

Medico-Dental Lesions of the Oral Cavity

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PART I.

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It is difficult for a member of one profession to choose a subject suitable for a lecture by another profession, but in this particular instance, the physician, the surgeon, and the dental-surgeon are really all practising different branches of the same great science—Medicine. I have, therefore, asked myself the questions: 'what have we most in common? How can my craft help yours?' and, 'what lessons have I learned from dental-surgery that I might pass on for your consideration?' In order to answer these questions, from facts rather than hearsay, I have the backing of over 30 years of private and hospital experience.

I do not intend to subject you to complete analysis of the cases met with in these long years of practice. Most of you will agree that statistical records are wearisome and difficult to recall. I am, therefore, with the aid of these slides* which were sent to me as a gift by that eminent Oral Surgeon, Prof. Kurt Thoma of Harvard University, President of the American Academy of Oral Surgery and Pathology, whom I was introduced to by our Dean of the Faculty of Dental Surgery of the Royal College of Surgeons of England, Professor Bradlaw, in London, last year, trying to demonstrate how and to what extent my craft and that of my present and future colleagues may be of help to the Medical Profession and consequently to suffering humanity.

In 1844 Horace Wells a dentist of Hartford, Connecticut, began to use nitrous oxide in his practice but retired because of an anaesthetic death of one of his patients. His friend William Morton of

Charlton, also a dentist, continued the development of inhalation anaesthesia. He first employed chloric ether when filling teeth, but in 1846 he turned to sulphuric ether in the extraction of teeth. Morton finally persuaded John Collins Warren, a surgeon to give the new anaesthetic a trial. The operation was performed on October 16th 1846 and consisted of an 'excision' of a "vascular tumour just below the jaw on the left side of the neck". When the operation was completed Warren exclaimed — "Gentlemen, this is no humbug". — The discovery was quickly accepted and the rapid sleight-of-hand era of surgery was replaced by careful, deliberately performed operations.

Thus, from the beginning, the dental profession played a significant role, since the second (and first publicized), general anaesthesia for surgery about the head and neck was given by a dentist.

Having been in practice for over 30 years, of these over 25 years as Dental Surgeon on the staff of a General Hospital, and the first to be appointed in Malta, it is understandable that I may have made errors and missed diagnoses: 'He who never made a mistake, never made a discovery'. This may be ascribed in part to my reluctance to venture beyond what I considered strictly to be the actual field of dentistry. To the ethical dentist, it might even seem presumptuous to offer any suggestion or advice with such serious connotations as mouth cancer, syphilitic lesions in the mouth, tuberculous lesions etc. in differential diagnosis. Although not always circumscribed by such a limited concept of his responsibilities, nevertheless the average

* (It is most unfortunate that we could not reproduce any of these slides because of difficulty in producing efficient reproductions locally.— Editor).

dental surgeon has probably received scant instruction in dental studies concerning the symptoms of mouth cancer and other lesions and the importance of early differential diagnosis.

After some years of practice, I have on many occasions, referred patients with these lesions to the surgeons and physicians at the hospital and in private practice and, though many diagnoses may not always have been correct, the majority of the cases were confirmed.

In all private cases that I have referred and many of the cases, if not all referred at the hospital I, as a dental surgeon, have been the first to be consulted by the patient.

In many discussions of mouth cancer and other lesions which may be confused with this condition in diagnosis, the first phase of the problem (the diagnosis) receives but little attention, the main considerations being directed towards the treatment of the growths. It can be demonstrated however, that the chance of cure depends at least as much, if not more, upon early diagnosis and prompt institution of treatment as upon any wide differences in the selection and application of the treatment method.

It is in the first phase, that is, in the discovery and diagnosis of mouth cancer and other lesions that the dental surgeon plays a leading role. Under certain conditions, the dental surgeon is confronted with a greater responsibility in the early diagnosis of these lesions than is the physician. In some varieties of mouth cancer and other lesions in the mouth it is more likely that the dental surgeon will be consulted first — for it is entirely reasonable for the patient to believe that the growth or its initial symptoms are due to some dental disorder rather than to a benign, a malignant tumour, or some other lesion. In such cases, the well-informed dental surgeon can render great service to the public health and welfare, for frequently he alone is in a position to make an early diagnosis, presumptive, or

positive. In the oral cavity, there are, needless to say many inflammatory lesions and benign and malignant tumours, as well as a variety of oral manifestations of systemic diseases which may at times offer difficulties in differential diagnosis.

