

PATHOLOGICAL RESEARCHES
INTO THE
DISEASES OF THE EAR.
(SEVENTH SERIES.)

SEBACEOUS TUMOURS IN THE EXTERNAL AUDITORY
MEATUS;

THEIR EFFECTS UPON THE ORGAN OF HEARING, THE PETROUS BONE AND
THE BRAIN, WITH SUGGESTIONS AS TO THEIR TREATMENT.

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IN a tabular statement of the morbid appearances found on the dissection of 1013 diseased ears, published in the thirty-eighth volume of the 'Medico-Chirurgical Transactions,' I reported ten instances in which a sebaceous tumour was developed in the external auditory meatus.

Since the publication of the paper containing that statement, I have made several additional dissections in which sebaceous tumours were contained in the auditory meatus, and I have also had the opportunity of studying the disease in cases which have fallen under my observation in hospital, and in private practice.

Inasmuch as sebaceous tumours generally produce deafness, and almost invariably cause disease of the petrous bone (disorganization or abscess of the brain being a result in some cases), as their presence in the meatus is far from being infrequent, and as they do not appear to have been

recognised by the medical profession, I am induced to lay before this Society the results of my observations upon them.

Sebaceous tumours are described by writers on the subject of skin diseases as occurring in different parts of the body,¹ but I am not aware that their presence in the external auditory meatus had been even alluded to previously to the publication of my dissections.

Nevertheless there can be but little doubt that cases of this disease occurring in the ear, and producing very singular results, must be constantly presenting themselves to the notice of members of the medical profession; it is not improbable that they are included under the category of cases of otorrhœa, and when the petrous bone and the brain become diseased they are probably looked upon as cases of caries resulting from otorrhœa.

The results of my observations upon the *structure* of these sebaceous tumours tend to show that they are almost wholly composed of flattened cells of a large size, and very similar to those constituting the epidermis. These cells are arranged in layers; they are enclosed in a distinct membranous envelope, formed of areolar tissue. When developed in the ear, these tumours do not appear to result from a morbid change of the hair-bulb or its follicle; indeed, they frequently occur in the innermost part of the meatus, close to the membrana tympani, where no hairs are to be found. Their shape is usually spherical, and they are met with in every part of the external meatus. They possess the singular property of increasing towards their attached surface equally with that towards the cavity of the meatus, and the result is absorption of the petrous bone. I am not aware that I have dissected a single sebaceous tumour in the external meatus, however small, that had not caused some absorption of the osseous wall. These tumours vary in size from a millet-seed to a large hazel-nut. When of the latter size, they cause an enormous dilatation of the meatus, so

¹ Mr. Erasmus Wilson has also given them the name of *sebiparous* tumours.

that not unfrequently a finger may be passed inwards as far as the membrana tympani. They also produce absorption of the bone to so great an extent that a communication is found with the mastoid cells, tympanum, cerebral or cerebellar cavities. Their progress would seem to be more impeded by the presence of a membrane than by bone, as the membrana tympani frequently remains entire when the surrounding bone has been absorbed. In one case, which will be cited, the tumour went through the external and then the internal osseous walls of the mastoid cells, and came into contact with the dura mater; instead of penetrating it, the tumour passed upwards, causing absorption of the posterior, and then the upper, wall of the petrous bone, and eventually entered the tympanic cavity, without producing any perforation in the dura mater. It is a remarkable feature of this disease that the tumour may pass through the substance of the petrous bone, causing a large aperture in it, without producing any visible effect upon the surrounding osseous tissue, the margins of the aperture being often as sharp and well defined as if made by a chisel.

Sebaceous tumours grow in the external meatus, and even reach to a considerable size, causing absorption of the bone, without the occurrence of pain; indeed, as a rule, the attention of the surgeon is called to them either on account of the deafness which follows the occlusion of the meatus, from the presence of a fetid discharge, or from symptoms of irritation of the brain, which too often terminate in death.

The circumstance that the presence of a sebaceous tumour in the ear seems capable, by the irritation it causes, of producing an abscess in the brain, may be adduced as additional evidence (if further evidence be required) in favour of the opinion that, when abscess in the brain co-exists with disease of the petrous bone, the abscess is caused by the affection of the ear, and the disease of the petrous bone is not caused by the abscess in the brain.

