SOME COMMON AURAL AND NASAL CONDITIONS. THEIR DIAGNOSIS AND TREATMENT.

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During the present year, and especially during this hot Summer, the amount of Otitis—Externa and Media—has been far in advance of any year in my experience, and because both these conditions are at present so common and are presenting features of considerable variety, I venture to outline their varieties, differential diagnosis and treatment.

Otitis Externa.

Three main varieties of this condition have been occurring:—

(1) Simple Dermatitis of the External Auditory Meatus associated in many cases with excessive cerumen, or merely showing as a redness of the meatus with great irritation, slight or moderate exudate, generally of a watery nature, and some tenderness or pressure on the auricle as a whole or especially on the tragus. Temperature and pulse remain normal.

(2) Furunculosis, showing either as a single or multiple boils, causing extreme pain, the actual area affected being exquisitely tender, and in bad cases associated with cellulitis extending to the face, neck or over the mastoid area. The temperature may be raised but is normally not much over 100 F., the pulse rate not as a rule increased unless the patient is becoming exhausted by a series of sleepless nights. The course of these cases is often protracted and may run on for a week to a fortnight or even longer.

(3) A very acute variety coming on suddenly and rapidly, with a raised temperature often as high as 101-102 F. and some increase in pulse rate, marked by great pain, multiple blebs in the external auditory meatus with swelling and tenderness, involving the outer surface of the drum and making it extremely difficult to decide whether or no the middle ear is also involved. The congestion of the whole passage may be so intense that pulsation becomes marked, and after bursting of the blebs masses of granulations may be seen on the top or floor or sides of the external auditory meatus.

Diagnosis.—The first (variety 1) is not difficult of diagnosis, pain is variable and is generally associated with great irritation in the external auditory meatus, the patient wanting to scratch it, deafness is seldom marked and is then generally due to soft masses of cerumen; tenderness on pressure over the auricle is variable and generally present, and is absent over the mastoid area where occasionally an enlarged lymphatic gland may be felt, there may be slight associated tenderness below the auricle in the neck from glandular enlargement. Absence of swelling of the drum and of bulging generally serve to exclude Otitis Media however mild.

Treatment.—Syringe out the cerumen, avoid soap, or glycerine, in cleansing the ear and instil the following daily or twice daily:—

Liq. Carbonis Detergens $\mathfrak{m}\mathfrak{x}\mathfrak{v}$.

Ac. Carbolic. Liq. $\mathfrak{m}\mathfrak{v}$.

Aquam ad $\mathfrak{z}\mathfrak{j}$.

This is best done out of a warm spoon. If the external aspect of the auricle is sore apply Ungt. Hydrarg Ammon. diluted with an equal part of Ungt. Ac. Boric.

When the condition is subsiding instillation of almond oil occasionally is advisable and cleansing of the ear should be carried out with Oatmeal and Bran water (a handful to half a gallon of water) still avoiding the use of soap.

The Diagnosis of definite Furunculosis (variety 2) is generally easy, the great and lasting pain preventing sleep, the localised excruciating tenderness and swelling of the external auditory meatus, sufficient, sometimes to occlude the meatus altogether and often the appearance of a definite pustule with a slightly raised temperature—generally not above 99.5°F.—complete the picture. The condition must occasionally be diagnosed differentially from Mastoiditis, especially when there is tenderness extending over the mastoid, this however is generally superficial and not marked on deep pressure, deafness is not usually pronounced and the patient looks tired and worn out. There is generally also great tenderness over the tragus of the auricle which is not present usually in middle ear affections. In extreme cases where there is definite cellulitis and burrowing pus, the diagnosis is more difficult.

Treatment.—Hot fomentations over the affected auricle and side of the head, aspirin—very probably morphia will be necessary—incision of any obvious pus points, but too early incision of inflammatory indurations is not advisable. Instillation of the same drops as recommended in ordinary dermatitis is very useful and when the meatal walls are so swollen as to be almost in apposition, a strip of $\frac{1}{2}$ -inch gauze soaked in this lotion may be inserted for $\frac{3}{4}$ -inch down the meatus with a probe and left there for a few hours and repeated. The patient should go to bed and stay there and be warned that the pain will or may last for several days, as it is often impossible to cut the condition short. Some use injections of colloidal manganese but of this I have no experience.

The third variety of External Otitis has been very common during the past year, and come on with great rapidity. It simulates an acute otitis media by pain, deafness, raised temperature and intense congestion of the meatus reaching to the outer surface of the drum and even in some cases accompanied by marked pulsation. There may be a watery sanious discharge and soon the appearance of debris in the meatus from exfoliation of skin. And in many cases it is extremely difficult to differentiate between an external and a middle otitis.

