailed. Also, the vascular and nerve supply of the region was addressed, as were suggestions for adequate regional anesthesia.

### Mohs Surgery for Sebaceous Carcinoma of the Eyelid

John L. Ratz, M.D. *Cleveland Clinic Foundation*

Sebaceous cell carcinoma of the eyelid, an aggressive tumor with high recurrence and mortality rates, treated with Mohs surgery, was presented. Three cases treated with Mohs surgery showed good response to therapy, and one patient has been free of tumor for more than 2 years. This suggests that Mohs surgery may be an extremely valuable tool in the treatment of a very dangerous and aggressive tumor.

### Microscopically Controlled Surgery for Periorbital Melanoma: Fixed-Tissue and Fresh-Tissue Techniques

Frederic E. Mohs, M.D. *University Hospital and Clinics, Madison, Wisconsin*

With conventional surgery, wide and deep excision of melanoma is needed to give reasonable assurance of eradicating not only the possible "silent" outgrowths from the clinically observed melanoma, but also the possible clinically invisible satellites in the peritumoral lymphatics. Microscopically controlled surgery, on the other hand, assures eradication of the melanoma and its unpredictable ramifications. Since it does not disturb possible satellites, the usual wide extra margin that is surgically removed in an attempt to encompass them is not needed. If any undetectable satellites should be present, they have not been disturbed or dissemi-

nated in the wound, and since they almost always arise by embolism rather than by continuous permeation in lymphatic vessels, they can be safely removed as they become grossly visible. This conservation of normal tissue is especially important around such an essential structure as an eye.

The presentation showed how the fixed-tissue technique is used for periorbital melanomas that do not involve the eyelid margins or the conjunctiva, and how the fresh-tissue technique with chemical cauterization is used for melanomas of the eyelids and conjunctiva.

### **Surgical Management of Eyelid Tumors**

Paul T. Gavaris, M.D. *Georgetown University*

The eyelids are first and foremost protective structures for the eye. Equally important is their cosmetic function. Therefore, surgical management of eyelid tumors should restore both functions optimally.

The anatomy is described as bilamellar with the tarsus, tendon, and septum being the deep or "skeletal" layer, and the skin-orbicularis the anterior layer. Repair of colobomas measuring 10 to 25% of the horizontal margin may be repaired primarily using a pentagon-shaped incision.

The tarsal edges are coapted with absorbable suture while the skin muscle is closed with silk or polyester material. For defects measuring 30 to 40%, canthotomy and cantholysis with creation of a "mini" flap are usually necessary. When 50 to 80% of the lower lid margin is excised, the use of the Hughes-tarsal-conjunctival flap with skin grafting is an excellent technique.

The lateral canthal tendon can be reconstructed with periosteal flaps taken from the orbital rims. Medial canthoplasties are more difficult to repair because of the presence of the lacrimal excretory system.

In total destruction of the lower lid, the "laissez-faire" approach is recommended with reconstruction using a number of techniques undertaken as a secondary procedure a year or so later.

### **Lessons to be Learned from Difficult Cases— Part 2**

Michael J. Albom, M.D. *New York University  
Medical Center*

Case presentations reviewed problems that were of a technical, psychological, and philosophic nature.

There may not be any ready solutions to some of the difficulties encountered, although hindsight may give added clues to attain acceptable answers. Long-term follow-up of aggressive recurrent basal-cell and squamous-cell carcinomas demonstrates the unpredictability of disease processes. A case of angiosarcoma was presented that provided lessons in biology of disease as well as the psychology of illness versus "wellness." Aggressive cutaneous cancers still cause serious morbidity and death, yet the public as well as many physicians remain complacent in their true concern about skin cancer. We must take a more active role in educating them.

