CAN EXERCISE RELIEVE DEAFNESS ?

Defective hearing is a bitter, hard affliction, and no imaginary ill. And if there is even a remote possibility of effecting improvement in the important faculty of hearing by methods of the sort described in the following paragraphs, we shall be well repaid for their publication. The statements here made are quoted from an address recently made by Prof. Fernet before the French Academy of Medicine and republished in the "West Virginia Tablet."

(By Professor Fernet)

I have been engaged for two years in perfecting a method of using the external voluntary muscles of the ear and scalp to combat advancing deafness.

The active and systematic use of these muscles has the effect of massaging the ear drums, bones and nerves, maintaining their blood supply and nutrition and of protecting them against atrophy. The exercises are principally useful in keeping the exterior and middle ear in good condition. I would not dwell too much on their value in connection with the auditory nerve, but their effect can only be good.

I describe my method of training the ear as "oral gymnastics." It is applicable in all cases where deafness is due not to an irremediable lesion of the acoustic nerve or the auditory centres, but to a change in the apparatus for transmitting the sound waves. This is the commonest of all forms of deafness.

The muscles and bones of the middle ear—stirrup bone, incus bone and hammer bone—have a function of prime importance to our hearing. They are the accommodating agents for that apparatus of perfection, the drum. They are as useful to the sense of hearing as the accommodating muscles of the eye to that of sight. The muscles of the external ear and those of the Eustachian tube have only a secondary role, but nevertheless they give help which is not to be neglected.

* * * Is it not reasonable to expect that the exercises which set in motion the cranial muscles, the external ear and the Eustachian tube must affect the associated muscles of the ear drum? Thus my system of oral gymnastics ends in making the muscles of the delicate ear drum contract with the external muscles.

Observe that all these muscles are supplied by the same nerve, the facial nerve, and that this common innervation explains the close relationship which unites them and associates them in their contractions. In fact, the isolated contraction of one of these muscles without several of the others is usually difficult or impossible to obtain.

For this reason I consider it useful in oral gymnastics to exercise all the muscles supplied by the facial nerve, no matter how accessory they may be. They all have the power of stimulating activity in the parts depending on the same innervation.

The lesions of the middle ear, which are the commonest causes of deafness, are the thickening of the membranes, exudates, adhesions, obstructions and scleroses. These are usually due to eruptions which occur frequently among heavy eaters and rheumatic subjects or to various atrophies of old age. These injuries occur in the outer part of the middle ear. They are all subject to the ameliorating effect of oral gymnastics. Though nutrition may be interfered with it is not abolished, and the parts affected share in the incessant movement of regeneration, which characterizes life, though in a reduced degree. We may, therefore, hope to bring them to a better condition by stimulating their nutrition.

The benefits obtained by oral gymnastics are due primarily to the stimulation of the nutritive supply of the various parts. This helps to repair the ravages caused by disease and to keep the organ in an invigorated condition.

Very often deafness is due to functional inertia and to the atrophy which follows the condition. These cases have a progressive character, which is a necessary consequence of the functional inertia. If only one ear is affected the subject instinctively uses only his good ear and the other ear atrophies from lack of use. If the two ears are equally affected, the inertia is less, but none the less it exists because the sufferer tends to isolate himself from the world, thus increasing his infirmity. Oral gymnastics would correct both these classes of cases.

I will now give a detailed description of the exercises. They are divided into three series, exercising successively the muscles of the skull, of the external ear and of the Eustachian tube. They thus proceed from the muscles most remote to those nearest to the ear drum, which is the principal object to be reached.

In the first exercise, which may be described as making faces, you contract successively the different muscles of the lips, the wing of the nostrils and the eye-lids. The contraction of each group of muscles should be repeated a certain number of times deliberately and without violent effort. The patient should endeavor to make them stronger as he proceeds and should bear in mind that he must try to make them reach the ear. When he has become thoroughly trained, he will feel the contractions most distinctly in the ear.

The second series, which is even more important, consists in exercising the muscles of the skull and the external ear. By a reasonable amount of perseverance any man can succeed in producing contractions of these muscles which will be evident to the eye. If the scalp muscles at first seem immovable and as if soldered to the scalp, make it more supple by massaging it at the beginning of each exercise. Contract the forehead muscle, then the occipital muscle (that of the top of the scalp) separately, and then both together, so as to produce a flowing backward and forward motion of the muscles of the upper part of the skull.

After this the patient combines the contractions of the occipital and the frontal muscles with those of the posterior, superior and anterior attachment muscles of the ear, which should be quite easy to do because of the connection between the latter and those of the skull. During these contractions we can see a movement not very extensive but evident, of the whole external ear. During this exercise the patient must endeavor to extend the movement as far as possible into the external ear opening, aiming to reach the bottom of this opening. This is how functional activity is imparted to the little bones in the ear and to the drum itself.

The third and last series consists of exercise to contract the muscles of the Eustachian tube. These exercises are the most difficult of all.

The patient can perform them by making a movement as if to swallow food, well at the back of the nasal cavity, accompanied by the simultaneous contraction of the superior constrictor muscle of the pharynx (top of the throat) and the muscles of the soft palate. In the effort at swallowing the back part of the tongue participates naturally.

