

Original Articles

THE IMPORTANCE OF CASE HISTORY TAKING IN ORAL SURGERY PRACTICE

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DIAGNOSIS is the art and science of recognizing the presence and nature of disease by an evaluation of its various distinctive signs, symptoms and characteristics. As modern rational therapy is based upon the scientific interpretation of the changes in structure and function of the body tissues the importance of an accurate diagnosis is at once evident. There can be only one true diagnosis and the success of treatment is dependent upon its establishment. Therefore, in our endeavor to render the best possible service to the patient every known method should be employed, if necessary, in making an accurate diagnosis.

The character of oral surgery practice is changing rapidly because of consistently greater demands being made by the health service professions and the laity. The field is extensive and in its scope is not unlike other specialized fields in medicine including ophthalmology, otolaryngology, obstetrics, and general surgery. An unusual amount of training and specialized skill are required to diagnose and treat diseases of the oral cavity, and for this reason it is not practical for the general practitioners of medicine or dentistry to have a very comprehensive knowledge of oral disease. The medical and dental professions and the public are therefore depending more and more upon the oral surgeon for the treatment of these conditions.

The successful oral surgeon of the future must be more than an exodontist. He must be as well grounded as the physician in the basic sciences. Diagnosis of mouth conditions requires a broad general concept of disease and an appreciation of the relationship of diseases of the mouth to disorders of other parts of the body. Even in making an examination for the diagnosis of a local condition the field of observation must be broad. The examiner should be alert to general conditions that indirectly influence the oral lesion. Since oral surgery is a health service closely paralleling the specialties of medicine, it cannot develop independently of medical methods.

Because of the great number of systemic diseases exhibiting oral lesions, one is immediately impressed with the importance of a knowledge, on the part of the oral surgeon, of the manifestations of the more common systemic conditions in which oral lesions occur. Although it is not within the scope of our specialty to diagnose and treat many of these conditions, we may by simply taking a concise and accurate history arrive at a tentative diagnosis that will enable us to intelligently refer the patient to the proper practitioner for treatment.

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A diagnosis should be made only after a careful consideration of the subjective findings, commonly known as symptoms, and the objective findings, or the data compiled as a result of the physical examination and special examinations. An adequate diagnosis might conceivably be established by consideration of only one or the other of these, but both an accurate history and a careful examination are preludes to the greatest number of satisfactory and complete diagnoses.

We, as oral surgeons, not infrequently attempt to arrive at a solution to a diagnostic problem by means of consideration of the physical and laboratory findings alone with disregard for the history. This undoubtedly results in many errors with final embarrassment to the diagnostician and dissatisfaction on the part of the patient. This is not alone the fault of the examiner but in most cases is a matter of inadequate training. The dental schools are almost uniformly consistent in their failure to teach students the value of case history taking in diagnosis.

The importance of case history taking in the practice of oral surgery cannot be overestimated. In many instances the history of a case is relatively more important to the oral surgeon than it is to the physician in making a diagnosis because the oral surgeon does not usually have the benefit of a general physical examination or extensive laboratory studies. He must rely upon the history of the case and a keen sense of observation to give him leads along these lines. In many cases a carefully taken history, including salient data, carefully written, and properly appraised will alone establish the diagnosis. This is notably true of tie douloureux in which disease the physical and laboratory findings are of little help and the diagnosis is made chiefly from the history. Hemophilia, hemorrhagic tendencies, cardiac disorders, lung disease, stomatitis due to drug poisoning and idiosyncrasies, heavy metal poisoning, salivary gland obstructions, vitamin deficiencies, neuralgias, early acute osteomyelitis, and early deep infections are only a few of the many conditions in which the history is an important factor in diagnosis. In an oral surgery practice where a great percentage of the work is done under general anesthesia, it is not always practical to have a medical consultation in each case but by careful questioning it is possible to evaluate the risk to be taken in performing the operation or in giving the patient a general anesthetic.