### **Treatment Failure: Issues-Attitudes**

Lane Gerber, Ph.D. *Department of Psychiatry,  
University of Washington, Seattle*

Chemosurgical treatment has greatly increased the treatment success rate for skin cancers while at the same time preserving more of patients' healthy tissue than any other form of treatment for skin cancer. This has meant that the chemosurgeon has had to face treatment failure far less frequently than many other physicians who treat cancer patients and far less frequently than most other surgeons. This boon for chemosurgeons and their patients carries with it high expectations for the physician and patient that may lead to difficult emotional reactions on those infrequent occasions when treatment is unsuccessful.

This presentation reviewed and discussed the literature on treatment failure, or the inability of a physician to successfully treat his/her patient's illness despite the physician's best efforts. Material from an observational study of surgeons was also presented as an additional context for this important and neglected topic. Finally the relevance of this information for chemosurgeons was explored towards the goal of enabling physicians and patients to better understand and cope with our human limits.

### **Microcystic Adnexal Carcinoma: A Review of the Biology of This Tumor and the Possible Role of Mohs Surgery in Its Treatment**

Neil A. Swanson, M.D., John T. Headington, M.D., Roy C. Grekin, M.D., Louis C. Argenta, M.D., and Reed O. Dingman, M.D. *Departments  
of Dermatology, Pathology, and Plastic Surgery,  
University of Michigan*

Microcystic adnexal carcinoma (MAC) has recently been described as an unusual form of cutaneous

carcinoma which usually involves the central face, and has a tendency towards locally aggressive growth, local contiguous spread and recurrence, possible perineural spread, and little tendency to metastasize. This tumor is important to differentiate from basal-cell carcinoma and squamous-cell carcinoma of the skin because of its locally aggressive behavior and apparently high degree of neurotropism. This paper defined the biology of this tumor, as reviewed in the literature and a review by one of the authors of twenty such tumors reported from four different centers. The potential for treatment of this carcinoma using the Mohs technique, and actual treatment of one such large central facial lesion, was presented. The multi-disciplinary approach to this tumor was emphasized, with the inclusion of Mohs surgery.

#### **Ideal Margin of Excision around Malignant Melanoma**

J. Bhawan, M.D. *Department of Pathology, University of Massachusetts Medical School, Worcester*, and D. J. Grande, M.D. *Department of Dermatology, Tufts University, Boston*

Despite advances in the field of melanoma, controversy still exists regarding the extent of excision of normal skin around melanoma. Wide excision is neither associated with better prognosis nor decreased chances of recurrences. Recent recommendations of narrow margins are also not based on scientific evidence and there is no agreement about the width of narrow margins.

A case of superficial spreading melanoma revealed diffuse melanocytic hyperplasia in the lower layers of the epidermis of clinically normal-appearing skin excised widely (5 cm) around the melanoma, which ceased to be present within 1 cm of resection margins. Two conclusions can be drawn from this observation. Firstly, it is not always possible to predict that clinically normal-appearing skin is not involved. Secondly, melanocytic hyperplasia may be a focus for recurrence. While there is no direct evidence for the second conclusion, the fact that the melanocytic hyperplasia stops at some point from the main tumor mass indicated that this may be part of the melanoma spectrum. This distance will obviously vary from case to case.

We therefore suggest that a technically feasible narrowest excision should be done first, with a careful histologic evaluation of margins of excision. If the margin shows melanocytic hyperplasia and/or dysplasia, further excision should be performed until "normal" skin margin is achieved.

#### **The Advantages of Mohs Surgery in the Treatment of Malignant Melanoma: Addition of Horizontal to Standard Vertical Plane, Possible Use of Permanent Section for Removal of Last Extra Margin**

Norman A. Brooks, M.D. *University of California, Los Angeles*

The ideal surgical margin around a melanoma is unknown. The question arises whether the addition of a Mohs surgical excision to a standard surgical excision can increase the degree of histologic control and yet still be tissue conserving. The thick specimens obtained by standard surgical excision require transverse vertical sectioning for histologic examination. Only a small percentage of the total volume is actually examined and silent outgrowths can be easily missed. A thin-layered Mohs surgical excision performed after a standard surgical excision not only allows for tissue conservation but also a whole new dimension of histologic examination in the horizontal plane. In this plane, no silent outgrowths or extensions can be missed. Subtle nuclear and cytologic changes can occur in the basal layer of the epidermis in the far periphery of a melanoma. Slides of permanent sections of the last extra margin were shown to demonstrate these subtle changes.