The chief points are that in the external form, the whole of the external auditory meatus is involved, blebs form at various points and often on the drum itself, which however is not definitely bulging and, if the progress of the case is watched from the beginning, it is seen to start in the cutaneous tissues of the external auditory meatus and spread inwards, and the auricle is very tender when pressed on or pulled.

Treatment.—Bed, sedatives, instillation of carbolic drops as before—fomentations.

The meatus should if possible be gently mopped out daily and inspected so as to watch any change in the appearance of the drum, as otitis media may supervene; if, however, this does not appear, the condition will after a few days begin to subside and then a powder, preferably Boracic with $3\frac{1}{2}$ to 4 grains of Iodine to the 3j, may be insufflated. If, however, as sometimes happens after the blebs burst, masses of granulation fill the meatus; these may have to be curetted away under anæsthetic. If during inspection period the drum is noticed to definitely bulge then it is obvious that Middle Ear infection has taken place and myringotomy should be performed.

In giving outline of treatment of the above conditions it will be noticed that no mention has been made of the use of hydrogen peroxide. In these acute cutaneous cases I have given up using it as it does not relieve pain and in many cases seems to definitely irritate. Carbolic drops 1 in 100 up to 1 in 50 allay irritation and exercise a much more rapidly beneficial action on the infection especially if combined with liq. carbonis detergens. If hydrogen peroxide drops are used, they should not be in greater strength than 3 volumes. I have seen definite damage done by too strong (5 to 10 volumes) peroxide, which can exert a strong caustic action on delicate cutaneous surfaces. Glycerine, too, is often used with carbolic, but I have known frequently glycerine to irritate and aggravate skin conditions such as the above and I have given it up. On the other hand, in cases of simple Acute Otitis Media or Myringitis where the condition is early and there is no marked tension or effusion an instillation of—

Menthol $2\frac{1}{2}$ —5%.

Ac. Carbol. $2\frac{1}{2}$ —5%.

Cocaine $2\frac{1}{2}$ —5% in Glycerine will frequently allay pain and would seem in some cases to avert effusion into the middle ear and consequently prevent the necessity of a subsequent myringotomy.

Otitis Media.

This nowadays is a very common condition, generally following some nasal infection, either the Rhinitis of Influenza or a severe cold, or by direct infection from a suppurating antrum. Adenoids when infected undoubtedly are a cause, but I am not at all sure that the presence of a certain amount of adenoid tissue is not a defence rather than a menace, as the condition would seem to be just as common after as before the removal of adenoids. Another cause at this season of the year undoubtedly is bathing, and this occurs with such regularity that one is inclined to the opinion that Bathing Pools in overcrowded areas may be a source of infection, water being sucked up through the nose. The subject requires further investigation.

The symptoms are too well-known to require elaboration.

Pain, varying with the patient and intensity of infection very often passing off owing to softening and bulging of the membranous drum, temperature varying from 99 to 103F. according to the infection. Some deafness—also very variable—and a certain amount of toxicity with usually a raised pulse. The drum is seen to have lost its contour and to definitely bulge, generally red in appearance but may be the colour of an over ripe cherry or show a localised whitish bulging.

Treatment.—Myringotomy, under an anæsthetic, for though some hardy patients may stand it without an anæsthetic, one's reputation for humanity will suffer considerably, and in the majority of cases the incision made will be inadequate—such is my experience. Care should be taken to incise vertically the posterior and lower quadrant of the drum, by so doing one avoids dislocation of an ossicle, a disaster to be shunned.

After treatment, bed, light diet, a four-hourly temperature chart, and a pulse record. Instillation of three vols. hydrogen peroxide six hourly to keep discharge fluid, and a careful watch for signs of mastoid involvement. If the temperature remains high and the pulse rate is up and the patient appears toxic, it is probable that Mastoiditis is present, even if there is no deep seated tenderness, and in my judgment once mastoid involvement is diagnosed, mastoid drainage should be carried out; but as further discussion on this subject would necessitate a lengthy paper I do not propose to go further into this.

If after myringotomy in a case of simple Otitis Media the discharge is not lessening in four to five days, it is often helpful to daily irrigate the ear, dry it out, and then insufflate the previously mentioned powder—Iodine four grains in Pulv. Boracis ʒj.

Acute Nasal Sinusitis.

Another condition frequently met with this summer is an acute infection of one or more of the nasal sinuses, most frequently the maxillary antrum, though general Sinusitis is not uncommon.

Acute, General or Pan-Sinusitis is often ushered in with a rigor, high temperature, rapid pulse, and severe pain, facial and frontal. Patient looks and feels acutely ill. Both nasal passages are blocked, there is thin purulent Rhinorrhœa, and patient cannot clear the nose; frequently there is accompanying sore throat, generally Pharyngeal.

