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CASES

ILLUSTRATIVE OF

DISEASES OF THE EAR.

BY

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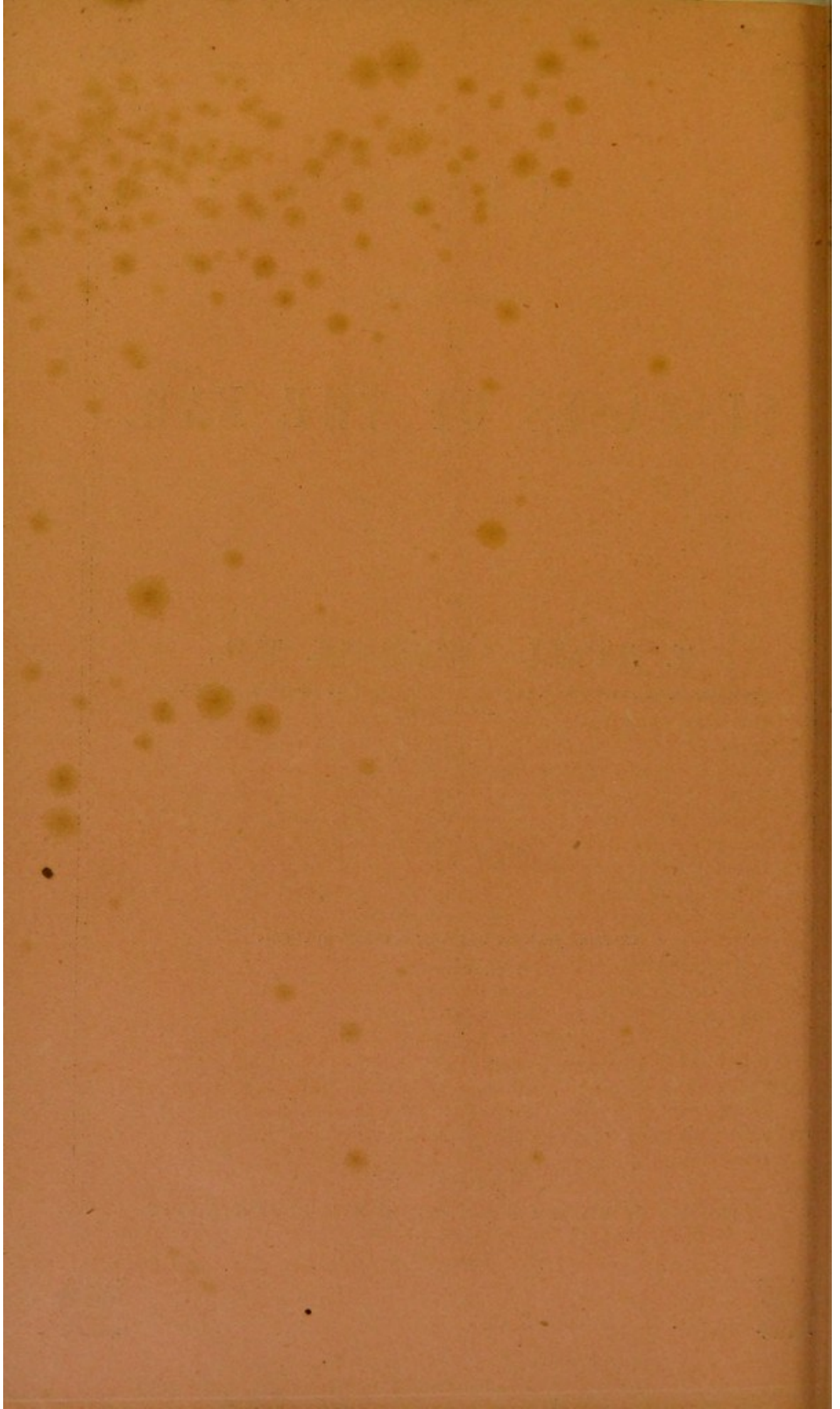
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C A S E S

ILLUSTRATIVE OF

DISEASES OF THE EAR.