The effect of sebaceous tumours upon the membrana tympani and the contents of the tympanum is worthy of observation, the result being, not uncommonly, very serious deafness.

In some instances the tumour presses upon the exterior of the membrana tympani, gradually forcing it inwards until its inner surface is in contact with the outer surface of the promontory; in other cases the tumour passes through the membrana tympani, producing an orifice with defined margins.

The only disease for which sebaceous tumours are likely to be mistaken is the presence of one or more osseous growths in the meatus, covered by the dermis; gentle pressure with the rounded extremity of a probe is, however, sufficient at once to discriminate between the two kinds of growth.

Treatment.—Considering how strong a tendency sebaceous tumours have to advance inwards, and thus to injure the membrana tympani and the bone, the effort of the surgeon should be to extirpate them as completely as is practicable. A simple incision into the substance of the tumour, and the evacuation of its laminated contents, is productive of no permanent benefit, the layers of epidermoid cells being rapidly reproduced. The desired object is the removal of the firm capsule of the tumour, which appears to be the parent of the cells. This can be effected by making a crucial incision into the tumour, and after squeezing out the laminæ, the firm wall may be seized by a pair of forceps and the whole of it withdrawn. In the later stages of the disease, when ulceration has taken place in the free surface of the tumour, producing discharge of a highly fetid odour, much care is required in the removal of the laminated contents of the tumour, and more especially of the wall, the attached surface of which may be in contact with the dura mater. In the first place, the ear should be frequently syringed with warm water, the stream being directed against the contents of the tumour. The flakes that remain after this operation has ceased to bring away any further secretion may be carefully seized and withdrawn by the lever-ring forceps, with which instrument the outer wall of the tumour may also be extracted. In cases where, from the remote position of the tumour, it is found impossible to extract the

wall, it is of importance that the case be carefully watched, and the laminæ removed as fast as they are secreted. It might appear unnecessary to remove the contents of the tumour so completely when a large opening exists towards the cavity of the meatus, but from the observation of cases it is highly probable that being open towards the cavity of the meatus, and even freely discharging, does not prevent a sebaceous tumour advancing towards the brain.

I will now proceed to give the particulars of six cases of sebaceous tumour in the external meatus, accompanied by an account of appearances found upon dissection. I will then present in a tabular view the leading features of all the instances which have fallen under my observation, and in which I have been able to conduct dissections; I will, lastly, cite one or two of the cases I have treated successfully.

(A) *Cases with Dissections.*

CASE 1.—*A sebaceous tumour developed in the posterior and outer part of the external meatus, causing extensive absorption of the petrous bone, and accompanied by an abscess in the cerebellum.*—M. W—, æt. 24, was admitted under my care as an in-patient of St. Mary's Hospital on the 6th of July, 1860. Of a delicate constitution, she had always resided with her parents, attending to minor household duties and teaching in a Sunday school. Since a child she is stated to have been subject to sick headaches. Four or five years ago she began to have a discharge from the right ear, and seven weeks since, this ear was attacked by violent pain, which was followed by a sudden increase in the quantity of the discharge. Accompanying the pain in the ear there has been a very severe pain in the head, which has wholly incapacitated her from following any kind of occupation. When seen on the 7th of July she suffered from constant pain at the back of the head and neck, accompanied by giddiness; at times the pain extended to the forehead, and she became delirious. She had double vision, but she saw distinctly

with either eye when used singly. Pulse 80, and weak. The meatus was full of thick, flaky discharge, of a very fetid character. Leeches were applied behind each ear, and a blister to the nape of the neck. On the following day there was intense pain in the head, both in the frontal and occipital regions. The patient lay on her back, moaning constantly and sighing deeply. Pupils equal, and perhaps slightly dilated; they were perfectly sensitive to light. Pulse very slow, varying from 20 to 16 per minute. The patient died suddenly at 2.30 a.m. on the 10th, immediately after taking a cup of tea for which she had asked.

