The consideration of the possible complications growing out of conditions of which earache is a symptom, or the principal symptom, is beyond the scope of this paper, as is also the consideration of the chronic purulent discharges which often follow acute conditions. A large share of the cases coming under the aurist's care result from lack of treatment or improper treatment of such conditions as I have described; and of all the causes mentioned there are none more productive of permanent damage than the exanthemata, and of these scarlet fever is far the most serious. The most obstinate cases of purulent disease of the ear, those attended with the greatest amount of permanent damage to the tympanic cavity and the function of hearing, occur in connection with, or as sequelæ of, scarlet fever. Too often it is overlooked or paid little attention to until the damage is too great to be more than partially remedied. In my experience, the worst cases of old suppurative ear disease with large perforations, or complete destruction of the drum and one or more ossicles, with foul discharge and considerable caries and granulation tissue, have had their origin in scarlet fever. Affecting as it does the throat and involving the Eustachian tube, there is every opportunity for the disease to invade the tympanic cavity and do much damage there. The same is true, though in much less degree, of measles and diphtheria. In all of these the possibility of injury to the ear should be borne in mind. Any pain which is referred to the ear should be investigated. If there is any deafness during the disease or during convalescence, the cause should be carefully sought for. Fluid in the tympanic cavity should be drained and any resulting discharge properly treated. No case of the exanthemata should be regarded as finished as long as there is any discharge from the ear.

I do not suppose any member of this Society has ever been guilty of telling a parent that the child would outgrow conditions such as I have referred to, although if the testimony of patients is reliable they are often so told. The outgrowing of diseases of this nature is a pernicious fallacy. The children never outgrow them. On the contrary, as the ear remains bathed in pus the pathologic process continues active, threatening all the time the general health and gradually destroying the hearing. When the individual seeks the help of the aurist, it is usually too late to do more than save the remnant of hearing and bring the active suppuration to a close; and even this is not always accomplished, as old adhesions remain. Let me urge upon you the necessity of looking carefully into the aural conditions present in your cases of the infectious diseases and of the exanthemata, especially in cases of scarlet fever, as scarlatinal deafness is much easier to prevent than to cure.

In searching for the causes of an earache the intimate relation between the nerve supply of the ear and the teeth must not be lost sight of, nor the clinical fact that some cases of earache are dependent on dental irritation. Conversely, toothache is sometimes relieved by remedies applied to the ear, especially those remedies containing chloroform. I have already referred to the grippe as a cause of earache. It is a very common cause, a large number of the acute serous inflammations having their origin in this disease. It is much less serious in its sequelæ than the ear troubles incident to the exanthemata, having less tendency to

eventuate in prolonged suppuration. Here, however, the liability of the ear to trouble should be borne in mind.

Clinical Department.

FRACTURE OF THE NOSE COMPLICATED BY A RHINOLITH.

BY TIMOTHY J. REARDON M.D., BOSTON.

COMPLICATIONS are the rule in fractured noses, and consist for the most part either of a separation of the cartilaginous septum, of fracture of the same causing various degrees of obstruction to nasal respiration, of hematoma of the septum, or of abscess of the septum either unilateral or bilateral.

The fracture may also be complicated by its extension into the orbita or by implication of the cribriform plate. Zuckerkandl reports an interesting case in this connection in which there was fracture of the nasal bones with a depressed fracture of the pars ossis nasalis frontis extending into the frontal sinus, and fracture of the ethmoid extending into the orbita and implicating the middle turbinate. The whole thing healed, though with more or less deformity.

Fracture of the processus nasalis of the superior maxilla is infrequent. Fracture of that process is interesting because it usually implicates the turbinates.

A case by Freytag illustrates this: A boy, ten years old, was struck by the clenched fist of another lad. The effect of the blow remained unnoticed for a few days by the boy's parents. Upon examination it was found that the part corresponding to the processus nasalis was occupied by a large swelling externally. Internally the apertura pyriformis was found to be tender and covered with pus. The latter was removed and beneath was a grayish-red mass. Attempts to extract this anteriorly failed; so it was pushed back into the pharynx and expelled by coughing. It proved to be a piece of the lower turbinate. After the lesion healed, very little of the turbinate was to be seen.

A case, reported by Watson, of late necrosis following a fracture, is of interest. Fifteen months after a fracture of the nose, the girl appeared with proptosis accompanied by a nodular swelling at the lower inner angle of the right orbit. She had a sero-purulent discharge from the corresponding side of the nose. A swelling inside the vestibule prevented internal examination. Vision was good and there was no diplopia. A small sequestrum was removed from the lower angle of the eye and the symptoms soon disappeared. I have been unable to find any case similar to the one I now present.

