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affections of the sound-perceiving apparatus by means of electricity, phono-massage, and various other more or less imperfectly tried remedies has not been touched upon by the writer. The reason for this lies in the fact that the advantage to be derived from these remedies has been much doubted by very many competent otologists who have given them a fair trial, and that certain disadvantages in their use have been discovered in some conditions. Further attention needs to be devoted to them as remedial agencies.

The treatment of deaf-mutism consists in the removal of any curable pathological conditions found to exist in the sound-conducting apparatus, and in the improvement of what hearing power still remains in the sound-perceiving apparatus. Chronic suppuration of the middle ear is especially prevalent among those mute from acquired deafness, and should receive competent attention to prevent fatal results. Urbantschitsch has recommended systematic acoustic instruction by the pronunciation of vowels, consonants, single words, and sentences; the instruction to be given for a short time two or three times daily. Politzer is of the opinion that this may be the means of effecting a modulation in speech, but that the hearing cannot be affected thereby, because it has generally been lost through processes which have run their course and have left behind irreparable anatomical changes. Only children with a remnant of hearing should receive speaking exercises. Bezold and Koller deprecate the combined instruction of the half-deaf and the totally deaf, as it produces a waiving of the hearing remnants which the former still possess.

Henry A. Alderton.

EAR DISEASES: AFFECTIONS OF THE AURICLE.

—CUTANEOUS DISEASES.—Cutaneous diseases of the auricle differ in no essential particular from diseases of the skin involving other parts of the body, and are of interest to the otologist only because, in their localization at this point, he may be called upon to treat the lesion, and also because of the fact that some of these cutaneous diseases may extend to the epithelial lining of the external auditory canal, and give rise to deafness, or, in neglected cases, may extend into the deeper structures of the ear and give rise to grave complications.

Acne.—Acne of the auricle is rare and has no special characteristics to distinguish it from acne elsewhere.

Ecthyma.—Ecthyma appears in the form of large, single pustules with an infiltrated, hard, and elevated base, and flattened in the centre. They soon become covered by a dark crust which, after falling off, generally leaves a crater-like, round ulcer with sharp, slightly elevated margins; the surface of the ulcer is covered with a greenish-yellow scab under which the pus wells up on light pressure. Through the confluence of several ulcers, and the extension of the disease into the deep tissues, there may develop an extensive inflammation of the skin and cartilage. Barnick describes a case in which, in the edges of the ulcer, were many bleeding points ("ecthyma hæmorrhagicum"), as also an endarteritis of the blood-vessels of the skin. The base of the ulcer showed everywhere granulation tissue. In the microscopical preparations staphylococci and streptococci were found.

Eczema.—Eczema may occur in all parts of the external ear. It may be confined to the auricle, or the canal may also be involved; in some cases the affection may even extend to the dermal layer of the drum membrane. Eczema may occur idiopathically in the ear or it may extend from an eczema of the face or head. (The reader is referred, for further information in regard to eczema of the auricle, to the article on *Ear Diseases: Affections of the External Auditory Canal*, p. 620.)

Herpes.—Herpes of the auricle is rare, and occurs either in its simple form in connection with herpes facialis, or as a part of herpes zoster in the region supplied by the auriculo-temporal branch of the trigeminus nerve and the auricular branch of the third cervical nerve. In the first case it is the anterior part of the ear and the tragus which are affected, in the latter the posterior part and the lobule. Sometimes blebs are formed in the canal, and, very rarely, on the tympanic membrane. The outbreaks of herpes zoster are nearly always accompanied by neuralgic pains on the affected side of the head and in the ear, and at times even the mastoid process is painful. This symptom of pain in the mastoid was so marked in one case reported that the wrong diagnosis of mastoiditis was made, and the true state of affairs was not discovered until a short time before the proposed operation was about to be undertaken. The hearing is often impaired during the course of the disease.