No. IV.

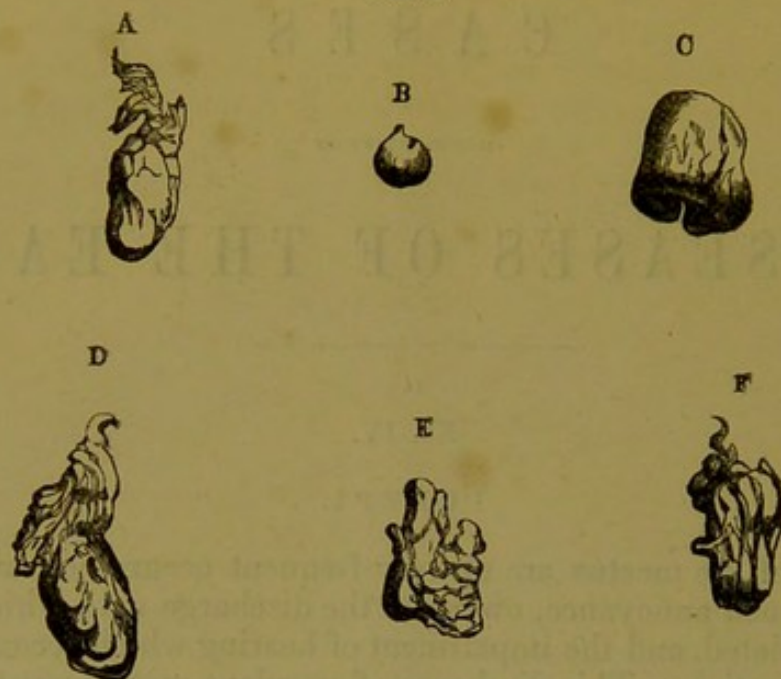
P O L Y P I.

POLYPI of the meatus are of very frequent occurrence, and give rise to much annoyance, owing to the discharge with which they are associated, and the impairment of hearing which accompanies their formation. This discharge of purulent matter must not be considered, as some would lead us to believe, as the result, but rather as the cause of the morbid growth; and the disease can generally be traced back to a catarrhal inflammation of the passages, often following scarlatina or some other fever. Indeed all purulent discharges from the meatus are apt to be associated with polypi, especially if they have existed long; and, in such cases, a careful examination must always be made to see whether one of these is present, as the treatment which suffices to remove a simple discharge is almost invariably ineffectual for the cure of one complicated with a polypoid growth. I am not prepared, however, to assert that polypi do not keep up the discharge; for we often meet with cases in which it ceases whenever the growth has been completely removed, although it is pretty certain that they are never the original cause of it.

In form, these growths vary greatly, sometimes being quite round, like a pea, at others very irregular on the surface, and they have a great tendency to assume the lobulated form. Sometimes they are divided into two or more lobes, at others, many superficial lobules mark its surface, while one of the commonest forms of all is that in which it is divided into many minute lobules appended to a central stalk, like a bunch of grapes. This corresponds to the "raspberry cellular polypus" of Toynbee. Sometimes they are sessile, but more usually pedunculated (see fig. 6). They vary as greatly in size as in form, being sometimes

as small as a very small pea, while they occasionally, on the other hand, assume such dimensions as completely to block up the

Fig. 6.



whole meatus, dilate the cartilaginous portion of it to a considerable extent, and, appearing externally, mould themselves into the concavity of the concha.