Autopsy.—On removing the brain, no abnormal change was observed until the tentorium on the right side was punctured, when two or three drachms of serous fluid escaped, the quantity escaping last being turbid. The cerebellum on the right side was found to be adherent to the corresponding petrous bone for a space of about one third of an inch in diameter; at this part, as well as at the superior surface of the bone, the dura mater was discoloured. On examining the cerebellum, an abscess, of the size of a large walnut, was observed at the anterior and superior part of its right hemisphere; it was quite superficial, and its walls were thin. The meatus externus was full of discharge, principally composed of flakes, looking like masses of epidermoid scales. On the removal of this discharge an aperture was observed in the outer part of the osseous meatus at its posterior surface. This aperture, the margins of which were sharp and well defined, measured about three quarters of an inch long and half an inch broad. It was surrounded by perfectly healthy bone and communicated with a cavity which was full of laminae, having the appearance of epidermis arranged concentrically, and bearing an exact resemblance to the tumours I had frequently examined, to which the name molluscous or sebaceous had been applied. This sebaceous matter extended backwards through an aperture in the posterior part of the petrous bone as large as that in the meatus, and was in contact with the dura mater, which separated the walls of the abscess from the tumour. The

laminated, sebaceous matter also extended upwards at the posterior part of the petrous bone, having completely destroyed the superficial layer of bone, and then passed horizontally outwards, beneath the bone forming the upper part of the petrous bone, until it reached the tympanic cavity, which it entered and wholly filled, pressing upon the inner surface of the membrana tympani, and causing an orifice in it.

CASE 2.—Sebaceous tumour in the right meatus externus, extending upwards towards the cerebrum, and attended by an abscess in its substance.—S. A.—, æt. 72, was first seen by his medical attendant on the 20th of September, 1859. For some days previously he had displayed symptoms of considerable excitability, and on the day when medical advice was requested he at times had symptoms of partial unconsciousness, and he passed his fæces involuntarily. When seen, his tongue was foul and his pulse very weak.

He was ordered a blister to the nape of the neck, and five grains of blue pill, in conjunction with two thirds of a grain of opium, were administered at night.

21st.—He appeared greatly exhausted, and picked the bedclothes; tongue very foul, bowels not moved. Two ounces of port wine were administered.

22d.—Was more sensible; he still picked the bedclothes, though to a less extent than on the previous day. Bowels not moved. The wine to be repeated, and a cathartic enema to be administered.

23d.—In the same state; the wine to be continued.

24th.—Is extremely low, and wanders in his mind very much. He remained in this state till the 30th of September, when a discharge was observed to take place from the right ear. His daughter, upon being questioned, then stated that her father had suffered from an occasional shooting pain in the right ear, which extended upwards to the side of the head, during the whole of the previous winter, and that about ten weeks since the discharge had, for the first time, issued from the right ear. No history could be obtained of any disease

of the ear during the early periods of life, nor, until the period when medical relief was sought, had he evinced any symptoms of mental derangement. No relief to the head symptoms followed the appearance of the discharge, which became abundant and very fetid, and he died on the 22d of October.

Autopsy, twenty-four hours after death.—The body was much emaciated. Upon the removal of the calvaria no appearance of disease was manifested, but on lifting up the cerebrum for the purpose of removing it a large quantity of purulent matter gushed from the under surface of the right middle cerebral lobe, where it overlay the petrous bone. On examination of the brain it was found that an abscess, of the size of a pigeon's egg, was situated in the most dependent part of the middle cerebral lobe; it presented a considerable aperture, through which the pus had escaped. Upon making a section of the brain, numerous red spots were visible in the white substance surrounding the abscess, and purulent matter was also found over the surface of the pons varolii and medulla oblongata. The lateral ventricles were also full of pus. The dura mater covering the petrous bone was not diseased, but it adhered to the bone more firmly than natural.

Dissection of the ear.—A sebaceous tumour as large as a hazel nut filled the meatus externus, which was dilated to between twice and thrice its natural size. The tumour extended upward towards the cavity of the cranium, and downward towards the root of the styloid process. The superior wall of the osseous meatus had, in reality, wholly disappeared, and the cavity in which the tumour was placed was bounded above by a small part of the upper wall of the tympanum and by the dura mater; the latter covered an aperture in the bone a third of an inch broad and three quarters of an inch long, and over the whole of this surface the dura mater was in contact with the upper surface of the tumour. Below, the tumour had so far dilated the osseous meatus that the lower wall of the latter extended half an inch below the membrana tympani, and was hollowed out