As to the appearance presented by the disease when it involves the auricle, herpes of the ear differs in no way from herpes on other parts of the body. The watery exudation gradually becomes purulent or bloody, and after a few days desiccation takes place. Only exceptionally can the process assume a gangrenous character. Recurrences are not uncommon in simple herpes.

The treatment consists in the administration of narcotics when there is severe pain; in the use of powders or of compresses wet in cocaine solution, after the formation of blebs has taken place; in the use of white precipitate ointment; and, after ulcers have formed, in cauterization with silver nitrate.

Impetigo Contagiosa.—Impetigo contagiosa appears as a small red spot which soon develops into a pustule that may reach the size of a large pea. In course of time this breaks down and a crust is formed. By contamination with the pus new foci may develop, and so there may be found at one and the same time lesions in all the various stages. This disease assumes the character of an infection and is mostly epidemic. The neighboring lymph glands are swollen. Children are the chief sufferers from this affection, but adults are not always exempt.

The treatment consists in bathing with green soap and then applying zinc ointment, or an ointment of bismuth subgallate.

Pemphigus.—Pemphigus of the ear is not observed very frequently as an independent affection; it is more often seen as a part of the same general affection of the skin.

After a prodromal stage of lassitude and weariness, there follow fever and an eruption of discrete, slightly elevated, red spots on which develop bullæ distended with serum or blood. These may be of varying sizes, from the dimensions of a grape seed to that of a hazelnut. The bullæ burst and leave a red surface which is quickly covered over with new skin. Thus the disease comes to an end and the fever disappears. The disease may last for from one to two weeks, but it can drag along for a much longer time and may recur. In most cases healing occurs, but it is also possible for the affected parts of the skin to slough. We must regard pemphigus as among the infectious diseases.

The symptoms are extreme itching and a feeling of warmth, neuralgic pains in the face, tinnitus aurium, and a greater or less degree of deafness. The skin becomes scaly and as it peels it leaves the underlying skin more or less red, according to the length of time the lesion has existed.

The treatment is the same as for this disease in other parts of the body. The general treatment consists of cooling diet, rest, and the use of quinine or antipyrin. The internal administration of Fowler's solution is also sometimes indicated. The local treatment consists in a copious washing of the affected part with weak bichloride solutions, and the subsequent application of zinc oxide or boric acid, or of talcum powder finely powdered. In the more pronounced cases the scalp should be shaved in the neighborhood of the ear, the scales should be removed from the affected parts by thorough washing with green soap (sapo viridis), then a solution of nitrate of silver of the strength of two per cent. is to be applied, and finally zinc or ichthyol ointment should be used freely.

The prognosis is good.

Psoriasis.—Psoriasis of the auricle is very rare. It is characterized, as in other parts of the body, by a sharply

defined, large or small efflorescence, with an infiltrated foundation covered with pearly epidermic scales. This is to be differentiated from other scaly skin diseases by the fact that in psoriasis the scales, when removed, leave a surface which bleeds and appears sieve-like.

The treatment does not differ from that of psoriasis in other parts of the body.

Seborrhœa.—This is an affection of the auricle of quite common occurrence; it develops especially in the hollows. It is less like the moist seborrhœa than the seborrhœa sicca, in which form of the disease the ordinary secretion of the sebaceous glands is hard and firm. The skin is covered with dirty, fatty, scab-like scales which undergo desiccation. There is no demonstrable anatomical change of the skin. The treatment is the same as for the disease in other parts of the body. Begin by washing the parts with tincture of green soap and then use a salicylic acid and sulphur soap made up with much fat. Constitutional anomalies must be taken into consideration.

Pruritus.—Pruritus very seldom occurs in the auricle. Romberg reports a case of itching in the left lobe. Every attempt to relieve this itching by scratching with finger nails brought on a severe attack of neuralgia of the first and second branches of the trigeminus. The treatment is the same as for the disease in other parts of the body. Salves are indicated: either the plain vaseline, albolene, etc., or vaseline combined with preparations of iodoform, iodol, carbolic acid, salicylic acid, or chrysarobin. Equal parts of chloral and gum camphor, rubbed together to make a viscid fluid, and applied to the part affected, will frequently relieve a pruritus when other measures fail.