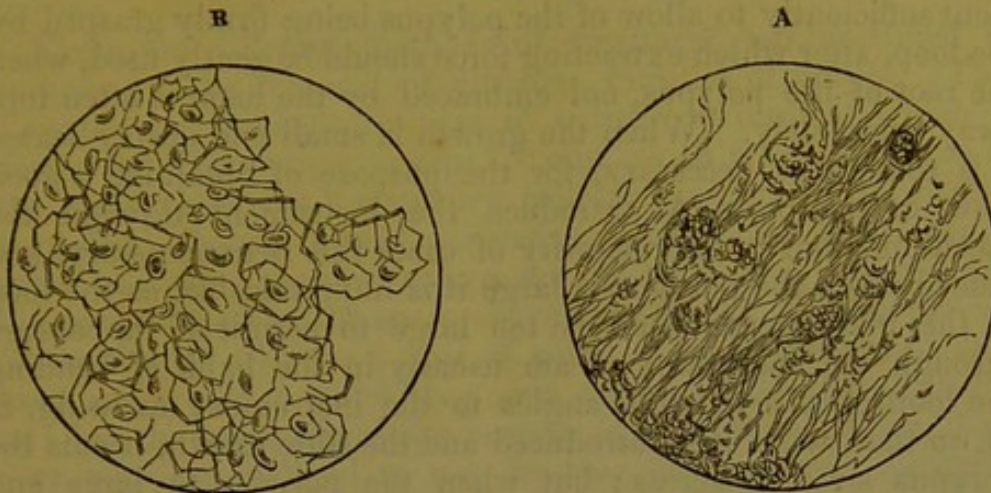
With regard to their minute structure, they possess a thin cuticular covering composed of epithelium of the pavement variety (see fig. 7, B); while here and there, in the specimens which I have examined, ciliated epithelium was detected. On making sections of them, two other elements are discovered—small oval or rounded nucleated cells, and fibres of connective tissue (see fig. 7, A). The comparative abundance of the cellular as compared with the fibrous element, determines the friability or toughness of the growth; and this is the only division of polypi which the practical physician requires to bear in mind, as some other methods of operation for the removal of the latter are quite ineffectual for the removal of the former, while caustics have a much more beneficial effect upon the more friable growth. All polypi, therefore, are, strictly speaking, fibro-cellular; but for convenience sake, we may term that in which the cellular element is in abundance the *cellular polypus*, in contradistinction to that in which fibres predominate, which we may name the *fibrous polypus*.

These growths usually spring from the walls of the meatus at its middle third, and seem to be attached by preference to its posterior wall. Sometimes, however, they proceed from the pos-

terior wall of the cavity of the tympanum in cases where the drum has been destroyed. Some authors speak of polypi springing from the surface of the membrana tympani, but I have never met with such a case, which must be of extremely rare occurrence.

It is unnecessary to dwell upon the causes which conduce to their formation, as, from what we have said with regard to the

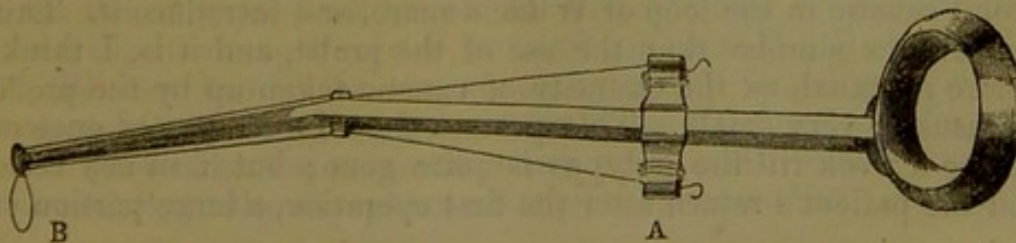
Fig. 7.



exciting cause, these must be identical with the causes of otorrhœa in general. It is of importance, however, to allude to the fact that otorrhœa and polypi occur by preference in those of the lymphatic temperament, while a large number of the patients are decidedly scrofulous. This requires to be borne in mind in the regulation of the general treatment.