of the root of the styloid process. In front, the tumour had so pressed upon the layer of bone separating the meatus from the temporo-maxillary articulation as to reduce it to the thinness of a fine shell, while behind it was separated from the portio dura nerve by an osseous lamina equally thin. Internally, the tumour pressed upon the outer surface of the membrana tympani, which had so far receded inward as to be in contact with the promontory. The portion of the osseous meatus situated immediately above the membrana tympani had been absorbed, so as to expose the bodies of the malleus and incus; these two bones were dislocated the one from the other, and pressed against the upper part of the inner wall of the tympanum. Upon a careful examination of the aperture in the upper wall of the tympanum produced by the tumour, a fine, sharp ridge of bone was observed at its anterior part, as if it had been turned up by the tumour.

CASE 3.—Sebaceous tumour in the meatus externus of each ear; petrous bones diseased; paralysis; death.—R. W—, æt. 66, died on the 16th of May, 1851. The following scanty notes contain all the information respecting the case which I have been able to collect. About a year previous to his death the patient suffered from pain in the right ear, from which a copious discharge was observed to take place; he at this time complained of deafness, headache, and giddiness. These symptoms somewhat abated, and he ceased to be under medical care till the 7th of May, 1851, when he again applied for relief, having been suddenly seized with vomiting, shivering, and inability to stand. On the following day he became comatose, and on the 10th he was seized with paralysis of the right side of the body. He remained comatose and paralysed until the 16th, when he died.

Dissection.—The brain was not examined. *Right ear—Meatus externus.*—Upon looking into the cavity it was found completely full of a white, lardaceous mass, having a very offensive odour. This mass, on minute inspection, was found to consist of an immense number of laminæ, packed

closely together like the coats of an onion. The laminae were easily separated from each other, and upon microscopic inspection were found to be composed of large, flat scales. Upon removing the tumour layer by layer it was found to have occupied the cavity of a size to have received an ordinary hazel-nut; the posterior wall of the meatus had been wholly absorbed, and the tumour had extended from the cavity of the meatus to that of the tympanum and mastoid cells, being separated from the two latter cavities by a distinct membranous capsule. The upper part of the tumour had pressed against and caused absorption of the upper wall of the tympanum, so that the tumour at this part was in contact with the outer surface of the dura mater. The margins of the orifice in the upper wall of the tympanum were sharp, well defined, and appeared perfectly healthy: dispersed over the outer surface of the tumour were small, thin particles of bone, having the appearance of fractured portions of the original osseous lamella. The tumour had extended inward so as to destroy the posterior and superior third of the membrana tympani, and it had apparently caused absorption of the whole of the incus and of the crura of the stapes. The malleus remained attached to the anterior three fourths of the membrana tympani, and the inner surface of this membrane was attached to the promontory by numerous strong, membranous bands. Below, the tumour had encroached upon the jugular fossa, and its lower part was in contact with the outer surface of the jugular vein.

When it is considered that this tumour had occupied a considerable portion of the cavity of the mastoid cells and tympanum, that it had destroyed one third of the membrana tympani, that it had caused absorption of the incus and of the crura of the stapes, and, lastly, that it was in contact above with the dura mater and below with the jugular vein, it will be well conceived how great must have been the irritation it produced, and how great is the probability that this irritation had caused an abscess in the brain. At the lower part of the meatus and near to the membrana tympani

was another sebaceous tumour, of about the size of a pea ; it had produced a cavity in the bone, and had undermined the lower fourth of the membrana tympani.

Left ear.—There was a sebaceous tumour, about the size of a large pea, at the upper and inner part of the meatus ; it also had caused absorption of the bone and of the upper and posterior third of the membrana tympani ; it was in contact with the outer part of the head of the malleus and of the body of the incus.

CASE 4.—J. B—, æt. 80, was brought to consult me in the early part of the year 1850 ; his health was good, but he was so hard of hearing that he required to be spoken to in a distinct voice within the distance of a yard from his head. He attributed his deafness to a cold which he had taken about three years previously.

Upon examination, the right meatus externus was observed to be filled with a grayish-white mass, which the patient declined to have interfered with ; the right meatus externus was, to all appearances, in a natural state.

The patient died about a year after I saw him, and through the kindness of a friend I had the opportunity of dissecting the ears.

