ON
AFFECTIONS
OF THE
MEATUS AUDITORIUS EXTERNUS.

By HENRY EARLE, Esq.

SURGEON TO THE FOUNDLING HOSPITAL, AND ASSISTANT SURGEON
TO ST. BARTHOLOMEW'S HOSPITAL.

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THE sense of hearing is so important to the safety and happiness of mankind, and a partial or total loss of it deprives us of so many sources of information and pleasure, that it is certainly to be lamented that the treatment of the diseases of the ear should have been so long and so generally neglected by the Profession at large. It will not, I trust, be deemed presumptuous in me to express a hope, that from a judicious application of the improvements which have taken place in modern surgery, to the treatment of these diseases, some benefit may yet be derived; and perhaps some affections of the internal organ, hitherto con-

sidered incurable, may be arrested in their progress by the early adoption of the most active and powerful measures. Should, however, our hopes of affording relief in the more obscure diseases of the labyrinth, prove fallacious, we may yet be able to discover causes of deafness in the external ear and cavity of the tympanum, which have not hitherto been described, and which may partake of the nature of diseases affecting other parts of the body, and readily yield to the operation of known remedies.

I have been induced to make the above remarks, and to believe that much remains to be investigated in this unexplored path, from having met with an affection, which I shall proceed to relate to the Society, and which has I believe been wholly overlooked, though it is by no means improbable that it may have been not unfrequently the cause of deafness.

In the early part of 1816, Mr. F. an ensign in his Majesty's service, called to ask my opinion respecting a complaint in his ears, of which he gave the following account :

That from childhood he had been occasionally liable to attacks of inflammation in the external ear, accompanied with heat, excoriation, and a copious thin discharge from the passage, which af-

fects his hearing, more or less, for several weeks, but left no considerable permanent deafness behind. About ten months before his application to me, he had been exposed to damp, and, in consequence, suffered a very severe renewal of the same disease, which so nearly deprived him of the power of hearing, as to oblige him to leave his regiment, then quartered in Ireland, in pursuit of further advice, with an understanding that unless he could obtain some relief, it would be necessary for him to quit the service, as he was quite incapacitated from active duty, by not being able to hear the word of command.

On examination, I found the meatus of either ear much narrowed in its calibre, by the thickening of the surrounding parts, and especially the great increased density of the cuticle, which had a very white appearance, and was moistened by a thin discharge, resembling runnet whey, that deposited a substance not unlike small portions of curd. On washing this away, and dilating the passage with a little instrument, which I had constructed for the purpose of examining the external meatus, there was not the slightest appearance of cerumen; but the same white thickened cuticle appeared to extend as far as the eye could reach.

The sense of hearing was nearly lost, but a

watch applied to the teeth or forehead was distinctly audible, a circumstance which convinced me that there was no defect in the auditory nerves. On throwing in water with considerable force, a dull obtuse sound was produced as if some dense medium were interposed. This led me to imagine that it was possible that the deafness depended either on a thickened state of the cuticle reflected over the *membrana tympani*, similar to that which lined the meatus, or on some morbid secretion existing between this cuticular layer and the membrane. This idea was strengthened by passing down a probe to the bottom of the meatus, which conveyed a sensation to my touch different from that which would have been produced by the contact of a healthy membrane; whilst at the same time it did not cause that painful sensation usually expressed by the patient in these circumstances.

After a little reflection, and entertaining this view of the subject, I thought myself warranted in attempting the removal of the whole cuticular lining of the meatus externus. I hesitated less in making this experiment, as all common remedies had been resorted to in vain, and the case appeared almost hopeless, unless some new mode of treatment could be devised.

To effect this removal, I had recourse to the nitrate of silver, which I had often found beneficial

in causing exfoliations of thickened cuticle from the feet, producing what are commonly termed corns.

I threw in with a silver syringe a very strong solution, and completely blackened the epidermis of the meatus.

In a few days, I began to syringe with warm water, conceiving that maceration would contribute to the speedy separation of the exfoliations. After persevering for several days, for a considerable time each day, it began to be detached in small portions at first, but subsequently in larger pieces, one of which, from its form, was very evidently the reflected layer which had covered the membrana tympani. The next syringe-full which I threw in occasioned to the patient a very distressing sensation and loud sound. His hearing from this time was greatly improved, but still rather confused. The other ear was treated in the same way with similar success. In a few days the hearing was very nearly restored.

From the time of the separation of the cuticle, the treatment consisted in the application of ungt. hydrarg. nitratis $\mathfrak{z}\text{iv}$. cerati cetacei $\mathfrak{z}\text{ij}$. olei olivæ $\mathfrak{z}\text{j}$. He was directed to introduce a little of this, night and morning, with a camel-hair pencil; this was recommended with a view to stimulate the ce-

ruminous glands to a more healthy secretion. Blisters were also directed to be applied behind the ears, and to be kept open for some time with the same intention. Soon after this, he returned to join his regiment, and I lost sight of him until very lately, when I had the pleasure of seeing him perfectly well; and he informed me that he had never experienced the slightest return of his complaint, and could hear as well as he had ever done in his life. On examining his ears, I found that a secretion of cerumen had taken place, and the lining of the meatus had a perfectly healthy appearance.

This very favourable result induced me to reconsider the subject, and to examine most of the authors who have treated of diseases of the ear; from their silence on the subject, I am inclined to think this peculiar affection has escaped their observation. Mr. Saunders, indeed, in speaking of the herpetic ulceration of the external meatus, mentions that it is accompanied with thickening of the lining, but does not seem to have suspected that a similar affection might extend to the reflected portion which covers the membrane; a state which must more or less impede the functions of that part, and, if suffered to increase, would probably terminate in permanent and complete deafness. On the ground, then, of its novelty, and from a wish to have the subject further investi-

gated, I have ventured to bring this case before the Society, though I am well aware that insulated facts are rarely deserving the attention of the public, and ought at all times to be received with caution.