The local treatment which I am in the habit of adopting for the removal of polypi is pretty constantly the same, and need not vary, owing to the size or structure of the growth, in any material respect. The discharge is first washed away by means of a syringe and tepid water, after which Toynbee's largest-sized speculum is introduced, and the shape, size, and depth of the growth made out, and also its point of attachment, as well as

Fig. 8.



possible by inspection, and by the use of the probe, bent about the middle, so as to prevent the hand from interfering with the

view. Wilde's snare* (see fig. 8.) is now made use of; a loop of the wire is drawn out (fig. 8, B), the size of the loop being regulated by the size of the polypus, and the dimensions of the meatus. This is gently insinuated into the meatus till the loop grasps the growth as near its root as possible, after which the slide of the instrument (fig. 8, A) is drawn back, and the polypus is cut across and removed. If the operator cannot succeed in grasping it close to the root, it is better not to cut the polypus completely across, but merely to draw back the slide of the instrument sufficiently to allow of the polypus being firmly grasped by the loop, after which extracting force should be gently used, when the root of the polypus, not embraced by the loop, is often torn away completely. When the growth is small and deeply seated it is sometimes necessary, for the purpose of obtaining a good view of the parts, to introduce the instrument through the speculum; but in the majority of cases this is unnecessary, and indeed when the polypus is large it is impracticable, as the loop of the instrument would be too large to permit of its passage through the speculum. I am usually in the habit of bending the loop of wire at right angles to the instrument (as in fig. 8, B), so that, when it is introduced and the slide drawn, it cuts the polypus straight across; but when the polypus is large and divided into several lobes, there is sometimes a difficulty experienced in the introduction of the instrument so arranged, in which case the loop must be placed in a line with the instrument, or nearly so.

After the operation, the hæmorrhage, which is sometimes pretty considerable, is arrested by the repeated injection of water which is nearly cold. When it has completely ceased, and the moisture of the meatus is nearly gone, the parts should be examined, and the remains of the polypus touched with solid caustic. There are two modes of effecting this:—a small piece of caustic may be melted on a piece of platinum over a spirit lamp, and the blunt end of a probe dipped in the melted caustic, a coating of which it receives. The probe is then introduced through a speculum, and the parts touched; or, instead of using the probe, a simple method is to entangle a small fragment of solid caustic in the loop of Wilde's snare, and introduce it. This is perhaps simpler than the use of the probe, and it is, I think, more effectual, as the quantity of caustic taken up by the probe is usually very small. This process should be repeated once or twice a week till the polypus is quite gone; but if in any case, on the patient's return after the first operation, a large portion of

* For a description of this instrument see Mr. Wilde's work on "Aural Surgery," p. 420.

polypus is seen to have been left, the snare should again be used. In the after-treatment of these cases the patient should be directed to wash out the meatus night and morning with tepid water and to use an injection, of which from 3 to 10 grains of the nitrate of silver to the ℥i. of water, is probably the best. The above method of treatment I have never found to fail in the extirpation of a polypus when it was properly carried out by the patient, and when the operation was carefully executed, and I believe it to be equally applicable to every variety of polypus of the ear.

There are different methods of treatment recommended by authors for the removal of different varieties of polypi. Thus Toynbee recommends the use of a little instrument which he names the "lever-ring forceps,"* and which is used by him for the removal of the "raspberry cellular polypus." It seems a very good, though a very expensive, instrument; but I cannot speak of it from personal experience, being so well satisfied with the performances of the snare above alluded to. For the removal of the fibrous polypus a pair of small dressing forceps is often used, and a case in which they were employed is narrated further on; but the snare serves the purpose equally well. Those, however, who are inclined to use dressing forceps, must remember that they are only applicable for the removal of the tougher forms of polypi, as the cellular growths at once give way on attempting to pull them out.

Caustics are sometimes relied upon alone for the destruction of these growths; but they are only applicable to the cellular varieties, and are even in these cases much inferior to the snare. Those most in use are the potassa cum calce—much employed by Toynbee for the removal of the "raspberry cellular polypus," before he adopted the lever-ring forceps—solid nitrate of silver, and saturated solutions of the bichromate of potash.

Astringent solutions are often employed; but, excluding exceptional cases, they can only be of service as adjuvants to other treatment, unless their use be continued for a lengthened period of time, and in a concentrated form. They are absolutely useless in the case of fibrous polypi. The preparations most in vogue are the sulphate and acetate of zinc and the acetate of lead, varying in strength from 5 up to 60 grains to the ℥i. of water.