Dissection.—*Right ear.*—The external meatus was half as large again as natural, and was distended by a sebaceous tumour, which seemed to have pressed equally on all its walls. At the innermost part of the lower wall it had produced a small orifice in the bone, which allowed of a communication below the membrana tympani between the cavity of the meatus and that of the tympanum. By its pressure on the outer surface of the long process of the malleus it had caused its total absorption, the head of this bone alone remaining ; it articulated with the body of the incus. The stapes was fixed in the fenestra ovalis more firmly than natural, and the otoconic was more abundant than usual.

CASE 5.—*Sebaceous tumour extending through the petrous*

bone, and covered by the dura mater.—A man between seventy and eighty years of age had been hard of hearing for a considerable period previous to his death; no further history of the case had been ascertained.

Dissection.—*Right ear.*—The external meatus was considerably dilated, and was filled by a sebaceous tumour as large as a small hazel-nut. This tumour had made its way upwards, and had caused absorption of the upper and posterior half of the osseous wall of the meatus: it projected into the mastoid cells, from the cavity of which it was separated by the well-defined wall of the tumour. The tumour had also caused absorption of the upper and posterior part of the membrana tympani and of the body and posterior arm of the incus. The posterior third of the membrana tympani being pressed against the promontory, had become adherent to it by firm, membranous bands. A second tumour, about the size of a small pea, was found at the floor of the meatus near to the membrana tympani.

Left ear.—Meatus externus much dilated, and the whole of the inner and upper part was occupied by a sebaceous tumour, which had caused absorption of the osseous wall to the extent of three quarters of an inch in length and half an inch in breadth. The tumour extended into the mastoid cells posteriorly, and superiorly into the middle cerebral cavity. The outer surface of the tumour was in contact with the dura mater above, and with the mucous membrane of the mastoid cells posteriorly. The tumour had pressed the membrana tympani inwards, so that the tympanic cavity was reduced to one half of its natural size, and the other half of the membrana tympani adhered firmly to the inner wall of the tympanum. The pressure of the tumour had caused absorption of the whole of the incus, with the exception of the lower part of its long process, which was disarticulated from the stapes; the neck of the latter bone projected through an orifice in the membrana tympani. A smaller tumour, of the size of a millet-seed, was buried in the central part of the floor of the meatus.

CASE 6.—*Sebaceous tumours situated in each external meatus, one of those in the left ear being in contact with the outer surface of the jugular vein.*—A man who died at the age of sixty-seven had been hard of hearing for some time, and the tubes of the ear were supposed to be filled by wax, but no attempt at its removal was made by the surgeon in attendance, as the patient declined to allow any operation to be performed.

Right ear.—The orifice of the meatus was nearly twice as large as natural, and the whole of the meatus was greatly dilated. A sebaceous tumour filled the whole of its cavity, reaching as far as the membrana tympani. Upon its removal the bone forming the posterior and lower wall of the meatus was found to be rough and partially absorbed.

Left ear.—The external meatus contained three sebaceous tumours, one about the size of a pea, situated at the lower part of its orifice, and having caused absorption of the bone, which was rough and scabrous. A second tumour, half the size of the former, was situated at the posterior part of the meatus, about a line from the membrana tympani; it had caused absorption of the bone, and extended into the mastoid cells. The third tumour, about the size of a small pea, situated at the floor of the meatus, close to the membrana tympani, had slightly undermined that membrane; it had also caused absorption of the lower wall of the meatus, and was in contact, in the *fossa jugularis*, with the outer surface of the jugular vein; it had also caused absorption of the anterior wall of the meatus, an orifice of considerable size communicating with the *fossa parotidea*.

(B) *A Tabular View of the Symptoms and Morbid Appearances found on Dissection in Eighteen Cases of Sebaceous Tumours occurring in the External Auditory Meatus.*

No.	Sex.	Age.	Symptoms of Disease.	Post-mortem Appearances.	
				Right Ear.	Left Ear.
1	Female	24	Discharge from the right ear for five years; great pain in the ear and head during seven weeks, followed by giddiness, delirium, and double vision.	A sebaceous tumour at the posterior and outer part of the meatus externus extended inwards and backwards to the cavity for the cerebellum, then upwards to the cerebral cavity, and, lastly, downwards into the cavity of the tympanum, which it completely filled. There was a large abscess in the cerebellum adjacent to the tumour.	Normal.
2	Male	72	Pain in the ear and deafness for some months; discharge from the meatus during ten weeks. Symptoms of cerebral irritation for five weeks previous to his death.	A sebaceous tumour, the size of a large hazel-nut, distended the external meatus, which was also much dilated. The tumour projected upwards, causing absorption of the petrous bone, and it was in contact with the outer surface of the dura mater. There was an abscess in the lower part of the middle cerebral lobe directly above the tumour.	Normal.