On examination both nasal passages are blocked with acutely reddened mucosa; this, however, may be contracted by painting with a cocaine solution and purulent exudation will be seen on the outer side of the middle turbinal bones and along the floor of the nasal passages. Trans-illumination of the antra and frontal sinuses will show dimming or great obscurity and there may be tenderness over frontal area and both sides of the face.

Treatment at this stage should be expectant. Bed, fluids, saline purge, painting the interior of the nasal passages with the following:—

Menthol gr. IV.

Cocaine e Hydrochlor gr. X.—XV.

Parolin ad. ʒj.

A soft camel's hair brush should be used and the paint inserted as far in as possible and not sparingly and at first at intervals of 4 hours. *There is nothing that will act as cocaine does in these cases;* for (1) by its constricting action it promotes free secretion and affords a nasal passage once more. (2) Its action is prolonged and its reaction very slight, and for this reason adrenalin should be avoided, as its reaction is severe and shortly after use the patient is just as blocked again. (3) Very few patients will feel any ill effect from the above paint which contains two per cent. or three per cent. of cocaine only. Should, however, the patient show any symptom of faintness, it may be administered in one per cent. strength.

Aspirin should be freely given while the temperature remains high—and I have found injections of combined pneumococcal-streptococcal immunogen starting with $\frac{1}{2}$ c.c. doses daily most valuable.

Unless there is definite pus shut up in a sinus without escape, no operation must even be contemplated in the acute stage, and if this has happened it should be let out with the least disturbance of surrounding tissues, otherwise one runs grave risk of Septicæmia or Meningitis supervening. If pain is severe, anti-phlogistine applied to the frontal area or the face will be found useful. When the temperature has fallen, and this may not be for a week or longer, if then there is still profuse rhinorrhœa, antral lavage should be carried out. It is seldom necessary to interfere with the frontal sinuses. Occasionally removal of the anterior end of the middle turbinals may be advisable. The same general principles of treatment pertain to single sinus infections. A painful frontal sinusitis and ethmoiditis on one side only will frequently yield to cocaine and so also will a maxillary sinusitis even though there may be some œdema of the lower lid on the same side.

There does occur, however, the case where pus is shut up in the antrum and cannot escape owing to blocking of the natural ostium. In this case, which will be accompanied by very severe pain, intra-nasal puncture and suction of the antral contents with a Watson William's Syringe will relieve and may have to be repeated on several occasions.

As to the cause of these conditions, there is no doubt that they are in many cases associated with bathing and the causative organism is very frequently the hæmolytic streptococcus.

Watch must also be kept on the ears. It has been proved by experiment that the path of fluid evacuated from the normal ostium of a maxillary sinus lies over the eustachian cushion of the same side, hence it is easy to understand an accompanying Otitis.

The subsequent treatment of an Acute Sinusitis should not be neglected. Over douching of the nose is to be deprecated. A "Nasal Drill" may be carried out with safety. Some mildly antiseptic fluid such as Glycerin of Thymol (one in three of luke warm water) should be either sniffed up or gently poured up the nose out of a glass nasal douche, and then snorted out into a handkerchief or a piece of lint held away from the nose; in this way *no* intra-nasal pressure is created as in ordinary blowing of the nose. If this is done at bed-time the nose will probably remain clear most of the night.

After doing the "Drill" the introduction of a little plain vaseline will help to keep the passages clear.

THE CLINICAL PICTURE GALLERY IN MEDICAL EDUCATION

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The purpose of this note is to propose that every medical school should include in its educational equipment a clinical picture gallery. There is no need to argue the force or value of the teaching appeal through the eye, for everyone admits it; and with not a few students visual memories are both more readily acquired and more persistent than are auditory memories. In the medical curriculum the professional lecture no longer dominates the training, and the pathological museum, the dissecting room, the physiological laboratory, the practical courses in chemistry, physics and biology, and the work of the clinical clerk and the surgical dresser all take a share in encouraging the student to educate himself by the observation of facts rather than by the hearing or reading of words. The clinical picture gallery would be an addition to this series, and the suggestion here made is that it would be a valuable addition. Admittedly, the best of all illustrations is the actual patient. But the significant patient is at the important moment by no means always available, and in these circumstances a not ineffective substitute may often be found in the clinical picture gallery.

The pictures themselves, at least in considerable numbers, already exist and await an opportunity for service. But they are shut up in bulky and relatively expensive atlases which the student either never sees or sees only on some passing and exceptional occasion. In his school picture gallery they would be part of his daily atmosphere and would secure that repetition of experiences which most of us need if memory is to be successfully impressed. If pathological facts in the shape of specimens in a museum need presentation of this order, why not also clinical facts in the shape of a picture gallery?