You will admit, I am sure, that members of the dental profession hold a position of unique advantage with regard to the early diagnosis of serious lesions of the oral cavity. Malignant tumours and other lesions of the mouth occur in many cases in persons who otherwise apparently enjoy perfect health. Many of them have seldom if ever needed to consult a physician, at least not for any complaint that would require a thorough examination of the oral cavity. The medical profession is powerless to provide early diagnosis and prophylaxis for this group of people. On the other hand, since it is becoming an increasingly widespread practice from childhood on, to have a thorough dental examination once or twice a year, the dentist can examine the oral cavity periodically under the most desirable conditions. If the dental surgeon does not avail himself of this unusual opportunity for the early diagnosis of tumours and other lesions, the irreparable loss to the health of the public is obviously very great.

By training and practice the dental surgeon is familiar with the normal anatomy of the oral cavity and hence should be able to recognize any departure from the normal. He has but to realize that his responsibilities do not end with the care and treatment of the teeth and their appendages alone: and that in every case in which he is able to discover a malignant or other lesion, it is possible that he has been instrumental in saving a human life. When a malignant tumour first appears in the gum, the hard palate, the edge of the tongue or the cheek, the location of the lesion and the mild character of the symptoms logically suggests

to the patient that there may be some trouble with the teeth. In such cases, therefore, it is natural for the patient to consult his dentist first. A study of the clinical history of patients with malignant tumours of the mouth will show that in a high percentage the advice of the family dental surgeon had been sought before a physician was consulted. In brief, the dental surgeon is consulted first in roughly one-third of cases of mouth cancer. It is particularly noteworthy that in such a variety as cancer of the gum the opinion of a dental surgeon was sought initially in approximately 65 per cent of these cases.

On the other hand, in many cases of mouth cancer in which a dentist is consulted first, it is obvious that the malignant character of the disease is not recognized. Then some form of dental treatment is usually given for a considerable period of time and the non-committal attitude of the dentist tends to reassure the patient that his complaint is not serious. Should the dental surgeon, when first consulted, miss the opportunity to diagnose early mouth cancer and other serious lesions, his oversight may bring about an irreparable loss of time in beginning proper treatment and the eventual result may be death from a hopelessly advanced cancer rather than prompt cure of an early growth. Much of what one knows on this subject after long years of practice has been learned, in all likelihood, by bitter experience, and this is the reason of the imperative necessity for under-graduate and post-graduate medical and dental education and training.

SYPHILIS: Delay in the diagnosis of cancer and other oral lesions is frequently caused by the erroneous diagnosis of syphilis (gumma or some secondary syphilides of the oral cavity). Mouth cancer and such syphilitic lesions are sometimes very similar in clinical appearances and the surest way to diagnosis is, of course,

biopsy. From the practical standpoint, however, it is significant that cancer of the mouth is statistically very many times more frequent than gumma. In those cases in which tongue cancer and syphilis are associated, syphilis has obviously played a prominent role in the aetiology, since it produces a chronic *luetica glossitis* that persists over a period of many years. Syphilis is a significant aetiological factor in lingual cancer, since about 20% of all patients with cancer of the tongue have a positive Wassermann test. The casual relationship between syphilis and mouth cancer does not appear to be a specific one. It is not the spirochaete itself but rather the long standing chronic inflammation which is a significant aetiological factor. If positive serological results are established, the diagnostician should not be misled and leave aside the more important concomitant lesion of carcinoma.

One practical conclusion to be drawn from these facts is that serologic tests should not be the only means of diagnosis, but these should be corroborated with bioptic findings in the differential diagnosis of an ulcer or tumour of the mouth. Otherwise, diagnostic errors will be found to be made in many cases of tongue cancer. Gumma of the tongue (the syphilitic lesion most resembling cancer and not easily distinguished from it clinically) is seen very much less frequently than lingual cancer. On the basis of chance alone, the probability of gumma is therefore small. In brief, to avoid fatal delays in beginning treatment, and tragic errors, a diagnosis of gumma should not be made until the presence of cancer has been excluded by biopsy.

LEUKOPLAKIA: This lesion can be recognized easily. It consists of a simple thickening of mucous membrane, characteristically whitish, smooth or papillary, and may appear as a discrete or diffuse patch. Leukoplakia is occasionally a pre-cancerous lesion. If uncomplicated,

the condition is of little clinical significance. It occurs as a response of surface epithelium to one or more forms of chronic irritation, such as syphilis, tobacco, chronic sepsis, avitaminosis, which are also factors in the aetiology of cancer. The presence of leukoplakia should, therefore, serve as a warning to the dentist and the physician that the patient is more likely to develop a malignant tumour of the mouth than the average person. All patients with marked leukoplakia should be referred by the dentist for periodic medical examination.

TUBERCULOSIS: Tuberculous ulcers of the oral mucous membrane usually occur by secondary implantation of tubercle bacilli in the sputum of patients with pulmonary tuberculosis. Only occasionally are these lesions encountered in patients in whom no other focus of tuberculosis can be demonstrated in the lungs or elsewhere.