#### **Comparison of Frozen Section and Paraffin Preparations for Examination of Malignant Melanoma**

Martin Braun, M.D.

There is great concern among many Mohs surgeons that frozen sections cannot be used with confidence to trace out atypical melanocytes on the edge of a malignant melanoma. An attempt was made to make a fair comparison of frozen and paraffin sections. The design of the comparison involved the use of a large lentigo maligna of the cheek. Strips of tissue 3 mm wide were cut through the center of the lentigo maligna. The strips were divided into five specimens each. The specimens from one strip were processed by frozen sections on the cryostat. Those from the other strip were processed by paraffin. The surface of the specimens used for comparison was the mirror image surface. In each specimen comparison, the frozen section was greatly inferior. The atypical melanocytes in the frozen section either were not visible at all or appeared as round areas of pale staining tissue, not at all pathologically di-

agnostic of lentigo maligna. While confirmatory work is needed, it does appear that the use of frozen sections in examining the margins of malignant melanoma is very unreliable.

#### **Squamous-Cell Carcinoma of the Forehead**

Jessica L. Fewkes, M.D. *Harvard Medical School*

As Mohs surgeons excise more lesions, histopathologic and clinical correlations are being made. Just as squamous-cell carcinomas (SCC) on the ear of middle-aged men have been examined and found to be a potentially highly aggressive tumor, so now we have examined seven patients with SCC on the forehead with supraorbital nerve involvement to try to delineate their characteristics and those of their tumors.

#### **Carcinoma of the External Auditory Canal: Removal and Prevention of Stenosis**

Joseph W. Buecker, M.D., and John T. Phelan, M.D. *Roswell Park Memorial Institute*

Because of the vital function and intricate anatomy of the external auditory canal, we recommend chemosurgery for carcinomas involving the region. Unfortunately, successful extirpation can be followed by progressive stenosis of the canal as wound healing and contracture proceed. Cases were presented which demonstrate a method to minimize this complication of stenosis.

#### **Emergency Airway Assessment and Management**

Hubert T. Greenway, M.D., and Constance Nagi, M.D. *Scripps Clinic and Research Foundation*

A review of emergency airway management including transtracheal intubation and the proper use of emergency airway equipment was presented. Particular attention was directed to: initial assessment and management of upper airway emergencies; a review of methods and equipment needed for oxygen delivery; a review of methods and techniques for emergency ventilation, including transtracheal intubation; and consideration of medicolegal aspects of emergency equipment maintenance, and preparedness of office personnel. A teaching station with airway equipment including laryngo-

scopes and an adult intubation model was available for those who wished to practice transtracheal intubation. Emphasis was placed on basic airway management using oxygen and appropriate ventilatory adjuncts.

#### **Microscopically Controlled Excision (Chemosurgery) of Dermatofibrosarcoma Protuberans: A Review of 25 Patients**

Paul O. Larson, M.D. *University of Wisconsin Hospital and Clinics*

Dermatofibrosarcoma protuberans (DFSP) is an uncommon tumor arising in the dermis with a well-known tendency to recurrence after excision. Treatment has traditionally consisted of wide local excision with recurrence rates ranging from 0 to 80% in large series. This paper reviews the use of microscopically controlled excision in the Chemosurgery Clinic at the University of Wisconsin by Drs. Frederic E. Mohs, Stephen Snow, and Paul Larson.

Twenty-five patients were treated microscopically using either the fixed tissue technique or fresh tissue technique with follow-up periods ranging from 2 months to 15 years. Two of ten patients followed for 5 years had recurrent DFSP (20% recurrence). One of these patients was subsequently treated chemosurgically and followed for 5 years without recurrence, giving an overall cure rate of 9/10 (90%).