ABSCESS.—Abscess of the auricle may occur in connection with skin affections, such as eczema, especially where pruritus is marked; the infection being conveyed by dirty finger nails or in some similar way. An abscess may also develop as a result of freezing or of an erysipelatous attack. Finally, it may develop from the sting of an insect or from a trauma of any kind, such as piercing the lobe, etc. Swelling, redness, pain, a sense of heat, and fluctuation are the symptoms which indicate the presence of an abscess of the auricle. The condition may become dangerous through a spread of the infection to the cartilage, thus causing a perichondritis. When a perichondritic abscess develops the cartilage is often destroyed, with a resulting deformity, or fistulæ may form.

Treatment.—An early free incision, curettage, and wet sterile dressings.

PERNIO; FROST-BITE.—In this affection we find various degrees of inflammation, according to the degree and the duration of the cold. The lighter forms are characterized by a bluish-red coloration, an ordinary amount of swelling, and very severe itching, which may increase to pricking pains. In other cases, which have resulted from exposure to a more intense cold, the auricle appears extremely swollen, very much reddened, and covered in various places with large blebs, whose contents are of a yellowish or bloody color. The pain is very great. The severest forms are seldom seen. In these gangrene develops; there is a black discoloration and abscesses form. Ultimately the ear shows varying degrees of deformity. Ears that have been frozen will continue to be sensitive whenever the temperature falls to a certain point. In these cases the swelling, the itching, and the formation of nodules, which may go on to form pustules and to ulcerate, often recur. In weakened individuals, especially young anæmic girls, frost-bites and chilblains are likely to develop at the beginning of cold weather.

Treatment.—In the lighter forms of freezing, cold compresses and poultices with Goulard's extract are sufficient; in extreme hyperæmia and swelling there should be a continuous application of cold by means of Leiter's coil. In regard to the itching and pain, relief may generally be obtained by the local use of tincture of iodine with the addition of tincture of opium. Afterward, ichthyol ointment should be applied. The following preparations will also be found useful: boric or zinc ointment; two per cent. silver nitrate salve; and orthoform vaseline. In the deep ulcers and also in exuberant granulations, silver nitrate stick should be used. Gangrenous parts should be amputated.

The ears should be protected from cold by ear muffs, and they should receive frequent washings with absolute alcohol. In anæmic cases the general health should be looked after.

ERYSIPELAS.—Erysipelas of the ear is of rather common occurrence. It takes its rise here either primarily, from injured or excoriated spots, or secondarily, from extension from the face or from the throat through the Eustachian tube and middle ear. The clinical picture, the course, and the termination are the same as when the disease affects other parts of the body. The auditory meatus, at least in the outer part, is generally involved, and occasionally the disease may extend to the membrana tympani. In those cases in which a perforation occurs the inflammation may extend from the middle ear to the mastoid cells.

Treatment consists in the use of ichthyol ointment, which both relieves the tension of the skin and keeps the infectious scales from being disseminated. Poultices with one-half to one per cent. bichloride solution have been recommended. Ordinarily the further spreading of the erysipelas has been prevented through frequent pencillings of the neighboring sound parts with strong tincture of iodine, or by scarifying them. The general condition and the complications demand suitable treatment.

GANGRENE.—Gangrene of the ear is seldom seen. Sometimes it affects the skin alone; at other times the cartilage is also affected; but there is always more or less extensive loss of substance. As causes we have a preceding wound or an abscess such as results from measles, erysipelas, or burning and freezing of the third grade. Urbantschitsch reports a case of Raynaud's spontaneous symmetrical gangrene in the upper third of the ear; it was caused by tropho-neurotic disturbances. In the majority of cases the inflammatory process is of long duration and depends on a disturbance of nutrition caused by thrombosis of the vessels. *Treatment* must consist in the removal of the necrotic tissue and in accelerating the formation of a line of demarcation. The last may be accomplished through the use of antiseptic poultices. Nourishing diet and tonics are indicated. Skin-grafting may be found necessary.

