

THE
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INFANTILE TYPE OF MASTOID.

It will be generally admitted that extension of acute suppurative inflammation from the tympanum to the mastoid cells is most commonly found in temporal bones in which the mastoid part approaches most nearly to the pneumatic type. In chronic cases, on the other hand, operation usually reveals a remarkable absence of pneumatic cells and an extreme degree of density of the bone covering the antrum.

In the pneumatic mastoids the frequency with which purulent extension takes place has been theoretically explained by the late Professor Bezold (1). He pointed out that the fewer the dissepiments in the mastoid cavities the less the amount of surface presenting a protective phagocytic mechanism, and hence the tendency to purulent invasion. No doubt, also, when a cavity is large and its neck small it is easy for the outlet to become partially or completely occluded and for the cavity to be shut off without means of exit for its purulent contents, as described by Professor Politzer (2) as occurring in influenza.

The density of the bone met with in cases of chronic suppuration which call for operation has often been attributed, with some show of probability, to a condensing osteitis occasioned by the chronic inflammation started in the mucous membrane. If this is true in any cases, it is not the real explanation in the majority, and Mr. Cheatle's arguments in favour of it being really the persistence of an infantile type are most convincing. He has

produced a large number of specimens in which no evidence of disease was present and in which this condition was well marked, and therefore could not rightly be designated "osteosclerosis." When he brought the matter before the Otological Society in 1907 (3) some members asked for microscopical evidence that the condition was not an inflammatory one, but to the majority the naked-eye appearances seemed quite conclusive. Mr. Cheatle showed some more recent additions to his collection at the last meeting of the Otological Section of the Royal Society of Medicine (4), and these gave still further support to his interesting explanation.

In association with this question, the description of the typical mode of development of the mastoid cavities, as given by Prof. Symington (5), is of considerable interest, though dating as far back as 1886: "After birth the external petro-squamous suture becomes obliterated, this process being generally completed by the end of the first year, if not sooner. About the same time the mastoid process becomes distinct. There is a continuous formation of new bone from the periosteum on the surface, so that the external and inferior walls of the antrum become gradually thicker and thicker. Thus in a new-born child the outer wall is only 1 or 2 mm. thick; by the age of five years it is about 6 mm., while in the girl, aged nine years, it was nearly a centimetre. The new bone is fine cancellous tissue. At about puberty this tissue undergoes a process of partial absorption, by which it is converted into a number of communicating air-cells, which are lined by a delicate mucous membrane."

It will thus be seen that the bone should in the average case be at its least favourable condition for the outward escape of pus or for access by surgical operation at or just before puberty; and in the discussion in the Otological Society referred to, Dr. Dundas Grant (6) stated that in his experience some of the most troublesome cases he had to deal with had been those of boys at that period of life, with extremely thick and dense bone over the antrum.

The study of Mr. Cheatle's specimens would be a work of profit and pleasure to anyone who has dealt with the temporal bone, and he has generously invited all the members of the Otological Section to visit his collection for this purpose. We are quite sure that the invitation is not limited to them, and we strongly counsel our readers to take advantage of it.

REFERENCES.

- (1) BEZOLD.—“Text-book of Otology,” translated by Hollinger, p. 180.
- (2) POLITZER.—“Parisian Society of Laryngology, etc.,” *JOURN. OF LARYNGOL., RHINOL., AND OTOL.*, vol. vi, p. 353.
- (3) *Proc. of Otol. Soc.*, May 4, 1907, vol. viii, p. 50.
- (4) *JOURN. OF LARYNGOL., RHINOL., AND OTOL.*, present number, p. 205.
- (5) *Edin. Med. Journ.*, October, 1886.
- (6) *Proc. Otol. Soc.*, May 4, 1907, vol. viii, p. 51.

REPORT (FOR 1908) OF THE EAR AND THROAT DEPARTMENT OF THE EYE, EAR, AND THROAT INFIRMARY, EDINBURGH.

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WE venture to report on the work done in the above Department during the year 1908, not because we have a large number of cases of outstanding interest to describe, but because we think that such reports on considerable numbers of carefully observed and recorded cases must always be of value. Their value, we believe, will increase, as we hope to make a similar report on the work of the Department year by year.

The percentage of interesting cases from the clinical standpoint is no doubt less than in a special department of a large general hospital, for the majority of the patients come without the recommendation of a medical man, but this perhaps gives a truer picture of the incidence of the various conditions met with in the speciality.

The new cases seen during the year numbered 1194, and of these fifty-three were treated in the wards. The total number grouped below is rather more; this is to be accounted for by the fact that many of the classes overlap.

The notes in some of the more interesting cases are unfortunately somewhat incomplete. It was, however, frequently impossible for us to find time to carry out examinations, which, though adding greatly to the value of a case as a clinical study, do not necessarily afford guidance as to treatment.