Case history taking is an art and science which taxes the ingenuity, judgment, tact, and breadth of clinical experience of the examiner to the fullest extent. The most valuable case histories are taken by those with clinical experience extensive enough to enable them to search out and evaluate the most important facts in the case. A wide clinical experience is a necessary prerequisite of keen diagnostic ability. This does not necessarily mean years of experience. One man, making full utilization of the senses of sight, touch, hearing and smell, can gain more experience in a year than another in a lifetime who looks but does not see, touches but does not feel, listens but does not hear, and smells but does not detect. A history may be valueless and extremely misleading if hurriedly taken and improperly appraised. The length of a history is by no means an indication of its value. It is better to have a short accurate concise statement containing the important facts regarding the case than a voluminous amount of extraneous material. A brief history containing salient facts is at once obviously more valuable than one written at length, but because of the

inexperience of the questioner contains an abundance of irrelevant data presented in an incoherent manner. By brief proper queries, mainly as to how function has been altered, valuable information can be obtained without much loss of time. A nice knowledge of disease is necessary in order to determine along which lines the questions are to be directed and in order to distinguish the relevant from the irrelevant.

To the young man in the field this may sound rather discouraging. However, if he makes a practice of taking routine histories in a careful, orderly, systematic manner, he will soon discover that it is not as difficult as it first appears. Not only will careful case history taking aid him in diagnosis, but it will afford an adequate record system, the careful study of which will eventually result in the crystallizing of very definite ideas regarding the diagnosis and treatment of oral diseases.

Questions well chosen and carefully asked will enable the oral surgeon to select the patient who should be sent to the physician for a physical examination or to select the patients who should be hospitalized. The average ambulatory patient seeking the services of an oral surgeon is in good general health and the contraindications to general anesthesia in most instances are diseases of the circulatory or respiratory system. A few well-directed questions such as the following will bring to light any gross disturbances of either of these systems:

1. Have you been ill recently?
2. Have you ever had any serious illnesses?
3. Do you tire easily?
4. Do you have shortness of breath?
5. Do your ankles swell?
6. Do you have pain over your heart?
7. Do you have a cold?
8. Do you have a cough?
9. Have you ever had lung disease?

It is also advisable to add: Do you have diabetes or kidney disease? Questions answered in the affirmative can be elaborated upon and if the surgeon thinks it advisable, the patient can be sent to a physician for examination.

After experience and practice are obtained in history taking, the procedure may be modified to fit the individual needs in any particular case. Obviously the recognition of a trivial condition would not necessitate a complete medical history. Nor would it be judicious practice to enter into a lengthy investigation of the family history in the case of a severe acute deep infection, a complicated fracture, or an acute dentoalveolar abscess. In the more obscure conditions, questions must be intelligently directed in a manner designed to establish certain symptom complexes that are characteristic of the suspected disease. Oftentimes this is a slow, tedious, time-consuming procedure, but in final analysis may pay rich dividends in satisfaction to the examiner.

CASE 1.—A 45-year-old white farmer was admitted to the hospital complaining of weakness of the wrists and ankles, lassitude, obstinate constipation and colic. Examination showed a "lead line" on the gums, muscle weakness and red blood cell stippling. A diagnosis of chronic lead poisoning was made but no history of contact could be established.

Every possible source of contact was investigated. The patient's household, barns, tools, water supply and food supply were studied. He had done no painting, nor had he sprayed his crops with anything containing lead. He was discharged from the hospital improved after two weeks of treatment but returned six weeks later in much worse condition. He was questioned day after day. Finally it was learned that the patient often used a small bore rifle on his farm to shoot hawks. He had carried a handful of 22 caliber, lead-nosed bullets in his trousers pocket for several months. It was his habit to handle these at idle moments throughout the day. He had not considered this significant, and it was only after repeated questioning that the source of the lead was discovered. He recovered without incident when the bullets were discarded.

CASE 2.—A 15-year-old white boy recently came to the office with an acute dentoalveolar abscess due to a carious mandibular molar. It was observed that he had a sty on one eyelid and that he was pale, malnourished, weak, and drowsy. His mother volunteered the information that he had recently recovered from a siege of boils. A set of circumstances of this nature at once suggested some underlying systemic disease. On further questioning, it was discovered that during the past year the patient slept from 16 to 18 hours a day, drank excessive amounts of water, had frequency of urination, voided excessive amounts, and despite an unusually good appetite had lost weight and had become weak. The symptom complex of weakness, loss of weight, polydipsia, polyuria, and polyphagia is suggestive of diabetes mellitus. On examination by a physician, the boy was found to be on the verge of diabetic coma with four plus sugar, four plus acetone, and four plus diacetic acid determinations on urinalysis. This patient might have gone into coma and died as a result of diabetes had the condition not been discovered.