ULCERATION.—Ulceration may occur as a complication of burning or freezing; it is also observed in ecthyma, in herpes, in otitis externa diffusa, in diphtheria, and in gangrene. Such ulcers are generally seated on the tragus, the concha, or the lobule. They are superficial and they soon heal if suitable antiseptic dressings are applied. On the other hand, if they are allowed to become deep-seated, they are very hard to heal and are often the starting-point of a very severe eczema. Every eczema may give rise to numerous small ulcers. The most frequent ulceration of the auricle is due to syphilis.

The ordinary ulcerations do not extend to any great depth, and are covered with a yellowish, watery exudate. Those of a syphilitic nature present more marked characteristics; they are deep, crater-like excavations with sharply defined, indurated borders. They are often seen when the chancre has been overlooked. The favorite site of a secondary syphilitic ulceration is the hole pierced for the earring in the lobule; the mechanical irritation supplied by the earring at this point favoring the development of papular infiltration and the formation of small ulcerations on the anterior and posterior surfaces of the lobule. In tertiary syphilis, if the ear is affected by the ulcerative destruction of the gummatous new growths, the underlying cartilage is apt to become the seat of inflammatory action.

Primary syphilitic infection of the auricle has been seen and described by Zucker. The case was that of a man whose ear had been licked by a syphilitic woman. The auricle became greatly swollen, ulcers formed upon the anterior surface of the tragus, and the neighboring glands also became very much swollen. Occasionally the con-

tamination of the ear with syphilitic secretion, as after contact with dirty hands or other infected objects, has caused a primary infection of this organ.

The *prognosis* and *treatment* of ulcers of the ear depend upon the causative factors.

DIPHTHERIA.—True primary diphtheria of the auricle has been observed in rare cases, but it generally occurs in connection with a previous or a simultaneous diphtheritic affection of the throat structures. Secondary diphtheria attacks the auricle by the infection being conveyed through an abrasion of its surface, or by direct extension from the throat, by way of the Eustachian tube and the middle ear. In such cases the auricle and the external auditory meatus are seen to be covered with the characteristic diphtheritic membrane, and when this is removed there will be seen large, irregularly formed, easily bleeding ulcerations of the skin. *Local treatment* consists in the application of antiseptic solutions and powders.

HYPERTROPHIES.—Hypertrophies are sometimes congenital, sometimes acquired. Under this heading are classed: nævus pigmentosus, nævus vascularis, and nævus cysticus; verruca vulgaris; cutaneous horns; those skin troubles which, starting in other parts of the body, affect the ear by extension or otherwise (*e.g.*, ichthyosis, scleroderma, and elephantiasis); and, finally, the thickenings which follow othæmatoma, perichondritis, the different inflammations, traumata, and freezing.

Nævus or mole, whether of the pigmented, the vascular, or the cystic variety, is a congenital anomaly which occurs with the growth of the body but causes no constitutional disturbance. It is seldom observed on the ear (Pipino). In old age the change of moles into malignant new growths (epitheliomata) has been observed.

The treatment is preferably surgical—excision and suture; the galvano-cautery, or the Paquelin cautery, or electrolysis may also be used.

The *wart* (verruca vulgaris) may be treated with fuming nitric acid, with concentrated carbolic acid, or with trichloracetic acid, or it may be removed by the galvano-cautery or excised with the knife or scissors.

The *cutaneous horn* should not be regarded as a neoplasm but as a pure hypertrophy of the skin. It is often scratched off by the finger nail, but when this happens the horn is generally reproduced. The use of the Paquelin cautery after the removal of these horns by the knife or curette, prevents their recurrence.