In patients treated initially with chemosurgery, none of seven patients followed for 5 years or longer had a recurrent DFSP and one of eight patients followed for less than 5 years had a recurrent tumor for an overall recurrence rate of 1/15 (6.7%). The recurrent DFSP was re-excised chemosurgically and has gone 1 year without recurrence.

The results of chemosurgical excision of DFSP are compared with standard excision of DFSP. Chemosurgical excision of DFSP shows a very favorable, low recurrence rate and should be an indicated method of treatment for both initial and recurrent DFSP.

#### **Erythroplasia of Queyrat of the Perimeatal Skin Treated with Mohs Microscopic Surgery**

Gerald Bernstein, M.D. *University of Washington, Seattle*

A 43-year old man with squamous-cell carcinoma in-situ (erythroplasia of Queyrat) involving the perimeatal area of the glans penis for 3 years was

treated with topical 5% 5-fluorouracil cream. This was apparently cured over an 8-week course of therapy. Recurrence, confirmed 1 year later, was treated with Mohs microscopic surgery.

Under general anesthesia the patient was operated upon by a team of urologists, a Mohs surgeon, and a plastic surgeon. A ventral slit was performed and extended to a distance of 6.5 cm. The urethra was isolated, dissected out, and excised in three microscopically controlled segments to a distance of 5.5 cm until a tumor-free plane was reached. Utilizing the foreskin as a free graft, the urethra was immediately rebuilt. The patient had an uneventful recovery and now enjoys normal cosmetic, urinary, and sexual function.

This presentation reviewed the surgical and histopathologic aspects of the procedure. The gross and microscopic anatomy of the penis and urethra were reviewed and therapeutic aspects discussed with emphasis on utilizing Mohs microscopic surgery.

#### **Solitary Pigmented Bowen's Disease**

Richard F. Wagner, Jr., M.D., and Donald J. Grande, M.D. *Departments of Dermatology, Boston University School of Medicine and Tufts University School of Medicine*

The case reports of two elderly men with solitary pigmented genital lesions were presented. These pigmented lesions satisfied the clinical criteria for melanoma (various shades of black or brown, irregular notch borders, discrete regions of epidermal surface change, and apparent regions of regression) of Mihm, Clark, and Reed (1975).

Upon histopathologic examination, biopsies from each lesion showed abundant keratinocyte atypia, mitotic activity, and individual cell necrosis, characteristic of Bowen's disease. In addition, numerous non-neoplastic, pigmented melanocytes with far-reaching dendritic processes were seen.

One patient refused treatment for his Bowen's disease and the other patient was treated with liquid nitrogen.

Pigmented Bowen's disease should be added to the differential diagnosis of pigmented lesions. Because of the genital location of the Bowen's disease in the two patients, care should be taken not to confuse this disease with Bowenoid papulosis, a disease with similar histopathology.

#### **Bowenoid Papulosis**

George Burns, M.D., and Richard G. Bennett, M.D. *Wilford Hall, AFH, USAF, San Antonio, and UCLA Medical Center*

Two cases of bowenoid papulosis of the penis were presented. In both cases, Mohs (fresh tissue technique) was used to remove the atypical-appearing epidermis, which extended from 3 to 5 cm beyond the visible lesions. Based on our experience, as well as a review of the literature, we conclude that bowenoid papulosis most likely represents a neoplasm which may evolve with time into Bowen's disease and invasive squamous-cell carcinoma.