Stomatitis due to a drug reaction is often difficult to diagnose because of its obscure nature. In diagnosing these conditions, the history is of the utmost importance and is often very difficult to obtain. This is due in part to carelessness in questioning the patient and is also in part due to the fact that the patient does not appreciate the significance of what the examiner means by the term "drugs." Not infrequently a patient, when asked if he has been using any drugs, will answer in the negative. However, after careful questioning, it may be discovered that the patient takes some type of sedative, or in many instances some type of cathartic of a proprietary character that the patient does not consider a drug. One of the important ones to question about at the time of taking the history is phenolphthalein. This drug is contained in many of the cathartics commonly sold over the drug counter and is a very common etiologic factor in oral lesions. The difficulty of getting a history of drug ingestion in some cases is well illustrated by the following:

CASE 3.—A 35-year-old woman was brought to the office by her physician and dentist who had been collaborating in the treatment of what they termed a Vincent's infection. After three weeks of intensive treatment, they failed to get favorable results and came for consultation.

Both the physician and the dentist insisted that the case was Vincent's stomatitis, but of a very persistent type that would not respond to the usual treatment. It was felt that the condition was not Vincent's infection, but it was decided to continue the treatment for Vincent's infection for a few days until the diagnosis was established. A case history was taken with special emphasis on drug ingestion. The patient denied taking medication in any form. She was seen on several different occasions and various angles of the history were again investigated, but each time the patient denied taking anything. Finally after almost a week of observation and further questioning regarding drugs, the patient said, "Well, doctor, I do take two grains of calomel every day but I don't think you would consider that a drug." When the calomel was stopped, the mercurial stomatitis cleared up.

Case histories should be in writing so that at the completion of the examination the material can be carefully studied and appraised. After some practice in history taking, the examiner may jot down notes as he goes through the routine and following the examination write, at his leisure, the case history in detail. This material may later be invaluable in the event of medicolegal proceedings, as illustrated by the following incident:

A leading oral surgeon recently removed four impacted third molars under nitrous oxide anesthesia from a 20-year-old college student. Postoperative hemorrhage was very severe and was controlled only after several days during which time all known methods for the control of bleeding were employed. About the time the bleeding was checked, the patient developed extensive infection involving the lower jaw, and side of the face and neck on one side. The case required continuous special nursing care, transfusions, and surgical measures for management of the infection. The convalescence was complicated by extensive osteomyelitis of the mandible, necessitating a long course of hospitalization. The patient missed a year of college.

Attorney for the plaintiff maintained that the surgeon was negligent in not taking a detailed written history in which he would have learned that the patient had recovered only three months previously from a severe case of pneumonia and, therefore, was not in good physical condition. Negligence was also claimed because a physical examination, bleeding and clotting time, and complete blood and urine studies were not done before undertaking an operation of such magnitude.

It is probable that the same complications would have developed if only one tooth had been removed. It is quite probable that the plan of treatment would have been the same even though a more detailed history and physical examination had been done, but the value of a complete written record, in this instance, can readily be appreciated.

Various printed forms are available listing the main headings, with space left under each heading in which the history is to be written. These are not desirable as often there is insufficient space to adequately accommodate the material to be recorded. Printed forms, likewise, contain spaces for information which in the case under consideration may be highly irrelevant. The

standard plain white 9" by 12" history sheet is the most practical material to use. This allows for expansion in those instances where elaboration is desirable and necessary; it contains no irrelevant material and its size permits ease in handling and filing.

Many men use the card system successfully and find that the smaller size allows for greater convenience in handling and storing. There is no objection to this if the examiner will use enough cards for each patient to adequately record the important data. There is a temptation to crowd the material all on one card, with the result that much of the material is illegible and distinctly insufficient to be of value for future reference.

Examiners with wide clinical experience may modify the usual method of history taking to suit the case under consideration, the character of the questions being determined by the patient's statement of his chief complaint. Variations and modifications are justifiable, but for the less experienced practitioner and even for those with wide experience, in many cases where the complaints are obscure, the following routine is suggested.

I Chief Complaint: (C. C.) This is a short statement of the thing most noticed and complained of by the patient. It should be short and in the patient's own words. For example: "tumor of the tongue," "swelling of the jaw," "sore mouth."

II Present Illness: (P. I.) This should be a chronologic development of events, beginning with the first symptom and leading up to the present status of the condition. Have the patient develop this in his own words as nearly as possible. Many patients are unable to do this and will resort to endless time-consuming rambling about irrelevant subjects. In these cases, the facts regarding the present illness must be drawn from the patient by careful questioning. This information should include the exact date of onset; the first symptoms noticed—(fever, chills, sweats, pain) and the progress of such symptoms from day to day; date of giving up work; date when patient last felt well. Insofar as is possible, ask the patient short, one- or two-word questions and demand short, concise answers.

