

driven into the tympanum and labyrinth, and caused meningitis and death. Sabatier a similar one, where the object was a simple plug of cotton. Levi cites the case of a soldier, who had put a stone into his ear to simulate disease. After the removal there was found a large perforation of the drum-membrane. The next day otitis media, paralysis of the facial nerve, fatal meningitis. Fraenkel and Moos have each reported a case lately where the extraction of a stone by inexperienced hands led to the same end.

On the other hand it is a well known fact, that foreign bodies may remain in the external canal without giving rise to the least inflammatory symptoms. Rein removed a carious tooth from it which had remained there for forty years. Politzer a piece of graphite one inch long, after twenty-two years, and Brown found both auditory canals of a boy filled with a number of small stones, which had been lodged there for seven years.

But in most instances the foreign bodies give rise to disagreeable symptoms from the beginning, to pain, irritation and inflammation of the walls of the canal and the drum membrane, and the aid of the physician is asked in haste, especially so, as our patients are chiefly children. The ear is a clever pocket in which to insert foreign substances, and those cases are therefore the most frequent ones. Besides, we find divers articles introduced by adults, as remedies against disease. In some regions of Europe there prevails a superstitious belief that small onions worn in the ear are panaceas against toothache.

The point to be remembered in our procedure for the removal is, that the width of the auditory canal is the smallest at the end of the first third from the entrance; then it widens again, and forms especially a kind of fossa below, in front of the drum-membrane. This is the place where the foreign bodies are mostly found, and more or less fixed, after they have been driven by some force through the narrow ring. If they remain in the external half of the canal, or if they are so small that the narrow place is easily passed, one simple bending of the head to the side, and some shaking, will suffice. If this fails, our *sovereign remedy is the syringe*. No instrument now, as the first inclination of so many seems to be.

Syringing is not painful to the patient, harmless, and successful in eighty to ninety per cent. of the

cases. Lukewarm water may be used, or an antiseptic solution. Bulb-syringes are, in my judgment, far superior to the stem-syringe. They require only one hand, hold a larger amount of fluid, and the pressure can be readily regulated.

This ought to be a mild one in the beginning, and increased gradually. The stream should be directed against one wall, generally the posterior; if the previous examination with the reflector shows a space between the foreign body and the wall, this side is chosen, of course. The injected fluid passes the impediment and acts from behind, and this steady pressure is a most effectual agent. The attachment of a small rubber tube, half to one inch long, to the end of the syringe is sometimes useful, as it allows a deeper introduction and direction of the stream to the desired place. Try the syringe again and again. Do not lose patience. You will often succeed after many fruitless trials. But I cannot agree with Kramer, who says *that every foreign body can be removed with the syringe*. There remain undoubtedly a number of cases in which this is impossible. There are, on the one side, bodies which swell, like peas, beans, etc., or hard bodies with very irregular surfaces. Then in cases of longer standing, where the extraction with instruments has been tried, and the walls are swollen and inflamed.

Instruments should not be used without illumination with the reflector. The introduction of a speculum is not always necessary. I have met with several instances where the removal was easier after the withdrawal of the speculum. But whenever the inefficiency of the syringe, after repeated trials, compels the use of instruments, this *should be done in chloroform narcosis*.

The firmly imbedded body is near to or upon the drum. Every little movement, or attempt to free it, hurts this very sensitive membrane, and is so painful, that even adults cannot hold still. As soon as the foreign body is touched they move the head, and your view is gone. You work in the dark. What can you expect of children? They will cry and fight when you have once caused severe pain. This working in the dark is not only difficult, but exceedingly dangerous. Perforation of the drum membrane, purulent otitis media, and their sequelæ and even fatal meningitis may be the consequence, as in the cited cases. On the other hand, in narcosis the removal is an easy one. You