The cause of this thickened state of the epidermis may, I think, be traced to the thin ichorous discharge which takes place in the room of the healthy cerumen. It is well known that cuticle, in common with other substances possessing the same properties as the hoofs of animals, is liable to imbibe moisture, by which it becomes thickened, loses its transparency, is thrown into folds, and assumes a whitish colour. This fact is familiarly known to occur in the hands of washerwomen, and when poultices have been applied for any time. Whilst this rugous state exists, the sense of touch is rendered very imperfect; but this appearance is soon lost on the evaporation of the moisture, and the cuticle resumes its former characters and functions. There is always, however, a separation of a whitish curdly substance, which, on becoming dry, assumes the appearance of a powder, having a greyish tint, similar to that produced by scraping the cuticle with a knife. Considerable quantities of this will sometimes come away from the feet, if they have not been constantly subjected to ablution and friction, and it appears to be similar to the exfoliations which

take place, on a larger scale, from the sole of the horse's hoof.

In the case now under consideration I believe that, by the continued application of moisture, the whole cuticle was thickened, and rendered opaque. Under such circumstances, it is easy to comprehend to what an extent the sense of hearing must have been impaired, as those minute and delicate vibrations of the membrana tympani, which convey the undulations of the surrounding elastic medium to the internal ear, must have been greatly impeded, if not wholly prevented.

The curd-like substance which was found in the external meatus very closely resembled the furfuraceous separation which has been described as taking place from moistened cuticle, and most probably was of the same nature, as it was collected on the surface, and could be scraped off in considerable quantity with the flat end of an eye probe. In the early stages of this complaint it is probable that the injection of astringent washes, clearing the meatus from all extraneous matter, and anointing it with some stimulating ointment, would be all that would be required : should it however be suspected that the cuticular covering of the membrana tympani was much thickened, the treatment adopted in the case above related might be had recourse to with every hope of success.

The lining of the external meatus, in common with the integuments of the rest of the body, is liable to various affections, some of which may be attended with considerable difficulty of hearing. A gentleman once requested me to examine his ears in consequence of a deafness which he had laboured under for some time. The symptoms he described very much resembled those usually attending an inspissation of the cerumen. On examination I found the whole passage choaked up with numerous scales, closely impacted together with a morbid secretion of cerumen. He had from childhood been subject to attacks of *lepra vulgaris*, which latterly never entirely left him, and at times spread over nearly the whole surface of his body. With some difficulty the passage was cleared of its contents. He was directed to syringe the ear every morning with a decoction of bran, or barley water, and to smear the surface with an ointment consisting of equal parts of ung. zinci, ung. hydrargyri nitratis, and ceratum cetacei. I likewise recommended him to take a strong decoction of sarsaparilla, with alterative doses of hydrargyri oxymurias. Under this treatment his general health improved much, and his cutaneous affection was mitigated. By persevering in the use of the syringe and the ointment his hearing was nearly restored.

I have met with one instance similar to the above, in which the patient, who was advanced in

life, neglected to pursue the measures prescribed, and has, in consequence, been repeatedly under the necessity of having recourse to his medical attendant for the removal of the cuticular exfoliations and impacted cerumen, which never fails to afford him temporary relief.

Some time ago I was consulted by a lady on account of an affection of the ears attended with some peculiar circumstances. From her birth she had never had any proper secretion, the meatus was unusually dry, and the substance which was deposited bore none of the external characters of cerumen. She had two brothers and a sister who were all similarly affected, and one of her eldest brother's children was deaf and dumb, and the others were affected with difficulty of hearing. At times, when she had been exposed to damp, or was disordered in her health, the secretion was more abundant and much thinner; this irritated the passage, and the whole ear had an erysipelatous redness, accompanied with considerable tumefaction and distressing deafness. At the time when I saw her she had been suffering from one of these attacks, and her health was much disordered. The natural form of the ears, particularly of the right, contributed much to increase the degree of deafness. The meatus was more curved than usual, and the tragus was so long, and projected backwards so much, that when swelled by inflammation,

it completely closed the aperture. To obviate this, she was continually drawing it forward with her finger, and introducing instruments into the passage, which tended much to keep up the irritation. I directed such medicines as I thought were calculated to improve her health, and endeavoured to sooth the local inflammation : still, however, the passage remained nearly closed, the sides being much approximated by the thickened state of the whole ear, apparently from interstitial deposit. To remedy this, I recommended that she should have a portion of sponge tent introduced every night into the meatus; in a short time, by this plan, the passage was considerably dilated, and her hearing much improved. She remained well for near a twelvemonth, when she again sent for me, on account of a severe erysipelatous attack in the right ear, accompanied with copious ichorous discharge. I recommended her to syringe it night and morning, and when the inflammation was a little abated, to anoint the passage with the ung. hydrarg. nitratis mitius. She improved rapidly under this treatment, and by persevering in the use of the ointment and syringe, she has experienced no return for several months, and can now hear better than she had done for many years.

This latter case shews, in a marked degree, the important part which the cerumen acts in the due performance of the functions of the ear. A defi-

cient or vitiated secretion generally induces a diseased state of the integuments, which may become so thickened as to cause an obstruction in the ceruminous ducts, and thus maintain the disease. The cases which I have had the honor of submitting to the Society, sufficiently prove the importance of paying attention to the state of this secretion, and of the integuments which line the meatus, and will perhaps authorize us to hope, that, by the application of suitable remedies, many distressing cases of deafness may be palliated, and some permanently relieved.

10, *Berners Street*,
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