A tuberculous ulcer is characteristically painful, tender, non-indurated: the surface is finely granular, and yellowish in colour. The differential diagnosis can be made only by biopsy of the ulcer. Roentgenographic examination of chest etc. should be done in cases where doubt exists.

The differential diagnosis between tuberculosis and cancer in the oral cavity is of great importance, since the proper method of treatment of the two lesions differ considerably.

Surgical excision or radiation therapy of a tuberculous ulcer is almost always followed by rapid progress of the disease. Rarely, the two lesions may co-exist in the oral mucosa. Frequently, these tuberculous lesions will respond favourably to streptomycin therapy.

FIBROUS HYPERTROPHY OF THE GUMS: Dental surgeons frequently observe fibrous hypertrophy of the gums in patients who have worn ill-fitting dentures for many years. This condition is also encountered in patients wearing a

full upper plate for some time with several teeth remaining in the lower jaw (molars missing), mastication being carried out with the anterior teeth: the resultant mal-occlusion produces hypertrophic gingival changes of the lower gum anteriorly.

Sometimes the possibility of a malignant tumour is raised by the dentist in these cases. This dental abnormality is seldom associated with the development of cancer in these areas.

LICHEN PLANUS (*Lichen Ruber Planus*). The lesions of the mouth are nearly always found in association with lichen planus of the skin. They occur most frequently upon the mucous-membrane of the tongue, lips and cheek and occasionally on the gingiva. They appear in the form of whitish dots, plaques or streaks, giving to the mucous-membrane an appearance as if it had been cauterized with silver nitrate. Inflammatory reaction does not occur and no change may be visible for years. General debility and depression may cause the disease, but the aetiology is not known.

PEMPHIGUS. Pemphigus Vegetans.

Pemphigus is an acute or chronic disease, characterized by the successive development of variously sized and shaped bullae which are filled with colourless or yellowish serous liquid. It is non-contagious and the aetiology is not known. It may appear on the mucous membrane of the mouth, the lesion being widely scattered over the gums, the roof of the mouth, the soft palate, lips or the tongue. The mouth lesions may precede the skin lesions and be the only lesions for some time. Blebs are formed, and these are seldom accompanied by inflammation, their bases usually being reddened and the surrounding skin normal. In size the blebs may range from a pea to a hen's egg. In form the blebs are mostly hemi-spherical or oval, but if they coalesce their shape is destroyed. Their

contents are at first clear, but they gradually in time become sero-purulent and in some cases they present a reddish or dark appearance. Their acute course is from two to eight days, and are succeeded by successive crops of new blebs. At times they burst, developing excoriated surfaces, or, after rupturing, their contents may dry into thin crusts. The oral manifestation of the disease is much less pronounced than that upon the rest of the body. The presence of blebs is not always indicative of pemphigus: these may also be present in syphilis, herpes, leprosy etc.

RANULA AND RETENTION CYSTS.

The oral mucosa, especially of the palate, the cheeks and the floor of the mouth contains numerous mucous and minor salivary glands, most of which are of microscopic size. When obstruction occurs to the ducts of these small glands, a retention cyst may develop. On the dorsum of the tongue or cheeks, the cyst seldom grows larger than 4 or 5 mm. In the floor of the mouth they may be considerably larger, and in this location, are known as *ranula*. Formerly, *ranula* was erroneously thought to be due to obstruction of the duct of the submaxillary salivary gland.

The clinical course of these cysts is benign and the treatment is surgical excision.

FORDYCE'S DISEASE.

Yellow patches or nodules are frequent-

ly encountered in the mouth, especially on the mucosa of the cheeks and less often in the floor of the mouth and on the gums. When this lesion presents as a discrete, raised nodule, the patient should be referred to a surgeon for a differential diagnosis of a fibroma. Fordyce's disease is relatively common. It is characterized by the presence of discrete, yellowish, seed-like lesions on the lips and gums. The condition is chronic and benign.

HERPES OR HERPES ZOSTER.

Herpes Zoster is a major herpes in which the disease is associated with nerve irritation. It differs from simple herpes in being more severe. I have observed a number of cases that appeared to be due to an impacted lower third molar, where the disease spread along the course of the trigeminal nerve and persisted after removal of the tooth. There is a tendency to believe that the disease is toxic in origin and affects the nervous system. Infection about the teeth no doubt has a direct relationship to the disease. In the mouth, the lesion is generally unilateral. The disease is often seen accompanying tic douleureux and Bell's palsy. The mucosa beneath the vesicles is oedematous. The vesicles burst more rapidly in the mouth than upon the skin and leave bloody erosions which soon become yellowish-white. The lesions heal without scar formation. Some cases are very severe, with violent neuralgia and pain.