Mr. M., age twenty-eight, was seen by me, June 17, 1897. About noon of that day, while riding a bicycle, he had struck his nose against the temple of the pole rider of a tandem coming from the opposite direction. Both machines were moving rather slowly at the time. The patient immediately experienced considerable pain about the bridge of his nose: a profuse epistaxis began and continued until he was seen by me four and one-half hours later; it was then only moderately severe. Externally there was considerable swelling about the root of the nose and under both eyes. A fine crepitus could be felt caused

probably by the air contained in the tissue. On deep pressure a distinct bony crepitus was to be felt; this was accompanied by pain. There was apparently no depression of the parts. On internal examination the septum was deviated to the left and almost occluded the left nostril, the turbinates on that side being in touch with the septum. On the right the passage was wide and when the blood was removed a grayish mass was visible lying close by the side of the lower turbinate. The middle turbinate appeared normal; the lower turbinate was reddened and excoriated. The agger nasi seemed to be normal and was not depressed, though there appeared to be slight bleeding from this point. The septum was movable at its juncture with the nasal bones but a fracture into it could not be definitely made out. No exposed bone could be felt in the region of the agger nasi.

The grayish mass on the right I attempted to remove, but it at first resisted all my efforts. A small piece, which I broke off, by its concentric formation and extreme brittleness showed the nature of the mass. After cocaineization with a 10-per-cent. solution, the entire mass was rather easily removed.

It proved to be a rhinolith, round in shape, and on section, white in color; it was about one centimetre in diameter. Chemical examination showed it was made up of calcium phosphate, magnesium phosphate, calcium carbonate and considerable organic matter. It had as a nucleus the proverbial cherry-stone.

An excoriated, bleeding area marked the spot where the rhinolith had been situated. The bleeding soon ceased, and the area was dusted over with sozoidol powder. The removal of the rhinolith allowed the patient to breath freely through the right nostril. A plaster dressing was applied externally and a corrosive gauze tampon was placed in the left nostril to combat any tendency to deviation.

June 19th. Patient had suffered but little pain; eyes were discolored, but the emphysema had disappeared. No foul odor had been observed from either nostril. Tampon removed.

June 24th. Plaster removed. Marked thickening over the bridge. Discoloration had disappeared.

June 28th. Pain had wholly disappeared. Patient stated that external appearances were as good as ever.

July 20th. Catarrhal symptoms had wholly disappeared.

With regard to the symptoms caused by the presence of the rhinolith, the patient's history previous to the accident will prove of value. He stated that as long as he could remember he had suffered from "catarrh." The right nostril had always been obstructed, and he had always been sensible of a most offensive odor from his nose. The odor was noticeable to others also. All these symptoms disappeared with the removal of the cause; otherwise he had always enjoyed good health.

The fact that the septum was not broken by the traumatism is rather remarkable. It may be explained by the presence of the rhinolith on the right side, which acted as a buttress to the septum, crowding it to the left against the turbinates, which performed a like office on the left. This support given to the septum prevented its fracture by traumatism, and, also, any marked depression of the nasal bones.

When I first saw the grayish mass in the right nostril, I thought that it was probably a piece of necrosed bone and considered its most probable origin was from a necrosed luetic septum. While this did not prove to be true, and, while after a most thorough search I have not been able to find a single reported case of fracture of a nose with a septum necrosed by lues, yet it seems strange that such cases have not occurred; for such necrosis of the septum is common and, when it exists, the support normally given to the nasal bones by the septum must be greatly diminished and the liability to fracture correspondingly increased.

In all cases of fracture of the nose it is well to remember the possibility of the presence of foreign bodies; this and other complications should always be carefully searched for and treated as the case may demand.

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Medical Progress.

REPORT ON THERAPEUTICS.

BY FRANCIS H. WILLIAMS, M.D., BOSTON.

(Continued from No. 3, p. 67.)

THE PRINCIPLES WHICH GOVERN TREATMENT IN DISEASES AND DISORDERS OF THE HEART.

Acute Inflammatory Diseases of the Heart.

THE general line of treatment in the vast majority of cases of acute inflammatory diseases of the heart is the same. It is necessary chiefly to consider the fundamental complaint of which the cardiac affection is in most cases a part, and this disease is, in the majority of cases, acute rheumatism. From the heart point of view and, indeed, from any point of view, all authorities seem now agreed that the right treatment of acute rheumatism is absolute rest in bed in woollen wrappings, a free relief of the bowels, and the administration of sodium salicylate in efficient doses, in combination with such alkaline remedies as the condition of the urine may suggest. The late Dr. Sibson showed that the difference between absolute and incomplete rest in the treatment of acute rheumatism was an exemption from heart complication of 71 per cent. as contrasted with 44 per cent. Few cases endure now more than five days' suffering under the salicylate treatment, and a treatment of the general disease thus successful can scarcely fail with due care and foresight to prove in some degree preventive of cardiac lesions, which are true manifestations of the rheumatic poison, usually of somewhat later appearance than the joint phenomena.

The current view that salicylates do not lessen the liability to cardiac lesions is founded on the fallacy that cases early relieved of pain and fever by salicylates are often allowed to get up too soon. If therefore on the relief of pain and reduction of temperature the patient be regarded as convalescent, and be allowed out of bed, he assumes the position of one with acute rheumatism still upon him treated with incomplete rest, and so becomes doubly liable to cardiac manifestations.