Ohmann-Dumesnil (A. H.)

[Reprinted from THE TRI-STATE MEDICAL JOURNAL, St. Louis, December, 1896.]

SYPHILITIC PERFORATIONS OF THE BONES,

By A. H. OHMANN-DUMESNIL,

Professor of Dermatology and Syphilology in the Marion-Sims College of Medicine, St. Louis.

SYPHILIS in its protean manifestations shows changes of the most varied character and pathological changes of the greatest dissimilarity. Like leprosy and tuberculosis it may attack any and all the tissues of the organism, sparing none, and often proving most destructive in its character. Whilst there is no doubt that syphilis is a proliferative disease, consisting of round-cell proliferation at its inception and, later on, of connective tissue hyperplasia of a fibrous character, it is equally indisputable that there are other changes which may be observed at times. Processes which are very destructive will manifest themselves more as a consequence of the disease, perhaps, than as a condition inherent to it. In other words, the destruction is rather an indirect than a direct one, yet is possessed of sufficient characteristics to justify its being called specific in form and character. In the so-called tertiary or post-syphilitic stages of the disease we meet with more or less marked involvements of the deeper tissues. These are rather prone to suffer and undergo a certain amount of destruction on account of a loss of resisting power as well as of reparative tendency. This element of destructiveness may be of a varying degree of severity, the quantity being dependent upon the locality attacked and the general state of the subject and of his tissues. In some cases the loss of substance and encroachments made upon vital organs may become so extensive as to endanger life even. Not infrequently permanent deformities of a very annoying character and permanent in their duration are the result of apparently trivial lesions which were neglected at their inception.

To even attempt a description of the various syphilitic perforations of bones and their varieties would involve the writing of a volume. On this account but two of the more frequently seen forms will be sketched in the present article. They are interesting to a high degree, more especially on account of the deformities caused and the inconveniences incident to them. Perforation of the nasal bone and of the hard palate are the two post-syphilitic lesions which attract so much attention and for which help is frequently sought, the subjects being anxious to obtain relief and being ambulant are very apt to have attention directed to their trouble and thus lead to embarrassing explanations or have the mortification of being continually stared at and otherwise annoyed.

It is quite a well-known fact that the nose is one of the organs which is prone to be affected by syphilis, more especially in those cases in which treatment has been neglected. Perhaps the most common example of the affection of the nasal bones which is met with is that peculiar condition known as "saddle-back" nose. It is not only seen in cases of acquired lues, but is one of the most typical of the signs of prenatal, or, as it is better known, hereditary syphilis. Another condition which is observed in acquired syphilis and which, while not visible, is distressing is one limited to the interior of the nasal cavities—perforation of the septum. The form of nasal trouble which will engage our attention is entirely different from those mentioned. It is a result of acquired syphilis and, so far as I have been able to determine in the cases I have had an opportunity to observe, it is dependent for its

cause upon an inadequate treatment or a neglect of the therapeutic measures and rules of conduct which should be most imperatively carried out. As a matter of fact, there is no excuse nowadays for the formation of perforation of the nose due to syphilis. The merest tyro who has even but a superficial knowledge of syphilology is capable of treating a patient sufficiently well to prevent such an untoward accident; but there is one condition against which even the most learned is impotent—the neglect of the patient. This is a condition around which no safeguard exists and against which the physician has no adequate protection.

In syphilitic perforation of the nose we have a manifestation which is either of late secondary origin or, most frequently, of that period which is a sequence of the secondary process and bordering on or inclusive of the so-called tertiary stage of the disease. The perforation is an indication of an involvement of the deeper tissues and is a direct consequence of a destructive inflammatory process of the nasal mucous membrane, which has culminated in ulcerative lesions. These destructive lesions may begin high up or lower down, being usually caused by some form of irritation, chiefly of a mechanical nature, such as scratching the nares with the finger-nail. The destructive lesion, beginning comparatively low down in the nasal fossa, gradually extends upwards by continuity of tissue until the upper portion of the anterior nasal fossa is attacked. As the process extends, healing and cicatrization takes place, but, when it is limited at the upper portion by the anatomical peculiarities existing there, destruction takes place in another manner. The process begins to extend through the mucous membrane and into the submucous structures. There seems to be but little pain connected with the ulceration and the patient is under the impression that he is suffering from an aggravated case of catarrh. A sanguino-purulent secretion accumulates and it possesses a very fetid odor which later on becomes unendurable to others and a source of considerable annoyance to the patient. It is a very characteristic smell such as is always found in connection with the bone caries of syphilitics. To resume, however, the unchecked continuation of the ulceration next attacks the periosteum of the nasal bone, giving rise to a constant, dull pain. This proceeds until caries of the bone takes place. This caries is limited in extent but not in depth, for the final result is that the skin ulcerates and the perforation is established. A good example of a typical case is shown in Figure 1. The process apparently stops when the perforation is established; but, it also remains stationary and there seems to be no tendency to spontaneous recovery. The edges of the opening become rounded off and even calloused. They will remain in this state unless ulceration is caused by either trauma or some other active cause. The perforation may remain stationary for years unless means be adopted to relieve the condition. One curious fact in connection with syphilitic perforation of the nose is that it is unilateral and, in all the cases I have had occasion to observe, it was located on the left side.

