

THE TREATMENT OF CHRONIC DEAFNESS BY THE ZUND-BURGUET ELECTROPHONES.*

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Abridged.

"Thou shalt not curse the deaf!" One shudders to think what an amount of abuse, what "curses loud and deep" must have been heaped on the heads of the deaf before Moses promulgated this edict. Incidentally it reveals to us in a flash how prevalent deafness must have been in his day. To Moses, the begetter of preventive medicine, with his enthusiastic temperament, it must have been a galling thought that he was powerless either to cure deafness or to prevent it, but he did his best to lessen the heavy burden of the deaf by trying to stop their fellow creatures adding human insult to nature's injury.

Otology is one of the youngest branches of medical science and only of late years has anything been done to assist the deaf, for the knowledge gained by specialism has still to filter through until it becomes part of the ordinary curriculum of the medical student. Prevention is nevertheless beginning to play its part, and already there is a great change in the type of deaf ear met with in adult life. A few years ago mastoid operations to remove the cause of chronic discharge from the ear in order to save life were much more frequent than at the present day, and doubtless this is because of the greater care of the ears during the course of measles and scarlet fever and the more frequent removal of adenoids and tonsils. Not so long ago any attempt to stop a discharge from the ears was looked upon askance by many parents in the less educated classes, the idea being that the stoppage of the discharge forced it into the brain. Now, however, every precaution is taken to prevent the ears becoming affected, and if they do become affected to try to stop the inflammation, as rapidly as possible by incising the drum, before the inflammation has spread to the mastoid antrum. Even if the antrum has become affected, timely opening and drainage will prevent permanent damage to the drum and will save many lives.

Notwithstanding existing knowledge it is still unknown how the sound waves reaching the inner ear are appreciated.

Until one or other of the theories of hearing has been proved to be correct, we shall not be able to discover how to prevent or cure deafness, and while a search is being made into the ultimate causes, let us take stock of what has been done or is being done (1) to alleviate the enormous amount of deafness there is in the world, and (2) to relieve tinnitus or noises in the head.

Probably no one who has not suffered from constant noises in the head can appreciate the misery, distress and nervous strain caused by them. No sympathy is ever offered to the sufferer on this account because the noises are subjective, and are not heard by outsiders. Every aurist, however, has had patients who may have become reconciled to their deafness but who beg piteously to be relieved of the noises which are driving them distracted, hindering their enjoyment of life and lessening their usefulness as citizens. The deaf therefore suffer not only from the negative evil of loss of hearing but also in many cases from the positive evil of constant noises in the head.

I suppose many of you have heard the following witty epigram by the late Sir William Wilde, the Dublin aurist. "There are two kinds of deafness; one is due to wax

and is curable, the other is not due to wax and is not curable." To-day however the chronic deafness we are considering is not that due to wax in the external meatus. It is of two kinds, 1st, that caused by a defect in the sound-perceiving apparatus, which comprises the inner ear and the auditory nerve, and is called nerve deafness, and secondly that caused by a defect in the sound-conducting apparatus and this apparatus comprises the external ear, the drum and the middle ear with its chain of ossicles; this type of deafness is met with in two forms termed respectively chronic adhesive otitis media or chronic catarrhal deafness (of which the commonest cause is catarrh produced by the presence of adenoids) and otosclerosis from "oto" ear and "sclerosis" hardening, that is a hardening of a part of the bony content of the middle ear. The cause of otosclerosis has not yet been discovered but it is known to be hereditary. This disease, which affects women more commonly than men, frequently begins during pregnancy or after childbirth and if not treated may get worse with each successive child. So often has this happened that a number of my female patients who had begun to suffer from otosclerosis, and some whose mothers had suffered from it, had been advised by several different aurists not to marry, and if they did marry, not to have children as they would inevitably become very deaf and yet despite these gloomy prognostications they did marry, they did have children, but because they were treated with the Zund-Burguet Electrophone, which will be demonstrated later, their deafness got better instead of worse.

Nerve deafness has hitherto defied treatment. The sufferers are told to try various drugs, to stop smoking, not to worry, to lead a godly, righteous and sober life, in the future, if they have not done so in the past, and above all, not to waste any more money on doctors as no one can do them any good. In other words, they must learn to grin and bear it and be thankful that they are no worse. If we turn now to the treatment of chronic otitis media the first sub-division of the lesion of the sound-conducting apparatus the prospect is no more pleasing.

A well-known American otologist in the super sunny climate of Southern California some years ago stated, "I once asked an aural colleague what he did for people who applied to him for relief from noises in the head, and he told me he sent them to his enemies. This crystallises our attitude towards the otosclerotics and still it should not be such if we live up to our Hippocratic oath as every humane practitioner should.

"For many years I have been of the same opinion as these writers and had got tired of having to tell so many patients, after the classical remedies had failed, that nothing more could be done for them, when, some years ago, an old patient who had tried every kind of treatment for his deafness and tinnitus, told me that he had just heard of a new treatment which was being carried out by Dr. Helsmoortel of Antwerp. He asked me if I thought it would be of any use for him to try it. I gave him the answer that John Hunter gave Jenner, when he said he was thinking about vaccination, 'Why think, why not try?' On making further enquiries my patient found that the treatment had originated with a M. Zund-Burguet in Paris, and accordingly he went to see him. My patient, who was aged 43, had had otosclerosis for many years; a radical mastoid operation had been performed on the right side some ten years before, and he could only hear with a speaking tube on either side. What troubled him most, however, was continuous tinnitus. The result of the treatment was that the deafness was relieved slightly, although he still had to use his speaking tube, the noises however were so much lessened that life once more became enjoyable."

* A paper read at the Nursing and Midwifery Conference, London, March 1932.

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