The hypertrophic skin diseases—ichthyosis, elephantiasis, and scleroderma—are very seldom seen as independent affections of the auricle. These cutaneous diseases, as a rule, affect the skin of the other parts of the body as well as that of the ear.

Ichthyosis.—Ichthyosis congenita is a very rare affection and never manifests itself on the ear alone. Under this heading are included those cases of intra-uterine hyperkeratosis of the entire skin which are characterized by increased formation and exfoliation of the lamellæ of the skin. In its growth the fœtus develops a skin absolutely like a coat of mail; the individual plates of skin being separated by deep furrows, as are the plates of a metal armor. This form of hypertrophy causes the skin of the fœtus to contract to such a degree that the mucous membranes are everted and brought to the outside (eclabium and ectropion). It is obvious that such a fœtus either dies in utero or in rare cases lives only for a short time after birth.

Elephantiasis.—Elephantiasis of the entire auricle has seldom been reported. In Haug's case the ear was very large, its measurements being as follows: circumference, 73 cm.; longitudinal measurement, 12.5 cm.; breadth, 7 cm. Histologically, it presented the characteristics of a lymphangiofibroma, in which there were rather numerous round cells, the result of the early inflammatory disturbance. Elephantiasis can occur after burns, freezing, and eczema, and after any kind of chronic inflammatory process, especially if an erysipelas develops on the site.

Aneurism.—An aneurism confined to the auricle alone or involving also the surroundings is rarely encountered. It may develop either spontaneously or under the influence of a trauma. The artery which supplies such an aneurism is either the auricularis anterior, the auricularis posterior, or the temporalis profunda. The symptoms caused by the presence of such an aneurism are a sense of discomfort, headache, and at times tinnitus aurium.

Angioma.—Angiomata of the auricle are of relatively frequent occurrence. They vary in size from that of a hemp seed or lentil to that of an egg. Their color varies from red and bluish-red to blackish-blue. They are soft, mostly flat, seldom round or provided with knobby prominences of the skin and subcutaneous tissues. They are observed on the anterior and posterior aspects of the auricle, on the tragus, at the entrance of the canal, and on the lobule—involving consequently the branches of the auricular, occipital, and temporal arteries. The smallest ones often manifest themselves as vascular nævi, which reach various degrees of development.

The angiomata of the auricle often remain unchanged in size for ten or more years. On the other hand, there are cavernous angiomata which grow with extraordinary rapidity, forming large knotty tumors. Most angiomata of the ear and its surroundings are congenital, but cases have been observed in which they have developed as a result of a burn or of freezing, as also from the effects of traumatism. A true aneurism only rarely originates in this way. Pedunculated angiomata are rare.

Injuries often lead to hemorrhages which are difficult to check; spontaneous bursting from momentary increased blood pressure, such as takes place during coughing, vomiting, etc., may occur. One case of death has been observed as a result of the bleeding from spontaneous bursting of a blood-vessel of the auricle.

The morbid anatomy of these angiomata is the same as that of other angiomata; that is, they are considered to be formations of enlarged blood-vessels with simultaneous thickening of the vessel walls, or they are due to the formation of new blood-vessels.

They are to be reckoned among the benign tumors only so long as the process of hypertrophy is confined to enlargement of the vessel walls and to formation of connective tissue. In this category belong the simple angiomata, the cavernous angiomata, and the angio-fibromata.

Malignant melanotic sarcomata develop at times from a nævus vascularis.

In the case of the smaller angiomata—those sufficiently large to be noticeable—the treatment consists in touching with the thermo-cautery or in excision; electrolysis may also prove to be an efficient remedial agent. Growths of greater size may be incised and a ligature then applied to the larger vessels, or they may be touched with the thermo-cautery. Injections of liquor ferri subsulphatis and such procedures are strongly advised against. Sometimes the larger angiomata can be excised *in toto*, especially if the chief vessels leading to them are easily accessible to ligature; this is particularly true in cases of aneurism.