The treatment of the condition just described is one which is, of necessity, both medicinal and operative. Both are really indispensable in order to obtain a good result. The former, however, is of the highest importance, not only in the way of a preparatory method, but as a means to render the latter of permanent benefit, and here it is that it is employed to follow the surgical procedure. To place the patient in the best possible condition for an operation, both internal and local measures should be pursued. To begin

with, iodide of potassium should be administered in half-drachm or drachm doses, in milk, after each meal for some two weeks. This should be followed by some mercurial for an equal length of time. A good preparation to give is the biniodide of mercury pill after each meal, the ordinary dose

FIG. 1. Syphilitic Perforation of the Nose.

being a quarter of a grain. Such a course of medication will place the tissues in a good condition and, in addition, will greatly aid in a rapid healing of the wound made by the operation. So far as local preliminary treatment is concerned, some few details must be attended to in order to obtain a good operative field. Of course cleanliness is indispensable, but the beneficent

effects of local mercurial treatment will make themselves very apparent when proper and judicious use is made of it. For the purpose of cleansing the nasal cavity the following mixture may be sprayed twice or three times daily:

℞ Ol. eucalypti ..... gtt xx
Benzoinol ..... ℥iv
M.

The spraying should be thorough, and after each spray the nares well blown. Following this cleansing spray the following should be employed and permitted to remain on the tissues:

℞ Hydrarg. oleat 5% ..... ℥ss
Ol. amygdal. dulc ..... ℥j
M.

But little of this need be sprayed each time.

One important part of the local treatment, which is of no mean importance, is the removal of all small pieces of necrosed bone which may lie in the upper and middle portions of the nasal cavity. The local treatment which has just been mentioned, in conjunction with the general measures given, will hasten a reparative process, and the removal of necrosed or carious bone will do away with a possible source of local irritation so detrimental to the success of all surgical operations. It may be necessary in some cases to curette carious bone, and this had better be done before the external opening is closed. The general and local measures which are proper having been carried out, the operation proper may then be performed. This is a plastic in which the borders of the opening are freshened and two flaps, one on either side, cut and their free borders approximated by means of the procedure known as "sliding." This should be performed in a very thorough manner and care taken that there be as little strain upon the tissues as is compatible with good coaptation of the edges. This will greatly aid in securing a good result. An important point to secure a good result is to enjoin absolute rest of the parts operated upon, as well as complete protection from all irritating influences, mechanical and otherwise. Many an operation of this sort has been completely spoiled by neglect of these precepts and subsequent attempts at repair rendered more difficult. Of course, the strict avoidance of alcoholics is absolutely necessary, and this can be inaugurated during the preliminary treatment. It will be found that medicinal treatment during the course of the healing is of the greatest advantage, and the use of arsenauro in 10- to 15-drop doses in water, after meals, will fill all necessary requirements. A strict observance of these recommendations will bring about most favorable results and will lead to a recovery which can be made permanent by continuing appropriate constitutional treatment.

On the other hand if a case of syphilitic perforation of the nose be permitted to go on untreated, it may remain in *statu quo* for an indefinite period of time. If, however, the subject of the trouble will indulge in alcoholics and neglect proper dietetic and hygienic rules, as too many are prone to do, the bone necrosis will extend. The entire upper portion of the nasal osseous structures will suffer and thus lead to the formation of a large, gaping cavity which plastic surgery even may be unable to cope with in a satisfactory manner on account of the mechanical difficulties presented, as well as the bad condition of the tissues which are available for such a purpose. It is for this reason that the individual afflicted with the slightest syphilitic perforation should always be made acquainted with the possible

dangers incident to neglect of his condition as well as with the advantages which accrue from prompt surgical aid and efficient general treatment.

