A Short Series of Lectures to Ward Sisters.

LECTURE 3.—THE EAR IN SCARLET FEVER.

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I now come to some of the special points in the diseases which we have to treat in this hospital, and I propose to take only those about which it is difficult for you to obtain information from the text-books at your disposal.

I have on previous occasions told you the reasons for the methods we employ in the routine, cleansing of throats, and for the precautions which we take to eliminate infection from our patients before their discharge from the hospital. You are, moreover, familiar with the practice of these from your everyday work in the wards. I wish now, firstly to tell you something of the anatomy of the ear, and then to show you how that organ is affected—as it very often is—by an attack of scarlet fever.

In the first place, the ear is an apparatus for collecting the waves of sound, making them larger, and then transmitting them to the ends of a nerve, which takes them to the brain, where they are interpreted so that we can make use of them.

The collecting is done by the outer ear, or auricle, which is made of skin and fibrous tissue arranged on a framework of cartilage. In man this outer ear has not much to do; in some of the lower animals—donkeys, for instance—it is great developed.

The auricle leads into a tunnel called the auditory meatus, the first ¾ in. of which is cartilaginous, the second part being hollowed out of the temporal bone in the side of the skull. At the end of the tunnel is a partition, the tympanic membrane or drum head; on the other side of this is a cave—the tympanum—containing the apparatus for magnifying the sound, which is simply a chain of three little bones—the auditory ossicles. One end of this chain is attached to the tympanic membrane, the other fits into a hole in the surrounding bony wall of the cave. The tympanum and its contents are known as the middle ear.

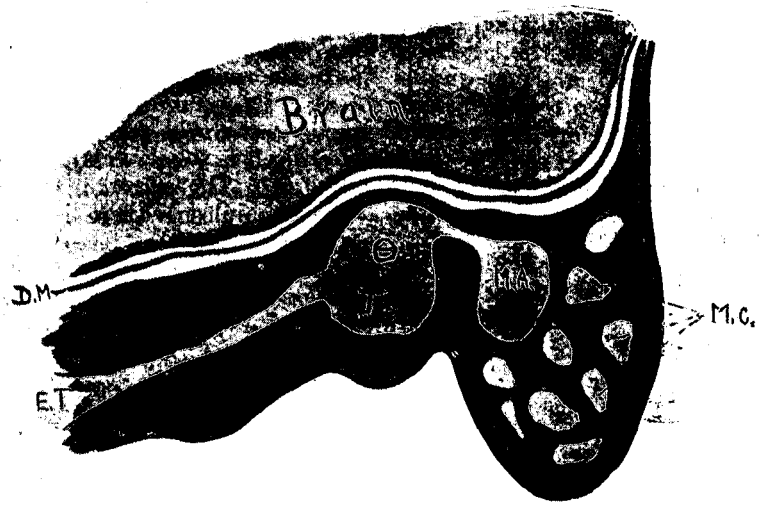

Fig. 1.—E.T., Eustachian Tube; M.A., Mastoid Antrum; M.C., Mastoid Cells; T., Tympanum.

The hole in the wall leads into the internal ear—another cave—where the waves of sound come into contact with the auditory nerve which takes them to the brain. The internal ear need not now concern us, as it is not affected in scarlet fever.

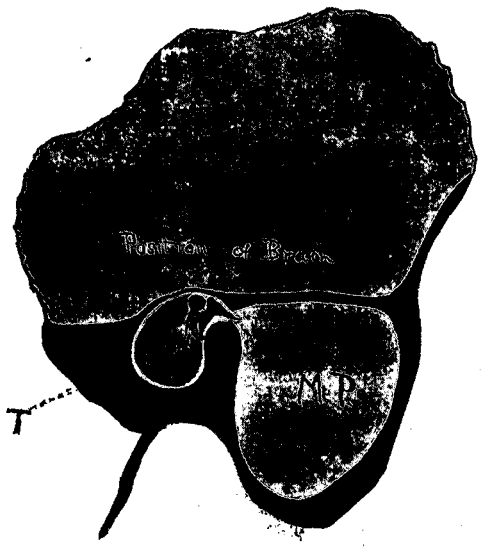

Fig. 2.—M.P., Mastoid Process; T., Tympanum.

Let us look more closely at the middle ear. It is surrounded, as we have seen, by bone, but the bone is not of the same thickness on each side. The roof is very thin, and on the other side of this roof is the under part of the brain resting on its membranes. The first diagram shows this well; it is intended to represent what you would see if you were to cut a person's head in half from ear to ear, the section going a little behind the auricle, and being, as a matter of fact, not quite straight. You will next notice that the tympanum is not

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