It is raised up at the same time as the soft palate. You should feel all these parts move at the same time through the close bond that joins them.

To strengthen the Eustachian tube, the patient should also practice breathing in with a snorting noise, keeping his mouth closed.

Oral gymnastics should be performed slowly, leaving between the various exercises sufficient time to avoid the fatigue which haste would surely entail. It is advisable to perform between each series physical exercises of a different character, such as breathing exercises. You must not forget that to obtain a satisfactory result great patience, perseverance and an intelligent preliminary instruction are necessary.

RADIUM LOOSENS STIFFENED JOINTS

Results in Treating Six Cases Following Tuberculosis

Details of the Treatment—It Was Given Both Internally and Externally and Had the General Effect of a Tonic

Dr. J. J. Nutt possibly has found a new use for radium, (although time will be required to establish the true value of his results), namely, in loosening joints stiffened by fibrous adhesions resulting from tuberculosis. Commenting on his preliminary report, the Medical Record says:

"Notwithstanding the many and great advantages effected by orthopedic surgery during the past thirty years, even yet the best to be expected in the treatment of tuberculosis arthritis, except when begun in the very earliest stages, is a stiff joint. This, while better than abscess and joint disintegration, is not a result in which the surgeon can take much pride, and various measures have been tried to restore motion.

"Bony ankylosis is, of course, practically hopeless, but fibrous adhesions continually tempt the orthopedist to renewed efforts to restore mobility. At one time thiosinamine was regarded hopefully, but the results of its employment did not come up to expectation. Forcible breaking up of the adhesions may restore motion temporarily, but the risk of lighting up the old trouble or of an even worse outcome is too great to warrant the undertaking in most cases.

"Recently some encouraging experiments have been made with radium in this condition. The good results reported in the use of radium in mobilizing joints stiffened by arthritis deformans suggested to J. J. Nutt the employment of the same remedy in cases of fibrous ankylosis following tuberculous arthritis, and he reports in the American Journal of Orthopodic Surgery, No. 2, Vol. XV., six cases of ankylosis of the joints in which this mode of treatment was essayed.

"In most of the cases a radium pad was worn directly over the knee, radium solution containing two micrograms was given per os (by the mouth) three times a day, and intravenous injections of radium clement were given, the amount injected varying from ten micrograms up to fifty or 100 micrograms, or one or more doses of twenty-five micrograms were given as conditions indicated. In the cases receiving the smaller amounts the injections were given about a week apart until the larger doses were reached, when the time was extended to one to two months between injections. When the larger doses were employed but one or two injections about two months apart were given.

"The process toward recovery was apparently definite, but slow, as some of the cases were under treatment for over a year, although in one or two of the milder cases slight movement was obtained within about two weeks after the beginning of treatment.

"The degree of motion obtained varied, of course, according to the amount of deformity and stiffness previously present. All of the patients were under continuous hospital care, and were made the subjects of routine hospital analyses as to blood, urine, &c. Nutt states that no general effect was noted besides that attributable to an excellent tonic; the patients themselves insisted that they felt better under the treatment.

The results locally were more or less definite even before any mobility was shown. A looseness was felt in the knee, more noticeable in the mornings than after use. When movement began to be perceptible the knee assumed a slightly flexed position and offered a little difficulty in straightening, though this did not appear to be the same expression of muscular spasm as is met with in active kneejoint disease, but was rather an uncertainty of the muscles with regard to relaxation as motion increased. Heat or swelling was never present.

"Since this is but a preliminary report, much is yet to be worked out before definite results as to permanency of cure or relief can be assured. As Nutt suggests larger doses may hasten the process of recovery with perfect safety and other combinations of methods in administration of the radium may give quicker or surer results.

circuitous routes has just reached New York and reported to the American committee of Armenian and Syrian relief.

The committee's informant, whose name is withheld, said there were 8,000 cases of typhus in Beirut when he left owing mainly to a lack of medicine and scarcity of doctors. The poorer classes have been wiped out by starvation, he said. In Lebanon he saw many villages and towns without a single inhabitant.

Determined To Be Still In The Game

(Amherst News.)

We had a very cheery letter from H. V. Wallace yesterday, former city editor of the News. Mr. Wallace went overseas with the 25th regiment and was severely wounded early in the war while on scout duty. He was in a hospital for eleven months without being able to get on his feet as his hip was badly shattered by German shell; he had an additional six months in hospital convalescing and for the last eight months has been doing clerical work with different regiments. He was attached for some time to the 104th, under Lieut.-Colonel Fowler and writes us to the effect that he is the sole member of that regiment now in England as the others are on the firing line, and at present he is attached to a Quebec regiment at Shoreham, Sussex, England. The medical authorities have declared him unfit for infantry duty and he has been offered several clerical positions in connection with hospital and other military work, but he has lately applied to be put on the Royal Flying Corps and expects to be accepted. He said the part that strikes him funny is that while he cannot march with a "bum pin" yet he anticipates passing the examinations successfully as a bird man. He has secured all his papers from the Canadian forces and has been tested out several times by the officers of the R. F. C. His final examination was due to take place a day or two after the date of his letter.

THE WORST POSSIBLE

Conditions in Syria and Palestine are declared to be the "worst possible" by a refugee who fled from there and by