THE PREVENTION OF EAR AND THROAT TROUBLES IN INFANCY.

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Now let us return to the nasopharynx, and consider it from the point of view of disease. With its numerous passages opening into and out of it, it forms a sort of meeting-place, like a large square with several communicating streets, by which passengers can arrive from neighbouring cavities or depart thereto. The nose and mouth are the most vulnerable parts, because they are the portals of the outside world from which the organism may be invaded by foreign hordes. The army which acts as a home guard against such invasion lies partly in the nose, which cleanses the incoming air by catching the grosser impurities and by the bactericidal power of its secretions, partly in the tonsils. These latter, as, no doubt, you have already gathered, are arranged to form what is practically a ring of tonsillar tissue round the opening of the food and air passages. There is the pharyngeal tonsil above, in the roof of the nasopharynx, the faucial tonsils on either side, and the lingual tonsil below. If those tonsils become below par, as when the child is defective in its vitality, or if they are called upon to cope with an invasion of germs which is too strong for them, they break down in their work of defence.

It can be readily understood, therefore, that in the nasopharynx we have an anatomical meeting-place which possesses powerful potentialities as a locality for the reception and dissemination of infections. As such it becomes a region of enormous importance, and this importance is greatly emphasised in infancy. Not only are diseased conditions of the nasopharynx a direct menace to ears, larynx, windpipe, lungs, and stomach, but it is now considered practically beyond dispute that a large number of more widely spread infections gain their entrance to the body at this region. Rheumatic fever, chorea or St. Vitus' dance, cerebro-spinal meningitis or spotted fever, and acute anterior polimyelitis or infantile paralysis are some of them.

Pause must be made here to take note of the structure of the tonsils. All four tonsils are masses of what is called lymphoid tissue, rich in cells, which are intended by nature to deal with dangerous micro-organisms and to destroy or render them powerless. If one of the faucial tonsils be examined, it will be seen that it is pitted with little blind tubes, called *crypts*. The pharyngeal tonsil forms a mass arranged in a folded manner, so that it presents ridges and furrows. These ridges also contain small crypts, especially in the parts which are sunk in a furrow. A similar condition obtains in the lingual tonsil. Offending germs are caught up in these crypts, and, provided the invasion is not too strong for the tonsil tissue to deal with, are disposed of. Too many or too powerful germs, however, may effect a lodgment in these tissues, and cause them to become inflamed and damaged, thereby reducing their efficiency.

The period of activity of the ring of tonsils is during infancy and childhood, and at puberty its constituent parts begin to retrogress. It is during their active period that tissues are liable to acute inflammation, and it is usually during childhood that the tonsils are most often affected. But the mere fact of temporary enlargement of the faucial tonsils in infants and children is no indication for their removal. This is, perhaps, a fact that is insufficiently recognized. A child's tonsils are often temporarily enlarged, but this swelling then means that they are exercising their function, not that they are necessarily a menace to their possessor. When, however, they become enlarged from chronic inflammation, and have either grown so big as to encroach upon the space for breathing or have become the seat of septic infection, then it is that the faucial tonsils are a distinct menace and require to be dealt with surgically. A pair of large tonsils may so block up the lower part of the pharynx as seriously to interfere with proper nasal breathing, and the importance of the latter is such as to render their removal imperative. I may add here that the consensus of modern surgical opinion is that the proper method of removal is to dissect the tonsils out whole, and not merely to chop off their prominent parts.

If the tonsils become septic, it means that they are no longer able to exercise their functions; they have succumbed to a microbic invasion too strong for them. If they are not removed they act as strongholds of septic microbes from which infection can be spread. The glands in the neck become inflamed and enlarged, and may suppurate, forming abscesses. The septic material spreads from the tonsil to the pharynx, irritating and inflaming it; it passes into the stomach during sleep, and causes digestive disturbances; or it is inhaled, and affects the windpipe and lungs.

The pharyngeal tonsil may become similarly affected by infection, either through the nose

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