It is by no means a rare case to observe mucous patches occurring upon and implicating the lining membrane of the buccal cavity. These patches are interesting as well as important for a number of reasons, but the point at present to attract particular attention is that they not only have a great tendency to spread superficially but are also prone to ulcerate and attack the underlying tissues. This destructive process is a comparatively rapid one and attended with a certain amount of pain upon mastication and deglutition. In addition, there is usually a moderate discharge of a mucopurulent fluid, and the whole process is accompanied by a strong fetid odor of a nauseating nature. In order to illustrate the rapidity of the destructive ulceration which is occasionally observed, it may not be out of place to quote the following:[1] J. Darier observed a young man of 22 who had a perforation of the velum palati. The hole was large enough to admit a lead pencil, had thin edges, no redness, no swelling, no induration, and no suppuration. The patient claimed that it had formed in three days. The opening enlarged. Eleven days later a second perforation had appeared inferior to the first and to the right. Like the other it had no inflammatory characteristics but appeared as if punched out. Eight days later, at the time the report of the case was made, the two openings had enlarged, the bridge separating the two not being wider than one and a half millimetres, whereas, it had been twice as broad a week previously. Whilst this is a rare case it has been introduced in this place to call attention to an unusual process of lightning-like rapidity which might prove very puzzling, especially in those cases such as the one given, in which the presence of syphilis was never recognized.

To resume the subject: When mucous patches of a destructive nature attack the roof of the mouth they should receive prompt and immediate attention in order to arrest the destructive action at the earliest possible moment. On the other hand, in older cases, it is a gummatous infiltration of the mucous membrane which constitutes the starting point of the trouble. Like all gummatous growths it has a tendency to break down and ulcerate. No matter what the primary lesion of the process may be, in neglected cases the tissues break down, ulceration sets in and the hard palate is attacked by the destructive action which has become established. The osseous structure gives way in a comparatively short time, forming a small perforation which communicates with one or both nasal cavities and not infrequently involving the vomer in the process of destruction. The perforation increases in size and may attain the size of a silver dollar, as shown in Figure 2. Whilst in the majority of cases there is but one perforation about the center of the palate it occasionally happens that several perforations occur; but, when they do the first one is nearest to the center and the others occur in its vicinity. As the process proceeds the perforations increase in size and finally coalesce to form one large, irregular cavity. This keeps on for a certain length of time until the loss of the osseous tissue ceases spontaneously. The soft borders which existed during the destructive action gradually assume a rounded and rather firm form in this manner, making a permanent aperture. This last gives the voice a distinctly nasal sound besides leading to quite an amount of physical discomfort on account

[1] *Bull. de la Soc. Franc. de Dermatol. et de Syphilig.*, June, 1896, p. 408 *et seq.*

of the inability to swallow liquids or food with any degree of ease or comfort. In the effort to swallow a liquid there is usually a regurgitation which takes place through the nares and it is not rare by any means for solid food to make its way into the nose and thus constitute a disagreeable source of irritation. Altogether the condition is a very unpleasant