When definite symptoms are present, they should be carefully analysed as variations in the character of the symptom may prove to be an important factor in the differential consideration. This is especially true of pain. Pain is one of the most common and important symptoms of oral disease. It is the symptom that brings most patients to us for treatment. Pain has a wide variation of quality and intensity and its character may establish the diagnosis. The sharp-shooting, lancinating pain of trigeminal neuralgia is typical and will establish the diagnosis, but a tumor of the Gasserian ganglion or of one of the divisions of the fifth nerve might cause a similar type of pain. The differential characteristic is a residual faint, dull, boring, burning pain with a small area of loss of sensation between paroxysms. Malignancy of the maxillary antrum or the fossa of Rosenmüller gives a similar type of pain but does not occur in paroxysms. Tic douloureux is at times difficult to differentiate from Tic of the ninth cranial nerve. The patient with ninth nerve Tic may get a paroxysm of pain on the act of swallowing, whereas, the mere presence of food in the mouth may initiate the pain in the fifth cranial nerve Tic. This is easily explained by a consideration of the innervation of the oral and pharyngeal cavities. When pain is a symptom, determine: regions involved; area and point of maximum intensity; character (dull, aching, sharp, lancinating, or wavelike); how induced; how relieved; how aggravated; relation to effort, meals and posture; time of onset and duration; presence of associated phenomena such as faintness, giddiness, nausea, vomiting, and fever; what treatment has been given and what relief has been noted from treatment.

When headache is a symptom, determine: time of onset, duration, periodicity, locality (frontal, occipital, lateral, superficial, deep, change of locality); radiation;

extension; effect of mobility of head; how relieved; effect of stooping, reading, sewing, and light; relation to constipation, to food, effort, posture, excitement, menstruation, nausea, giddiness, vomiting, visual disturbances; inquire about family history of headache, allergy, or epilepsy.

III Past History:

- (a) General health
- (b) Diseases of childhood (duration, severity, date): measles, mumps, whooping cough, diphtheria, scarlet fever, chickenpox, St. Vitus Dance, acute rheumatic fever, sore throat, vaccination, serum reactions, etc.
- (c) Other diseases and their outcome: malaria, typhoid, pneumonia, pleurisy, rheumatism, poliomyelitis, sore throat, tuberculosis, and gonorrhoea. A history of syphilis may be difficult to get because some individuals will deny infection and many others do not know they have had it. At times the history must be obtained by indirect questioning and by inference from a history of the presence of luetic lesions. Careful questioning may bring out the previous existence of chancre or secondary lesions such as mucous patches and skin lesions. Sore throat, skin eruptions, loss of hair or nails and miscarriages may be suggestive of luetic infection. Determine extent of treatment.
- (d) Injuries and operations.
- (e) History of each system.
 1. *Cardiorespiratory*—Inquire about cough, expectoration, hemoptysis, shortness of breath, night sweats, palpitation, retrosternal or precordial oppression or pain (relation to effort, radiation), swelling of ankles.
 2. *Gastrointestinal*—Inquire about appetite, eating habits, bowels (number and character of stools, presence of blood or mucous, visible parasites), nausea, vomiting (descriptive details), jaundice, pain (character and relation to eating), belching, flatulence, hemorrhoids, trouble with teeth.
 3. *Genitourinary*—Ask about urination, frequency, pain, difficulty in starting stream, presence of blood or pus, number of times voiding during day or night, edema.
 4. *Neuromuscular*—Inquire about headache, dizziness, insomnia, fainting spells, nervousness, epilepsy, twitching, spasms, cramps, weakness, paralysis, abnormal sensory disturbances, neuralgias, wasting, rigidity, aphonia, aphasia, tinnitus, defects in special senses and organs of special sense.
 5. *Bone and Joint*—fractures, arthritis, deformities, swelling, limitation of motion.
 6. *Best weight*—when, loss or gain, how rapidly.
 7. Observe and appraise mental condition and get opinion of reliability of response.
 8. *Eyes*—Inquire about glasses, history of failing vision, pain, double vision.
 9. *Ears*—Note loss of hearing, pain, discharge.
 10. *Nose*—colds, epistaxis, drainage.
 11. *Menstrual*—regularity, character, duration, pain, age of onset, intermenstrual discharge, age of menopause. Date of last period.
 12. *Marital*—Years of marriage.
 - Number and health of children.
 - Health of mate.
 - Miscarriages—causes if known.
 - Number of pregnancies.
 - Marriage—happy or unhappy.
 13. *Habits*—Tobacco, alcohol, drugs.
 - Work—character and surroundings.
 - Sleep, exercise, recreation.