3	Male	66	Pain in the right ear for a year, followed by discharge, headache, and giddiness. Nine days previous to death, was seized with vomiting, shivering, and inability to stand, followed by coma and paralysis.	Meatus full of a tumour which had extended through the upper wall of the meatus, and was in contact with the dura mater; it also extended backwards into the mastoid cells, and downwards to the fossa jugularis.	A sebaceous tumour, about the size of a pea, was attached to the upper and inner part of the meatus externus.
4	Male	80	Hardness of hearing for about three years.	Meatus much dilated, and filled by a sebaceous tumour; it produced a communication between the meatus and the tympanic cavity below the membrana tympani. The long process of the malleus had been absorbed.	Normal.
5	Male	72	Hardness of hearing for some years.	Meatus filled by a sebaceous tumour, the size of a small hazel-nut. The upper and posterior wall of the meatus absorbed, and the tumour projected into the mastoid cells. The upper and posterior part of the membrana had been absorbed. A second tumour, of the size of a small pea, was situated in the floor of the meatus, near the membrana tympani.	Meatus much dilated, and filled by a sebaceous tumour. The upper and posterior walls of the meatus absorbed, and the tumour projected upwards, being in contact with the dura mater, and backwards into the mastoid cells. The body of the incus had disappeared. A second tumour, of a small size, was seen on the floor of the meatus.
6	Male	70	Hardness of hearing for some years in the left ear.	The meatus contained three sebaceous tumours; one, the size of a small bean, at the lower part of the meatus near the orifice, the bone being rough and scabrous; the two other tumours were lodged in depressions of the bone, and were the size of millet-seeds.	Normal.

		Post-mortem Appearances.	
No.	Sex.	Symptoms of Disease.	Right Ear.
7	Male	For some months pain at times in the left ear, accompanied by the presence of a tumour which filled the orifice; the hearing power much diminished.	<p>The osseous meatus distended by a tumour measuring three quarters of an inch long and half an inch in breadth.</p> <p>Normal.</p>
8	Male	No history could be obtained.	<p>A tumour, about the size of a pea, at the lower and outer part of the meatus.</p> <p>A tumour, similar to that in the right ear, at the posterior and lower part of the meatus, near to the orifice. Upon its removal, the cancellous structure of the bone was exposed over a space measuring three quarters of an inch long and half an inch broad.</p> <p>Normal.</p>
9	Male	Dulness of hearing in the right ear during many years.	<p>The meatus externus was much larger than natural. At its upper and inner part, close to the membrana tympani, was a tumour the size of a small pea; it projected into the meatus, and also through the membrana tympani into the tympanum. The upper wall of the tympanum was perforated by several small orifices filled with blood.</p> <p>Normal.</p>
10	Male	Gradual deafness for eighteen months in the right ear; accompanying the deafness was a bumping noise in the ear.	<p>A sebaceous tumour, the size of a pea, occupied the inner extremity of the meatus, above the membrana tympani. The adjacent bone was absorbed, together with the</p> <p>Normal.</p>
			Left Ear.