#### **The Value of Mohs Surgery (Fixed Tissue) for Treatment of Male Genital Squamous-Cell Carcinoma**

Peter C. Suhge D'Aubermont, M.D. *Emory University*

The use of the chemical fixative ( $ZnCl_2$ ) for Mohs surgery has been largely abandoned by those doing chemosurgery. In a review of 20 cases of squamous-cell carcinoma of the penis (including Bowen's disease or erythroplasia of Queyrat), the fixative was used in nine cases. Although the fixative has certain disadvantages, such as pain or swelling, better hemostasis is obtained, particularly on larger lesions of the glans penis. In two cases, the fixative was used to control bleeding after beginning the case by fresh tissue Mohs surgery. Our overall cure rate for this series of 20 cases was 94% at 1-7 years.

#### **Giant Carcinomas Treated by Delayed Mohs Microscopic Surgery**

Anthony V. Benedetto, D.O. *Medical College of Pennsylvania*

Very large and destructive tumors can be very difficult to manage, especially in the elderly and in certain areas of the body where grafting procedures are not reliable. The Mohs technique was done in delayed stages over an extended period of time, and the wounds were allowed to heal by secondary intention. Mohs microscopic surgery—fresh, fixed, or both techniques—was used to treat non-metastasizing tumors of the body. Lesions treated were: two basal-cell carcinomas and one squamous-cell carcinoma of the forehead; one Paget's disease of the perineum; one Bowen's disease of the penis;

two basal-cell carcinomas of the leg; three basal-cell carcinomas of the scalp. Two to five separate delayed surgical procedures were done for a particular lesion over a period of 4 to 18 months. There were no recurrences at 1–6 years after the surgery. Not all patients can withstand the rigors of extensive excisional surgery with or without grafting procedures. Delayed Mohs excisions with secondary healing can produce cosmetically acceptable and functional results.

### **Malignant Clear Cell Hidradenoma Treated by Mohs Surgery**

Mary E. Maloney, M.D., and Paul A. Krusinski, M.D. *University of Vermont, College of Medicine, Burlington*

Clear cell hidradenoma is rarely reported to be malignant, and is not felt to develop from benign lesions. However, it is apparent that clear cell hidradenoma can be recurrent and can extend locally to involve deep structures. Treatment of malignant clear cell hidradenoma has been primarily wide excision or amputation. We present the 14th case of malignant clear cell hidradenoma. This case shows progression from benign to malignant histology over a 9-year period. Mohs surgery necessitated a total of a 1-cm margin to clear the tumor mass. A further surgical margin of 1 cm was taken to assure that skip areas were not missed.

We recommend Mohs surgery for treatment of recurrent clear cell hidradenoma to prevent future malignant degeneration. Furthermore, we recommend that any tumor showing increased mitotic figures or angiolymphatic invasion, suggesting malignant degeneration, be treated by Mohs surgery (to define the limits of the tumor mass), followed by at least 1-cm margin of normal-appearing tissue to prevent adjacent local recurrence.

### **The Advantages and Versatility of the Cheek-Neck Advancement-Rotation Flap following Mohs Surgical Excision of Cutaneous Malignancies**

Arnold E. Katz, M.D., and Donald J. Grande, M.D. *Departments of Otolaryngology and Dermatology, Tufts University School of Medicine*

The cheek-neck advancement-rotation flap is not frequently considered in the reconstructive options following tumor extirpation in the head and neck

area. We have successfully used this flap in 15 patients. This technique was used to repair combined defects of the cheek and lips in two patients, isolated cheek defects in two patients, and isolated defects of the nose, temple, and in antral cutaneous fistula in each of three patients.

This flap is extremely safe and the scars can be well concealed in the wrinkles of the face, the preauricular crease, and the wrinkles of the neck. It is especially valuable in the elderly patient and should be considered as one of the options for reconstruction of the head and neck following removal of cutaneous malignancies.

### **Triangular Advancement Flaps with Subcutaneous Pedicle in Skin Closures**

Stephen N. Snow, M.D. *University Hospital and Clinics, Madison, Wisconsin*

The triangular advancement flap with a subcutaneous pedicle is a simple method of using adjacent skin to close wounds. The flap has the advantage of possessing a good blood supply obtained from the subcutaneous pedicle. Undermining is unnecessary. In partial closures, this flap can be taken from areas of redundant skin to reduce the size of the original defect. In primary closures the cosmetic results are excellent. This report illustrates some of its uses in closures of facial defects following microscopically controlled surgery.