Cysts.—Cysts develop for the most part in the scaphoid fossa of the ear, in the form of a soft, fluctuating mass. They contain a yellow, thin, sterile fluid, or one which is more or less tenacious in character; it is only seldom that they contain a purulent fluid. They are often found lying between the perichondrium and the skin, but generally they are seated between the two layers of the cartilage. Rupture of the cartilage seldom occurs. The duration is from a few days to many years. Microscopically, the cartilage shows hyaline degeneration.

Treatment.—In general, it is sufficient to incise the tumor and evacuate its contents; in some cases, however, it will be found necessary to resect the upper or both layers of limiting cartilage. Healing occurs in a short time, and with little or no deformity. The injection of a mixture of iodine and glycerin is a less certain method of effecting a cure, and the length of time required is also greater. Massage is even more uncertain in its results.

Othæmatoma (Blood Tumor).—Othæmatoma is an exudation of blood into the subcutaneous connective tissue, or under the perichondrium, or into the substance of the

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cartilage. Generally, the swelling appears suddenly on the surface of the auricle, in the antihelix or in the concha, and quickly reaches a certain size; in some cases it may be as large as a hickory nut, or it may even involve the whole upper two-thirds of the ear. The swelling, when the subcutaneous structures are alone involved, is hemispherical, fluctuating, with a smooth surface and at times a bluish color. The skin covering the tumor is intact. Fluid blood or bloody serum constitutes the contents of the mass. Where the extravasation is under the perichondrium the depressions and elevations of the auricle are definitely outlined. In many cases there is pain at the outset, but seldom are there other evidences of inflammation. Left to itself, an othæmatoma, in the course of time, undergoes absorption, or else it remains as a local thickening between the folds of the ear. If inflammation sets in, the symptoms may be quite severe; otherwise the only symptoms will be a change in the form of the auricle, a certain feeling of pressure, and—when the area involved is quite large—closure of the external auditory meatus.

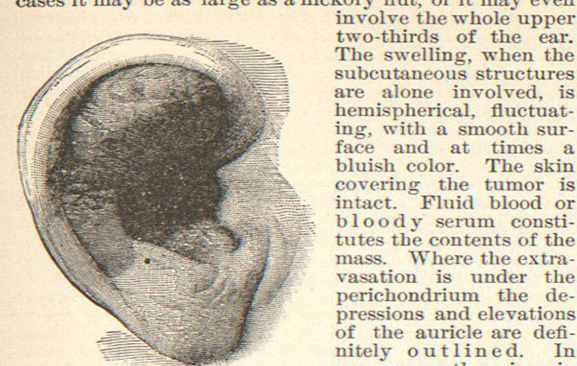

FIG. 1702.—Medium-sized Othæmatoma of the Auricle. (After Sexton.)

The treatment is expectant. Compression by bandage and massage hasten absorption. Puncture or incision is certainly not to be advised; only evidences of the formation of pus and necrosis furnish indications for surgical treatment, in which case evacuation of the cavity, with removal of any bits of necrosed tissue, is in order.

The greater number of cases of othæmatoma are found to be of traumatic origin, occurring in those whose ears are much exposed to injury—such as boxers and prize fighters.

In old, decrepit persons othæmatoma does occur without trauma, and is then due to atheromatous degeneration of the blood-vessels.

"Deformity of the auricle to a greater or less extent is nearly always a result of othæmatoma. Figs. 1703 and 1704 represent some of the strange and characteristic forms the organ may assume after healing takes place; they are the same, it may be said, whether occurring in lunatics or in the mentally sound. Obliteration of the sac is accomplished by the union of its walls, and where the perichondrium has been greatly stretched by extreme distention it contracts upon itself as reabsorption takes place, and adaptation to the cartilage as before cannot occur; the misshapen appearance of the cartilage increases with the continued contraction during the process of adhesion. The ear finally becomes indurated, the skin on the outer surface immovable. Sometimes the organizable lymph which obliterates the cavity enormously increases the thickness of the auricle, as in Fig. 1704; but where a thin plastic layer only intervenes the auricle will be reduced in size, and often become even thin and shrivelled, as in Fig. 1703" (Sexton).