IV Family History: Of father, mother, brothers, sisters.

Living—state of health.

Dead—cause of death and age at death.

Occurrence in family of condition similar to patient's or of:

Tuberculosis

Malignancy

Heart and kidney disease

Nervous and mental disease

Diabetes

Gastrointestinal disease

Syphilis

Gout

V Diagnosis From the History:

Deductions from an appraisalment of the symptomatology and the clinical course noted in the above data should form the basis for a tentative diagnosis at this point before proceeding with the physical examination.

Standard abbreviations are permissible and desirable throughout the entire history and serve markedly to cut down the time necessary to write up a complete history.

A number of valuable observations may be made during the course of taking and writing up a case history. Although this actually falls within the province of the physical examination and not within the discussion of history writing, I believe that its mention at this time is desirable in order to emphasize its importance. In a sense we are all detectives. We must develop our special senses to the highest degree; especially our sense of observation. Before resorting to palpation, percussion, or auscultation, we must give the eyes a chance to observe. As many impressions may best be gained during the short interval during which the history is being taken, I will take the liberty of mentioning some of the most important possible observations at this time.

Mental state. A fair estimate of the patient's mental condition should have been gained by the time the history has been taken. Our diagnosis of the psychoses and neuroses must necessarily be made by what the patient says and the manner in which he says it. Those with insanity and delusions will be quite obvious; those with hysteria will show emotional instability; and the neurasthenic will betray himself by his mode of dress, low spirit, symptom complexes and phobias.

Mode of approach. The ambulatory patient may show by his energetic gait and erect carriage that his condition is recent and not grave whereas the slow, deliberate gait of a bent figure may indicate a serious chronic illness or depressed mental state. The gait of tabes dorsalis, paralysis agitans, and hemiplegia is characteristic.

Facial expression. Valuable diagnostic data may be obtained by observation of the expression. The hysterical and neurasthenic faces are unmistakable. The facial expression may convey states of pain, anxiety, uneasiness, worry, and may be a valuable index to the severity of the patient's condition. Fever may be evident by the flushed skin; the acromegalic face and the paralysis of facial muscles in Bell's palsy are characteristic.

State of nutrition. Marked weight loss is usually indicated by wrinkling of the skin and loose fitting clothing and is suggestive of malignancy, tubereu-

losis, diabetes, or Graves' disease. The appearance of malnutrition may be an indication of poor tissue reaction and slow recovery.

Skin and mucous membranes. Pallor of the skin, gums and lobes of the ears noted during conversation with the patient suggests blood dyscrasias. Jaundice, cyanosis, and pigmentation may be obvious. Ecchymosis and petechiae may be significant findings. Leucoderma colli or other secondary syphilides may be noted.

Hair and nails. The dry fine hair of myxedema or the patchy alopecia of syphilis may be noted. The cleanliness or lack of care of the nails may throw some light on the personal habits of the patient. Cyanotic watch-glass fingernails may indicate a congenital heart or chronic lung disease.

Lymph nodes. The enlargement of the cervicle chains makes one consider Hodgkin's, tuberculosis, syphilis and infection.

Cough and expectoration may help establish a fair presumptive diagnosis of tuberculosis, asthma, bronchiectasis, aneurysms of aorta, or pertussis.

The quality of the breathing, the character of the voice and speech, the appearance of the eyes, and the ability to hear are other points which can be observed. Notched incisors, ulcerative and inflammatory gum conditions, missing teeth and advanced pyorrhea may be noted.

The hand may reveal: congenital heart disease or a chronic lung condition by clubbed cyanotic fingers; acute rheumatic fever by the red periarticular swellings; subacute or chronic arthritis by deformed joints; acromegaly by increased size; and myxedema by its spade shape.

Edema of the face and eyelids would lead one to suspect nephritis or angioneurotic edema; swelling of the ankles would lead one to suspect nephritis or a cardiac condition.

Numerous other examples could be cited but those mentioned are sufficient to show how vast a fund of knowledge can be gained by merely observing the patient during the period in which the history is taken and before the examination proper has started.

With a history carefully taken and analyzed and appraised, as outlined, the examiner should feel that he has developed a substantial foundation upon which to establish a tentative diagnosis before proceeding to the physical examination.

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