Blisters behind the ears are sometimes to be recommended in cases of old standing, not so much for the purpose of curing the disease, as for preventing any disagreeable effects from following upon the abrupt cessation of a long-continued discharge.

* For a description of this instrument see Mr. Toynbee's work on "Diseases of the Ear," page 89.

At the same time as the local treatment is being carried into effect the general health must be attended to, and any deviation from the healthy standard corrected. In debilitated or scrofulous persons, cod liver oil is especially indicated in combination with tonics, particularly those containing iron, as the syrup of the iodide or the saccharine carbonate. The diet should also be good, and warm clothing and plenty of open-air exercise in the country prescribed. Sea-bathing is often beneficial.

The following cases serve to illustrate the preceding remarks:—

Miss G., aged about 40, consulted me on the 21st August, 1861. She had had discharge from the right ear for more than ten years, accompanied by a sense of fullness in the ear, and by occasional pain; and, about seven years previous, she noticed, for the first time, that the hearing was impaired.

On examination, the tick was inaudible when the watch was pressed firmly against the right ear, or over the mastoid process, but pretty distinctly heard when on the temple. The meatus was very much dilated, owing to the presence of a pretty large, firm, conical-looking polypus which projected into the outer third of the meatus, and was bathed in discharge. It was adhering apparently to the posterior wall of the meatus. It was grasped firmly with a pair of common dressing forceps, and, by using extracting force, and at the same time giving the forceps a turn, was removed entire. It proved to be a typical example of the fibrous polypus; the fibrous element being greatly in excess of the cellular (see fig. 6, A). The flow of blood was considerable, but was checked at once by the injection of tepid water into the meatus.

August 22nd.—The discharge was almost gone, and no remains of the polypus to be seen, except the ragged mark of its attachment to the posterior wall of the meatus at its inner third.

The membrane of the tympanum was now seen to be quite opaque and collapsed, and the handle of the malleus invisible. The eustachian tube was impervious, and the hearing not improved. A blister behind the ear was ordered, and an injection of nitrate of silver (gr. v. to the ℥i. of water) was to be used twice daily, after washing out the ear with tepid water.

September 4th.—The discharge was gone, but the hearing not improved. All treatment was omitted.

Some months afterwards, I heard from the family attendant that the hearing had gradually but steadily improved, and that the patient could hear tolerably well with the affected ear.

Mr. B., aged about 40, came to me on the 1st of February, 1862. He was affected with discharge from both ears, coming and going since childhood; but no further history could be obtained.

On examination the tick of the watch was heard at the distance of three inches from the right ear, and there was no discharge from this side.

On the left side the tick was audible, when the watch was placed on the temple or mastoid process, but inaudible when pressed firmly against the ear. Not even the crack of the nails was heard on this side; but he heard loud sounds close to the ear. A considerable amount of purulent matter having been washed away with the syringe and warm water, and the speculum being introduced, a small round polypus was detected at the very bottom of the meatus springing apparently from the posterior wall of the cavity of the tympanum.

Toynbee's largest sized speculum was now carefully introduced, for the polypus was so deeply placed that it was quite invisible without it; through the speculum Wilde's snare was passed, the wire being bent at right angles to the instrument; the loop was then insinuated round the root of the growth, the slide of the instrument pulled back, and the polypus extracted.

It came away entire, was perfectly round, though indistinctly lobulated on its surface, and about the size of a small pea. (See fig. 6, B.)

The bleeding was arrested by the injection of tepid water into the ear, and the patient recommended to wash it out twice daily, and to use an injection, containing nitrate of silver (gr. v. to the ℥i. of water) morning and evening.

February 4th.—Discharge gone. Removed with the syringe a quantity of lymphy matter, after which the tick was heard when the watch was close to the ear.

11th.—Discharge not returned. Membrana tympani gone; old inflammatory deposits detected in the cavity of the tympanum; eustachian tube impervious. Tick heard, when the watch was close to the ear. After letting a drop of almond oil fall into the bottom of the meatus, the tick was heard at the distance of an inch and a half.