In a few cases the hæmatoma is confined to the lobule alone. The disease develops in the form of a circumscribed, soft, purplish-red swelling, more or less sensitive to the touch. This swelling consists of a hemorrhage into the subcutaneous areolar tissue. Owing to the exposed position of the lobule it often the subject of injuries, but a simple hæmatoma is of very infrequent occurrence in this locality. Consequently, when we encounter this lesion in the lobule of the ear, we have a right to suspect that the blood-vessels of the part may be diseased, especially if any brain disease or some general disturbance of nutrition should be present at the same time. Hæmatoma may also occur as a purely idiopathic condition in conditions of mental health, even without a preceding traumatism.

The diagnosis is not difficult. The sudden appearance and the coloration make the confusion with angioma or neoplasms impossible. The disease, however, has been confused with perichondritis, but it is easy to differentiate between the two, since the latter does not occur in the lobule. The prognosis, for those cases in which there are no brain lesions, is good; in the others, it is not favorable, as the disease is apt to recur.

Treatment must be purely surgical. It should consist in incising the swelling, cleansing the cavity by curettage, and then packing it with iodoform gauze. Then at each change of dressing the cavity should be washed out with weak carbolic solution. The bandage should exert a gentle pressure. Healing follows without complications.

Perichondritis.—Perichondritis generally begins in the external auditory canal, with œdema of the tissues. As a rule it extends to the concha and thence over the other parts of the auricle, until often the whole organ is converted into an irregular, fluctuating mass, in which the folds and prominences of the auricle are obliterated. The meatus is stenosed and the lobule alone remains free from involvement, being separated by a sharp line from the other parts. An increase of the local temperature is present. The neighboring lymphatics are often involved and may become the seat of abscesses; at times, sharp, darting pains, with a sensation of heat, are referred to them. The fluctuating mass, which has formed in the course of a few days, contains a clear, serous, synovial-like fluid, which is never bloody as in the case of an othæmatoma; it soon, however, changes to pus. Throughout the whole course of the disease the cartilage of the ear escapes involvement, although here and there partial or entire loosening may take place. Tuberculous perichondritis of the auricle has been observed by Haug.

The course of the affection is either acute, lasting for from three to ten weeks, or chronic, lasting for the same number of months. Healing often occurs without any deformity, but in some cases there is a certain amount of shrinking. In rare cases ossification has subsequently taken place. The left auricle seems to be the more frequently affected.

Etiology.—The causative factor may be a local infection of the external auditory canal, or the disease may

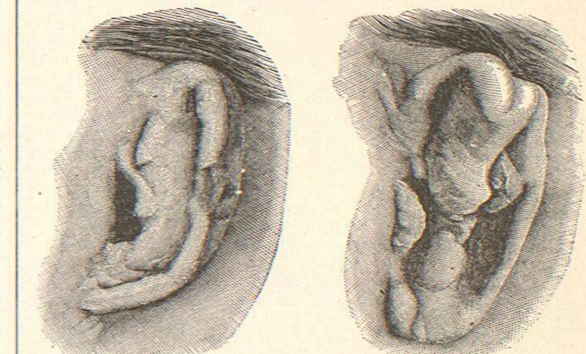

FIG. 1703. FIG. 1704.

FIGS. 1703 AND 1704.—Deformities of the Auricle Due to Othæmatoma. (After Sexton.)

follow a general infection, as in the case of syphilis. In some instances it develops from a trauma or through extension from a furunculosis, from an otitis externa, or from a purulent affection of the middle ear. According to Haug the disease is sometimes of tuberculous origin.