### **The Use of Free Flaps in Reconstruction following Mohs Surgery**

Donald J. Grande, M.D., and Matthias Donelan, M.D. *Departments of Dermatology and Otolaryngology, and Plastic Surgery, Tufts University School of Medicine*

Microscopically controlled surgery for cutaneous malignancies can result in extensive defects that are not amenable to reconstruction by local flaps or full and split thickness grafts. Until the advent of microvascular surgery, these wounds were often repaired with less than satisfactory results. The use of free flaps has allowed the reconstructive surgeon to utilize vessels, already in the defect to support a free flap, thereby producing a viable bed for further grafting. We will present a demonstrative case using latissimus dorsi free flaps to the calvarium following Mohs surgery. The history and indication for free flap-microvascular reconstruction will be discussed.

### **Informed Consent: Where Good Surgical Experiences Begin**

Dan Jones, M.D.

Dermatology has moved into a new era where we are recognized as skin surgeons with unique training in the biology and treatment of cutaneous tumors. Of the numerous techniques we use, Mohs micrographic surgery is one of the most sophisticated. This presentation demonstrated the importance of informed consent in establishing an alliance with the patient by sharing in the uncertainties of our science and establishing a realistic framework for the surgical experience. It lays down the facts about the surgical procedure and eliminates any misconceptions or assumptions. Beyond creating a more professional atmosphere, informed consent will decrease unnecessary litigations. Case presentations of Mohs surgery demonstrated these points.

### **A Comparison of the Cosmetic Results of Healing by Primary and Secondary Intention following Mohs Surgery**

Leonard H. Goldberg, M.D., and Kenneth M. Ellner *Baylor College of Medicine*

It has long been debated whether facial wounds allowed to heal by granulation and epithelialization produce a better cosmetic result than those closed primarily. In order to standardize our evaluation of cosmesis, a system (cosmetic index) was developed which measures five variables: pigment, patient acceptance, sequelae, deformity, and surface texture. Using this system, we compared healing by primary and secondary intention in 100 randomly chosen patients 1 year after Mohs surgical removal of a skin cancer. We examine the role played by the age of the patient, size of the lesion, depth of the lesion, and body region in both types of closure.

### **Keratin Protein Expression in Basal- and Squamous-Cell Carcinoma with Deep Invasion: An Immunohistochemical Study**

June K. Robinson, M.D., and Robert Gottschalk *Northwestern University School of Medicine*

The expression of certain classes of keratin is associated with cell maturation and differentiation. During cell transformation and tumor development

the cell specificity of intermediate filaments, keratin, is largely conserved. Taking advantage of this, we utilized monoclonal and polyclonal antikeratin immunohistochemical techniques to examine 100 basal- and squamous-cell carcinomas as they became deeply invasive.

Dyskeratotic keratinocytes and keratin pearls in squamous-cell carcinomas stain with antikeratin antisera to larger keratins (65-67 Kd), but fail to stain intensely with those of smaller keratins (50, 56 Kd). At the deep tumor margins, no cells express larger keratins but cells retain expression of 50, 58 Kd, which are markers of keratinocytes derived from stratified squamous epithelial cells. Similarly, basal-cell carcinomas do not express low molecular weight keratins (50, 56 Kd) as strongly at the base of the lesion as they do at the surface. This selective loss of keratin polypeptide markers is associated with progressively more aggressive behavior as the tumor invades deeper structures.

### **Sound Dressing Techniques for Difficult Anatomic Areas**

Stuart J. Salasche, M.D., and George B. Winton, M.D. *Brooke Army Medical Center, Fort Sam Houston, Texas*

As there is currently no single reference which provides the skin surgeon with techniques or instructions for designing dressings to fit wounds in difficult anatomic areas, this presentation offered the viewer many examples of such dressings. Bandaging techniques which provide the wound protection and compressive support in such awkward areas as the medial canthus of the eye, the nose, the ears, and the scalp were demonstrated.

