of tuberculosis. Pending a bacteriological examination it was thought probable that the ulcer might be tuberculous.

Mr. Robinson said his opinion was that it was a tuberculous ulcer.

A Case of Post-Pharyngeal Swelling, shown at the May Meeting.

Dr. Bennett reported that a section was made of a small piece of the pharyngeal wall, but no evidence of tuberculosis was detected. The patient was sent to the country for several weeks and given iodide of mercury internally. The swelling gradually diminished, and has now almost completely gone. There has been, however, no reason to suspect any syphilitic process, and the swelling was most probably a chronic inflammatory process.

Two Cases of Ethmoidal Necrosis.

Shown by Dr. W. Hill. Dr. Hill showed a brother and sister suffering from ethmoidal necrosis due to hereditary syphilis.

BRITISH MEDICAL ASSOCIATION.

Seventy-second Annual Meeting, held at Oxford, July 26, 27, 28, and 29, 1904.

Proceedings of the Section of Laryngology and Otology.

President : Charters Symonds, F.R.C.S.

Proceedings, *Thursday, July* 28.

(*Continued from page* 660, *vol.* xix.)

On the Local Treatment of some Forms of Non-Suppurative Catarrh of the Middle Ear by Compressed Air and Nebulizer.

By Adolph Bronner.

Most cases of disease of the middle ear are due to a primary affection of the mucous membrane. This is directly continuous with that of the Eustachian tube and naso-pharynx. It is therefore of great importance that we should in all cases of middle-ear disease treat locally, not only the mucous membrane of the middle ear, but also that of the tube and naso-pharynx.

Most authors follow the teaching of Politzer and state that the use of the bag is as efficacious as that of the catheter. In my experience this is not so. In fact, I have seen numerous cases in

https://doi.org/10.1017/S1755146300175729 Published online by Cambridge University Press

which the use of the bag caused severe pain, vertigo, and increase of deafness, sometimes rupture of the drum. And this is only natural. If the Eustachian tube is open there is a sudden and violent rush of air against the diseased drum, which may easily be damaged, and severe vibration of the ossicles and distension of the ligaments and muscles must be caused. The bag when attached to the catheter, as is frequently done, can be equally harmful. The pressure is too sudden and too violent. For many years I have used Lucae's double bag, fixed on to the catheter. With this a weak and continuous current of air is blown through the catheter, the strength of which can easily be regulated. Better still is the large compressed air apparatus as used in America. This consists of a large receiver of seamless steel, about 4 feet high and 2 feet in diameter. Air can be pumped into the receiver by an ordinary hand pump, or more conveniently by an automatic pump attached to the water main, which gives a pressure equal to three quarters of that of the water. A gauge records the pressure of the air in the receiver and also of the escaping air. You can fix a so-called multiple comminutor or nebuliser on to the receiver. This consists of numerous bottles into which the air passes. The compressed air blows the liquid contained in the bottles against the walls of the same and breaks it up into exceedingly fine particles. In this form it escapes from the bottle and is blown through the catheter into the middle ear. Practically any drug—iodine, menthol, camphor, formalin, tincture of benzoin, paroleine—can thus be sprayed on to the mucous membrane of the Eustachian tube and middle ear, and for any length of time and under any pressure. Any solution can be used; if watery, then glycerine should be added. The most useful solvent is a hydrocarbon oil such as chrismaline, or paroleine.

When the drum is perforated the liquid, looking very much like vapour, can be seen escaping by the external meatus. It also, of course, enters into the cavities and recesses adjoining the middle ear, and thus, in cases of purulent otitis media, it can be used to disinfect these regions, which are so inaccessible to ordinary treatment. By an ingenious arrangement the flow of compressed air can be interrupted so as to produce up to 1000 vibrations per minute. This is very useful in breaking down slight adhesions of the drum, removing spasm of the tensor tympani muscle, and dispersing any serum in the middle ear. By this method the immediate result obtained is not only greater than after the use of Politzer's bag, but also more permanent, and the diseased mucous membrane can be treated at the same time.

https://doi.org/10.1017/S1755146300175729 Published online by Cambridge University Press

In some cases I use the catheter several times at intervals of a quarter to half an hour, and often the hearing improves slightly after each application.