Patient was recommended to syringe out the ear with tepid water in the evening, and to put a drop of almond oil into it every morning. He did not return after this; but there can be little doubt that the hearing has by this time become much more acute, although the improvement in this respect was very marked before he ceased his attendance; for I have noticed that, after the removal of a polypus, the hearing power often returns very gradually.

In this case, it appears to me that the polypus sprang from the cavity of the tympanum itself, although I am aware that this is said to be an unusual occurrence. It is impossible for me to say for certain, however, as the polypus was removed so completely that its point of attachment could not afterwards be determined.

Miss D., aged about 18, was brought to me on the 24th June, 1861. At the age of 18 months she had scarlet fever, with severe throat affection. While the throat was inflamed, she was seized with pain in the left ear, followed in a few days by discharge, with relief to the pain. The discharge had continued ever since. Five years previous to my seeing her, she noticed a little growth in the ear, which was "cut" twice without improvement, and an injection was used, which produced no good effect.

On examination of the left ear, the tick was faintly audible when the watch was pressed firmly against the ear, more distinctly when it was placed on the temple, and still more so when on the mastoid process. She had often been troubled with sore throat since the attack of scarlatina; and three months before she consulted me, the left tonsil suppurated. The tonsils were noticed to be slightly enlarged, especially the left. A large, firm, fibrous polypus, divided by a fissure into two segments, was seen projecting, close to the orifice of the meatus, which extended deep into the ear and appeared to be attached to its posterior wall. On pressing the polypus inwards, the patient complained of uneasy sensations and "lightness of the head." The meatus was much dilated by the growth, and the eustachian tube was impervious.

June 26th.—The polypus was firmly grasped by a pair of common dressing forceps, and, by giving the instrument a turn, readily extracted. (See fig. 6, c.) The bleeding was pretty considerable, but was checked by the injection of tepid water into the ear. The tick of the watch was then heard at the distance of 2 inches from the ear.

28th.—On examining the ear, the discharge was much less, the meatus very much dilated; no trace of polypus detected, membrana tympani gone, ossicles invisible, old red granulations in the cavity of the tympanum, eustachian tube impervious. A blister was ordered behind the ear, and an injection of nitrate of silver (gr. v. to the ζ i. of water).

July 5th.—Discharge much less; blister did not rise well; eustachian tube still impervious. Tick of watch heard at the distance of 3 inches. Granulations in the cavity of the tympanum touched with a solution of nitrate of silver (ζ i. to the ζ i. of water). To increase the strength of the injection from 5 to 10 grains to the ounce of water, and to repeat the blister behind the ear, and keep the surface raw with sabine ointment.

19th.—Discharge all but gone. Injection and blisters to be continued till the discharge quite gone, and then to return to have an artificial drum introduced. I had no opportunity of applying the artificial drum, as the patient did not return. I think that, in all probability, the hearing would have been slightly improved

thereby, although the case was not a very good one for it, owing to the deposits in the cavity of the tympanum, and the obstruction of the eustachian tube. Probably, however, the introduction of a drop of oil, as in the last case, would have been productive of fully as much benefit with less trouble.

E. M., aged 42, female servant, came to the dispensary on the 9th April, 1862. She was affected with a discharge of purulent matter from both ears, with considerable tinnitus. She had had the discharge from the right ear for four years; from the left as long as she could remember.

On examining the left ear, the crack of the nails was heard close to the ear; but the tick of the watch was quite inaudible, when the watch was pressed on the ear, on the temple, or on the mastoid process. A large soft conical polypus was seen projecting close to the orifice of the meatus; and on examining it through the speculum with a probe, it was found to extend very deeply; but its exact place of attachment to the meatus could not be made out.

On examination of right ear, the tick of the watch was heard, when it was pressed against the ear, but inaudible when on the temple or mastoid. A polypus was detected in this ear which resembled in every respect that in the left meatus, except that it was divided into 3 lobes. The tinnitus upon this side was sometimes so severe as to prevent sleep.