### **Stimulation of Granulation Tissue over Exposed Cranial Bone by Use of Carbon Dioxide (CO<sub>2</sub>) Laser Perforation**

Ronald G. Wheeland, M.D., and Philip L. Bailin, M.D. *Cleveland Clinic Foundation*

The healing by secondary intention of large cutaneous defects that result in exposure of bone is characteristically exceedingly slow or disappointingly incomplete. We wish to describe our method utilizing the carbon dioxide (CO<sub>2</sub>) laser to perform multiple small perforations through the outer table of the exposed cranial bone to stimulate the development of granulation tissue after tumor extirpa-

tion with the Mohs microscopically controlled surgical technique. This procedure can be rapidly and safely performed in an outpatient setting without use of anesthesia and predictably results in the development of sufficient granulation tissue to allow subsequent healing by secondary intention or permit later wound coverage by skin flaps or grafts. The many advantages of our technique compared to the conventional methods suggest that it should be considered as an alternate method to stimulate the production of granulation tissue over exposed bone and speed wound healing.

### **Mohs Surgery for Treating Squamous-Cell Carcinomas of the Mobile Tongue**

Wayne M. Marley, M.D., and Rex A. Amonette, M.D. *University of Tennessee*

Carcinoma involving the anterior two-thirds of the tongue comprise 21% of intraoral squamous-cell malignancies. Sixty percent of these patients have clinically negative cervical nodes at diagnosis with primary lesions measuring <2 or <4 cm (stage I and II, respectively). The traditional wide excision surgical procedure gives 48 and 34% 5-year survival rates. Seventy-five percent of treatment failures are detected within 24 months postoperatively. Of these, half are at the primary surgical site alone or appear with regional nodes. Salvage of these patients with combined radical surgery and radiotherapy is poor (<50% 5-year survival rates) and accompanied by moderate to severe radiation sequelae.

More extensive surgery (hemiglossectomy, mandibulectomy, radial neck dissection) do increase cure rates, but with higher surgical morbidity.

Total microscopic margin controlled excision (Mohs surgery) is proffered as the initial surgical modality for the primary lesion. This may offer optimal chance for cure with minimal morbidity and facilitate the interdisciplinary approach to these tumors.

### **Infiltrative Basal-Cell Carcinoma: Its Histology and Biological Behavior**

Ronald J. Siegle, M.D., and Sheldon V. Pollack, M.D. *Ohio State University and Duke University*

Infiltrative basal-cell carcinoma (BCC), a histologic variant of BCC, is believed to be an "aggressive" form of this tumor. It has not been clearly defined

histologically, nor has its behavior been well documented. Our histologic criteria for infiltrative BCC include a poorly circumscribed growth pattern with elongated strands of cells, the majority of which are four to eight cell layers thick, invading through a nonsclerotic stroma. To study its behavior, 214 consecutive recurrent BCCs referred for Mohs surgery were classified by growth pattern. A multivariable analysis of the following groups was performed: infiltrative (N = 24), nodular (N = 120), sclerosing (N = 8), and "all other" non-infiltrative BCCs (N = 190). Significant results include: infiltrative BCC required five or more Mohs stages more often than nodular or "all other" BCCs; post-op size was greater for infiltrative vs. nodular; and pre- and post-op size were greater for infiltrative vs "all other" BCCs. The infiltrative vs sclerosing groups showed no significant differences.

Infiltrative BCC is a distinct histologic type of BCC and is separable from the sclerosing type. Analysis of this population of recurrent tumors suggests the infiltrative BCC is more destructive and difficult to treat than the more common nodular BCC. When present histologically, this variant should be noted so that adequate treatment may be rendered.