Many cases of so-called dry catarrh of the middle ear are not due to any affection of the mucous membrane at all, but to a primary disease of the osseous labyrinth. Naturally, in these cases the catheter should be used most carefully, if at all. If sudden and great pressure is applied, as with Politzer's bag or the bag attached to the catheter, the hearing and tinnitus may become worse. In dubious cases I use the catheter with an iodine spray under very low pressure.

The compressed air can also be used with an ordinary coarse spray for numerous purposes—to apply a cocaine solution to the nares before the use of the catheter, or an astringent to the mucous membrane of the nares and naso-pharynx, or a disinfectant (per-chloride of mercury, peroxide of hydrogen, etc.) to the nares before and after any intra-nasal operation, or for the local treatment of laryngitis and tracheitis.

Dr. DUNDAS GRANT said he would like to confirm Dr. Bronner's remarks upon the great utility of the compressed-air apparatus he had described in cases of adhesive—not sclerotic—catarrh of the middle ear. He had found repeated interruptions of the instrument—massage action—very useful. He also approved of the use of the catheter in cases of catarrh.

Dr. W. MILLIGAN had had the apparatus in use for many years, and concurred in its value and utility in certain cases—that is, in chronic adhesive cases which did not respond to the bag and catheter. He would also suggest the heating of the air. He did not consider the apparatus of any use in cases of sclerosis.

Dr. THOMAS BARR believed that the efficient use of Politzer's bag was much more suitable, on the whole, than the catheter. He always inspected the membrane during inflation rather than trusted to the ear-tube, which was not quite reliable, as he had known cases in which no sound could be heard, and yet the membrane could be seen to move.

Dr. HEMINGTON PEGLER thought that the value of the apparatus lay in its substitution for the bougie. He cocainised the mouth of the tube, and used the rhinoscopic mirror to see if the catheter was in position. He thought the air-current breaker or intra-tympanic massage described by Dr. Bronner a very valuable addition to the apparatus.

Dr. SCANES SPICER desired to know of any case of rupture of the drum, as he had heard of one case.

Dr. DONNELLAN (Philadelphia) had had a little experience in the use of this method. He was disposed to use politzerisation first, and if he could not succeed in that he next used the catheter and bougie. He found that a previous post-nasal application of cocaine with adrenalin often allowed the successful use of the bag where previously it had no effect. The advantage of the catheter over Politzerisation was that with the former only the affected ear was inflated.

https://doi.org/10.1017/S1755146300175729 Published online by Cambridge University Press

Dr. G. Jackson thought that in 99 per cent. both ears were affected.

Dr. Bronner, in reply, said he considered that the bougie should only be used with very tight strictures. He did not think rupture of the membrane would occur unless by very careless use of the apparatus. The pressure should not be turned on all at once. He had once or twice seen circumscribed emphysema, which had not done any harm. A preliminary spray of cocaine and adrenalin could be used with the apparatus. The catheter thus used with a continuous current was very much better than the ordinary method with a Politzer bag.

Ménière's Disease: A Clinical and Experimental Inquiry.

By William Milligan.

The effects of internal medication and external applications in the treatment of severe cases of labyrinthine vertigo are so eminently unsatisfactory that any relief which might follow operative interference would be eagerly welcomed by many patients. Having had the opportunity during the past few years of operating upon several patients suffering from labyrinthine suppuration where vertiginous attacks accompanied by vomiting were prominent symptoms, and having noted the great relief, and in some cases complete cure, of such symptoms after operation, it struck me that an operation designed to remove the semicircular canals in non-suppurative conditions might have similarly beneficial effects. In such cases, where the morbid process has lasted for months and sometimes for years, the terminal filaments of the auditory nerve are so disorganised and the hearing power so deranged that for practical purposes the organ as an organ of hearing may be disregarded. The object of treatment should therefore be to destroy the static segments so that peripheral impulses may cease to call forth vertiginous phenomena.

In the three cases in which I have attempted to accomplish this the patients had suffered for years from repeated attacks of vertigo, incessant tinnitus, and progressive loss of hearing power. In all three patients the usual drugs reputed to be of value in such cases had been tried, with in addition almost continuous counter-irritation over the mastoid process, periods of rest in bed, and special dieting. In all three cases the results had been practically *nil*. The risks of operation and its possible failure having been placed before the patients and having been accepted by them, the following method of treatment was adopted:

Under chloroform anæsthesia a complete radical mastoid operation was performed, the bony wound being enlarged anteriorly and posteriorly as far as was practicable. The external semicircular

https://doi.org/10.1017/S1755146300175729 Published online by Cambridge University Press