11	Male	72	Deafness in both ears gradually coming on during several years. Noises in each ear like a buzzing rattling and roaring.	upper part of the membrana tympani; the tumour extended into the tympanic cavity. The carotid canal was contracted, and the upper wall of the tympanum hypertrophied.	Normal, with the exception of a thickening of the membranous labyrinth.
12	Male	—	No history obtainable.	The meatus much dilated, and filled with a sebaceous tumour. The upper part of the meatus near to the membrana tympani perforated, and a communication existed between the meatus and the tympanic cavity. The upper wall of the tympanum was perforated by numerous foramina.	Meatus greatly dilated, and filled by a sebaceous tumour. The osseous floor of the meatus very rough. There was a second tumour at the upper part of the meatus, near to the membrana tympani.
13	Male	60	No history obtainable.	Normal.	Normal.
14	Male	78	Deafness for several years in both ears.	Meatus much dilated by a tumour at the outer part of the meatus. Meatus much dilated by a sebaceous tumour in the upper and outer part of the posterior wall. It extended into the tympanic cavity through a circular orifice the size of a small pea, the margins of which are sharp and well defined, as if made by a chisel. A second tumour, of nearly the same size, situated at the upper part of the membrana tympani, projected through the upper part of the membrana tympani, into the tympanic cavity.	A small tumour, at the upper and inner part of the meatus, projected through an aperture in the bone into the tympanic cavity.

		Post-mortem Appearances.	
		Right Ear.	Left Ear.
No.	Symptoms of Disease.		
15	Male 67 Hardness of hearing, supposed to be dependent upon the presence of hardened cerumen.	Meatus dilated by a sebaceous tumour, which had caused a roughness of the bone at the lower part of the meatus.	Meatus greatly dilated; a large sebaceous tumour, situated at its orifice, had destroyed the lower wall of the meatus. A second tumour, situated at the posterior and inner part of the meatus, had caused an aperture communicating with the mastoid cells. A third small tumour at the floor of the meatus, near the membrana tympani, had caused absorption of the bone; the tumour was separated from the jugular vein by a thin membrane only.
16	Male 56 Subject to a discharge from the left ear during some years; small portions of bone had been extruded at various times.	Normal.	A tumour, the size of a large horse-bean, near the orifice of the meatus, had caused absorption of the bone. A second tumour, much smaller, at the posterior part of the membrana tympani, had produced an aperture communicating with the mastoid cells.
17	Male 50 Deafness in the left ear during some years.	Normal.	A large sebaceous tumour on the floor of the meatus, near the orifice, had caused considerable roughness of the bone.
18	Male 60 Deafness in the left ear during some years.	Normal. membrana tympani, had caused absorption of the latter membrane and the adjacent bone, and projected into the tympanic cavity, pressing the incus inwards towards the promontory, and dislocating it from the head of the malleus.	A sebaceous tumour, the size of a large pea, situated at the upper and back part of the membrana tympani, had caused absorption of the latter membrane and the adjacent bone, and projected into the tympanic cavity, pressing the incus inwards towards the promontory, and dislocating it from the head of the malleus.

(c) *Cases treated successfully.*

The two following cases indicate the mode in which the disease may be advantageously treated.

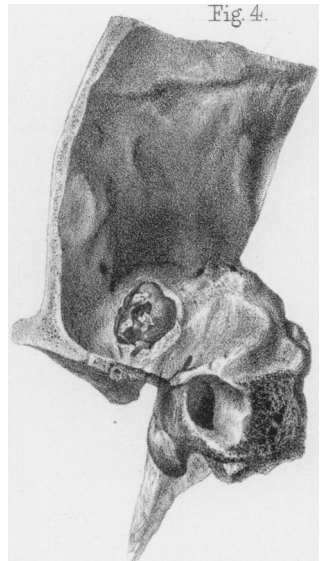
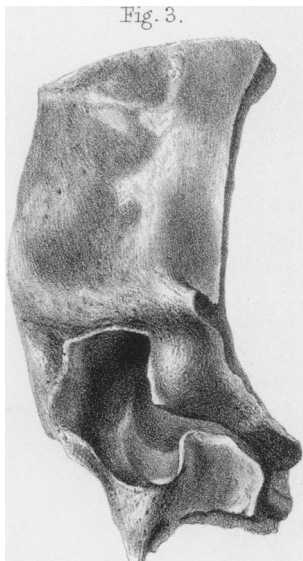
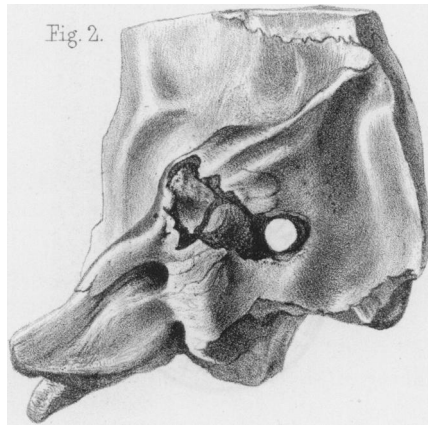
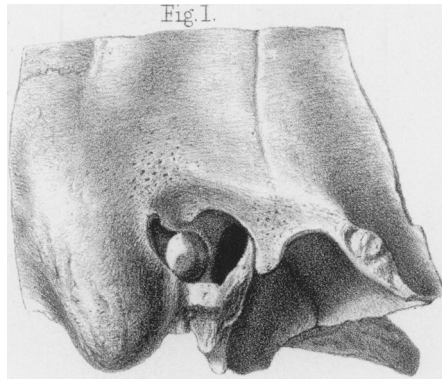
CASE 19.—*Sebaceous tumour in the right ear, accompanied by pain and deafness; removal; cure.*—Mr. F—, æt. 45, consulted me in the year 1854 on account of pain in the right ear and side of the head, attended by copious fetid discharge and deafness. He stated that during several months he had experienced an uncomfortable sensation of fulness in the ear, which had terminated in deafness; and that within the last two months the pain had greatly increased, and the discharge had appeared, and had become constant, without affording any relief to the pain. Upon examination the meatus was observed to be distended by a large grayish mass, from which a milky fluid oozed. By the aid of the syringe and warm water a considerable quantity of this discharge was removed, together with large white flakes. The interior of the tumour, which could now be examined, was seen to consist of white layers; some of these were withdrawn by the aid of the lever-ring forceps.