### **An Immunologic Mediator Associated with Basal-Cell Carcinoma**

Leonard M. Dzubow, M.D. *University of Pennsylvania School of Medicine*

The pathophysiologic basis for individual susceptibility to the development of basal-cell carcinoma is not known. Clinical correlation, however, can be made with fairness of complexion, history of actinic exposure, and genetic background.

A soluble factor has been isolated from the tumor-involved skin, sun-exposed normal and sun-protected normal skin of all individuals examined with basal-cell carcinoma. This substance inhibits normal lymphocytic stimulation by mitogenic agents. Examination of young and old tumor-free individuals with fair complexions revealed the presence of this substance in skin samples. Dark-complexioned tumor-free patients lacked this material.

It is possible that the presence of this cutaneous mediator is genetically determined and establishes a permissive environment for cutaneous carcinogenesis in predisposed individuals by immune interference.

**Keratoacanthoma: Benign or Malignant?**George R. Mikhail, M.D. *Henry Ford Hospital*

Keratoacanthoma (K-A) has been classified as a benign lesion. However, the lesions can be destructive, particularly when they occur on the nose, lip, and eyelid. The biologic behavior in such cases is not that of a benign lesion. Furthermore, examples of metastatic K-A are on record (Schnur, P. L., and Bozzo, P. *Metastasizing keratoacanthomas?* *Plast. Reconstr. Surg.* 62:258, 1978). The diagnosis of K-A can be problematic. Many cases of squamous-cell carcinoma (SCC) have been initially wrongly diagnosed as K-A (Jackson, I. T. *Diagnostic problem of keratoacanthoma.* *Lancet* 1:490-492, 1969; Mikhail, G. R. *Squamous cell carcinoma diagnosed as keratoacanthoma.* *Cutis* 13:287-392, 1974; Goldenhersh, M. A., and Olsen, G. *Invasive squamous cell carcinoma initially diagnosed as a giant keratoacanthoma.* *J. Am. Acad. Dermatol.* 10:372-378, 1984). Therefore, it is proposed that K-A may be considered a subtype of SCC and should be treated as such when the diagnosis is in doubt or when the lesions are large and invasive.

**The Effectiveness of Curettage and Electrodesiccation in the Treatment of Basal-Cell Carcinoma**Charles B. Stoer, M.D., and Henry Menn, M.D.  
*University of Miami School of Medicine*

The presentation examined the data concerning the history, use, and cure rate of the curettage and electrodesiccation (C & D) in the treatment of basal-cell carcinomas. Special attention was given to the need for histologic control in certain body locations and for specific histologic types. Patterns of referral to the chemosurgeon following unsuccessful C & D was discussed in an effort to better define the appropriate role of C & D therapy for basal-cell carcinoma.

**SUTNICK AWARD**

For many years, Dr. Ted Sutnick has donated the funds for the Sutnick Award for the best scientific paper presented at the annual meeting by a fellow in chemosurgery. The awards committee announced that this year the first prize of \$500 was awarded to Charles B. Stoer, M.D., Fellow of Dr. Henry Menn at the University of Miami, and the second prize of \$250 was presented to Ron Wheeland, M.D., Fellow of Dr. Phil Bailin at the Cleveland Clinic.

**MOHS SURGERY CONFERENCE**

On January 11-13, 1985, 29 physicians met at the Sonesta Beach Hotel and Tennis Club in Key Biscayne, Fla. for the Mohs Surgery Conference sponsored by the Skin Cancer Foundation. Drs. Henry Menn and Philip Bailin were co-directors of the program. As the honored guest speaker, Dr. Frederic Mohs regaled all those present with information gleaned from his years of experience.

**BULLETIN OF ACC**

Two issues of the Bulletin of the American College of Chemosurgery will appear in *The Journal of Dermatologic Surgery and Oncology* in April and October of each year. The third issue, a newsletter, will be mailed to members of the society in July. News items should be submitted to either of the co-editors:

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