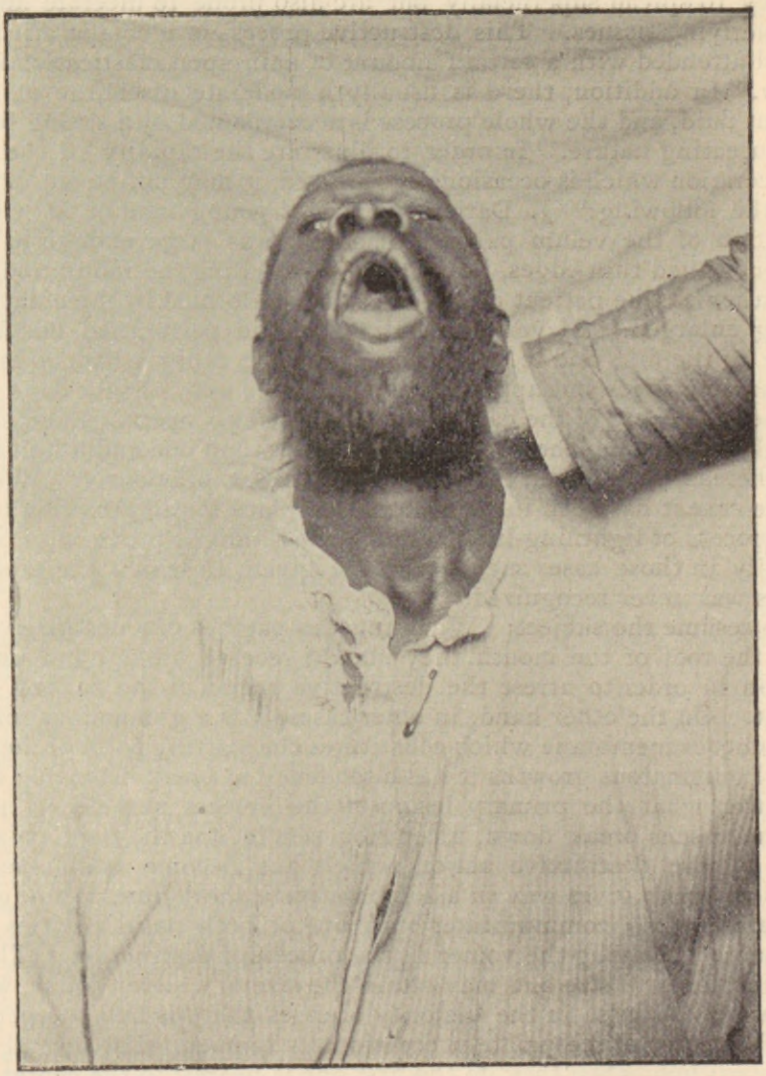

FIG. 2. Syphilitic Perforation of Hard Palate.

one which calls for active interference of some sort for its amelioration.

In all such cases it will be found that destructive lesions are also present. Among the more common ones are ulcers of the legs and upon the trunk. Their size and depth seems to be proportionate to that of the perforation of the hard palate. The soft palate will not infrequently be found to present perforations or ragged, deep ulcers which are rapidly destructive

and have a tendency to extend downward and destroy the uvula. The pharnyx is another part which will present one or more ulcers which exhibit a tendency to become large and deep. The pillars of the fauces also present ulcerative manifestations with marked destruction of tissue. On the other hand cases present themselves in which a single perforation of the hard palate is alone manifest in and about the upper respiratory and buccal tract. Bone lesions in other parts as well as gummata are not rare accompaniments, however. In any case the local lesions, wherever they may be situated, constitute a good index of the condition at large and fully demonstrate the want of tone and lack of resistance in the tissues of the organism of the affected individual.

So far as treatment is concerned it is by no means as easy a matter as in the case of perforation of the nasal bones. The general management and constitutional treatment need not be dwelt upon, as it has already been outlined in the case of syphilitic nasal perforation. Yet, more care must be taken in regard to diet, in so far as the forms of food given are concerned, on account of the mechanical disadvantages offered by the preparation itself. Instructions should be given with care as to the proper methods of deglutition, and no food requiring much mastication is to be recommended. The proper method of drinking so as to avoid regurgitation should be taught the patient and he will derive a certain degree of comfort from a strict observance of proper directions.

Locally, treatment is quite difficult in some cases. All irritating food and liquids are to be avoided and perfect cleanliness should be observed. The floor of the nares should be kept scrupulously clean and all spiculæ and small particles of bone removed. The same local detergent and medicinal means are applicable here as have been recommended for perforation of the nose. The closure of the perforation in the palate is, of course, of prime importance if it can be accomplished. In the smaller perforations a staphylorraphy is indicated and will succeed if the preliminary course of treatment is thorough and the paring of the edge of the perforation is properly done. No definite directions can be given or rules laid down for the surgical measures which should be adopted, for they must be entirely governed by the indications and necessities presented by the case in hand. Necessarily, an operation on a syphilitic, especially an adult, will present more difficulties than in a child or infant so far as closing or perforation of the palate is concerned. In the larger perforations more difficulties exist and but little can be advised. Surgical measures will be found of but little avail unless they are such as are indicated by the absolute necessities of a case. Various devices, in the way of an operative method, have been attempted, but they have never proven successful. In a large perforation too much tissue must be replaced and if an attempt be made to borrow it from contiguous parts a destruction of these latter may take place, and result, finally, in a greater destruction than the original lesion presented.

One of the best methods to adopt in such a case is the use of an obturator. It can be worn without inconvenience by the patient and will afford him an opportunity of eating, drinking and speaking with ease as well as comfort. The obturator should be attached to a dental plate and if the patient have any teeth missing they may be attached to the plate, and in that manner add to the cosmetic effects of the device. Before attempting

to use such a plate with an obturator attached, two conditions are necessary: The mucous membrane of the mouth, especially that covering the palate, should be in the best possible condition to avoid the formation of any ulcerative process. Secondly, the edge of the perforation should be put in such a condition as not to be easily irritated. If it has not healed so as to be in such a condition it should be pared in such a manner as to afford an opportunity for cicatrization to take place in the proper manner. With a good edge such a lesion will permit of the use of an obturator whose presence will never be noticed nor its existence suspected. The plate should not be gold, as the use of mercurials will make it deteriorate. Good vulcanized rubber is the best material to employ. It is also better for the patient to have two obturators, as, by this means, he will always have a clean apparatus and thus greatly lessen the dangers of possible irritation which one might produce.