The polypus in the left ear was seized in the ordinary way, near its root, by means of Wilde's snare, and removed entire without much difficulty. (Fig. 6, D.) Much hæmorrhage ensued, which was arrested after some time by injecting cold water into the meatus. The hearing immediately after the operation was slightly improved. She was directed to wash out the ears with a syringe and warm water, two or three times a day.

April 16th.—Tinnitus gone from left ear since the operation. Discharge very slight. No trace of polypus to be detected. The membrane of the tympanum was gone; the cavity of the tympanum was much contracted by the presence of granulations; the ossicles were invisible, and the eustachian tube obstructed. The faint crack of the nails was heard with ease. An injection of nitrate of silver (gr. v. to the ℥i. of water) was ordered for the left ear; to be used twice daily.

The polypus in the right ear was now removed in the same way as that in the left, with immediate removal of the tinnitus, but no improvement in the hearing.

23rd.—The granulations at the bottom of the left ear were touched with a strong solution of nitrate of silver (℥i. to ℥i. of water).

On the right side patient said that she could hear very well

for two days after the operation, but tinnitus supervened, which did away with the improvement. No trace of polypus existed, but there was slight discharge from both ears. For this an injection of nitrate of silver (gr. x. to the ℥i. of water) was ordered. As the patient's diet was bad, and she was not very strong, a table-spoonful of cod liver oil was to be taken three times daily, and thirty drops of syrup of the iodide of iron to be added to each dose of the oil.

May 7th.—The discharge quite gone from the right ear; nearly so from left. The artificial drum was tried on both sides, but without benefit, owing, no doubt, to the inflammation having extended to the internal ear (the tick was inaudible, when the watch was placed on the temples or mastoid processes), the deposits in the tympanic cavities, and the obstruction of the eustachian tubes. The treatment was to be continued for some time. As the patient did not return, and judging from what I have observed in similar cases, I have no doubt that the discharge subsided, and the hearing gradually improved.

Peter T., painter, aged 20, came to the dispensary, 7th May, 1862. He complained of discharge from both ears, that from the right following scarlatina, and of 12 years' duration; from the left of one year's duration, and attributed to the use of an ear-pick. During this period tinnitus was occasionally complained of. Both drums were perforated, and the eustachian tube free; as air rushed out of each ear with a hissing noise on forced expiration, the mouth and nose being closed.

On examining the right ear, the tick of the watch was heard at $1\frac{1}{2}$ inch from the ear, and distinctly heard when pressed upon the temple and mastoid process. A small slightly lobulated polypus was detected deep in the meatus.

On the left side the tick, when the watch was placed upon the temple and mastoid process, was much more faintly heard than on the right, and only audible when touching the ear. A large superficially lobulated soft polypus, which bled readily, was seen projecting as far as the junction of the external with the middle third of the meatus. It evidently penetrated deeply, though the exact point of attachment was not ascertained.

The greater portion of each polypus was removed by means of the snare (fig. 6, E), and the remains touched repeatedly with solid nitrate of silver. Five grains of the saccharine carbonate of iron were to be taken thrice daily, and an injection of nitrate of silver (gr. v. to ℥i. of water) was to be used night and morning.

June 3rd.—The tick of the watch was heard at the distance of six inches from each ear. The discharge from the right ear was gone, and there was no trace of polypus. On the left side the discharge was slight, and there were still some remains of the polypoid growth.

The nitrate of silver injection was replaced by one of sulphate of zinc (gr. v. to ℥i. of water.)

July 9th.—Right ear continued well. Tick heard two yards from the ear. Membrana tympani quite collapsed, and only a slight trace of the handle of the malleus detected. On the left side the tick was heard when the watch was nearly a foot from the ear, and the discharge and the remains of the polypus nearly gone. The iron powders were to be continued, and the zinc injection increased from gr. v. to gr. x. to the ℥i. of water. This patient did not again show himself.