Two days afterwards the cavity was again full of discharge and white flakes; these were removed in the same way as before. By thus using the syringe and lever-ring forceps the mass of the tumour was removed, and ultimately the firm wall of the tumour was withdrawn. The latter operation was followed by a diminution of pain, the discharge slowly subsided, and in a fortnight the patient wholly recovered, and I believe that he has had no return of the disease.

CASE 20.—*A sebaceous tumour in the right ear, attended by great pain and discharge; removal; cure.*—C. W—, a gentleman, æt. 54, consulted me in the month of July, 1860, on account of violent pain in the right ear and side of the head, accompanied by discharge. The origin of the affection

was stated to be a cold, supervening upon an attack of scarlet fever at four years of age. From that period until eighteen years of age, during the spring easterly winds he had attacks of earache, sometimes in one, at others in both ears; each attack commonly terminated in discharge. Between eighteen and twenty-four there was an intermission of the attacks, but at the latter age deafness began to be manifest. At twenty-seven another attack of pain occurred in the right ear; the suffering was intense, and lasted several hours, and terminated in the exfoliation of a small piece of bone. These attacks recurred at various times, and were always accompanied by copious discharge of glutinous matter, and very often of a tough, whitish substance, something like gristle. In the intervals of these severe attacks a soreness was experienced in the ear, accompanied by throbbing and by noises like the rushing of water, hissing, and singing. The late Mr. Pilcher attended the patient in some of these severe attacks, and removed considerable portions of a white substance from the ear.

At the time of my seeing the patient, the right outer meatus was closed by the presence of a large white tumour, the interior of which was exposed and poured out an offensive discharge. By the aid of the syringe and warm water some flaky matter was removed, which did not, however, in the least degree diminish the pain in the ear and side of the head; these symptoms, however, completely subsided on the removal of a large mass of yellowish-white material which, upon examination, proved to be a sebaceous tumour.



DESCRIPTION OF PLATE I.

- Fig. 1.—An aperture produced by a sebaceous tumour in the outer part of the meatus auditorius externus, and communicating with the cerebellar cavity.
- „ 2.—The effects of the tumour on the posterior and upper surfaces of the petrous bone.
- „ 3.—The external meatus greatly expanded by a sebaceous tumour.
- „ 4.—The upper osseous wall of the meatus perforated by the tumour.

DESCRIPTION OF PLATE II.

Fig. 1.—The whole of the upper and posterior wall of the external meatus, and the upper and posterior part of the membrana tympani, destroyed by a sebaceous tumour.

„ 2.—A sebaceous tumour *in situ*; the external meatus being expanded.

„ 3.—An aperture in the upper and posterior wall of the meatus, communicating with the mastoid cells, produced by a sebaceous tumour.

