

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

As we approach the Millennium I thought it would be interesting to see what our forebears were writing about 100 years ago. The Journal of Laryngology, Rhinology and Otology was then published by Rebman Publishing Company, Limited, 11 Adam Street, Strand, London, W.C.—Editor

BRITISH MEDICAL ASSOCIATION

ANNUAL MEETING, HELD AT PORTSMOUTH, AUGUST 1 TO 4.

SECTION OF LARYNGOLOGY AND OTOTOLOGY

Docent Dr. F. ROHRER (Zurich) read a paper on *The Anomalies of Development of the Auricle in Relation to the Mathematical and Physical Conditions of the Folding of the External Ear*.

The axis of the ear going from the incisura trago-helicina to the tuberculum Darwinii, the real ear-point, gives the coefficient for the powers of secondary folding of the auricle by traction and compression, parallel or vertically, to the axis. Therefore, in the developed external ear, we find the normal model, and exceptionally a series of abnormalities and supernumerary cartilaginous protuberances. We see (1) from the last-mentioned protuberance a crus supernumerarium goes from the superior end of the truncus of the anthelix to the tuberculum Darwinii; (2) from the same origin arises the cymba; (3) the crus helicus goes through the concha to the inferior end of the anthelix; (4) from the antitragus arises the crus helicus ascendens through the concha.

The folding of the auricle can be excessive or abortive. Through an abortive state of folding we find:

(a) The margin of the helix thickened and without excavation (Macacus ear).

(b) The margin thin and largely developed, but only a small turn forwards (Pithecus ear).

(c) The margin thick and large and turned forward excessively, with a point on the horizontal superior part of the helix (Satyr ear).

In the latter case regularly the helix is formed like a band, and grown together with the anthelix; also the scapha is aborted.

(d) The helix is atrophied, and the anthelix very prominently developed (Morel's ear).

The secondary folding of the cartilaginous walls of the auricle is the consequence of a definite law, with mathematical and physical conditions. I have made a scheme, following exactly the prominent cartilaginous walls of the auricle, both for the normal external ear and also for anomalies of the cartilaginous walls, demonstrating the atavism and the teratology of the auricle. This scheme gives four cycloids, and shows all four anastomoses together.

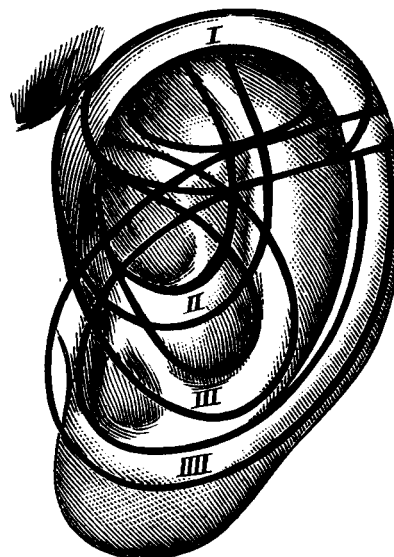
First cycloid includes: Helix horizontalis, tuberculum Darwinii, crus tertium anthelicis, crus inferius anthelicis, helix ascendens.

Second cycloid includes: Crus superius anthelicis, superior trunk of the anthelix, crus anthelicis in concham, crus helicus ascendens.

Third cycloid includes: Crus inferius anthelicis, trunk of the anthelix, superior end of the antitragus, cartilaginous wall from the antitragus in the concha, crus helicus.

Fourth cycloid includes: Crus supernumerarium anthelicis from tuberculum Darwinii to the superior end of the trunk of the anthelix, crus quartum anthelicis in cymbam, tragus, antitragus, cauda helicus.

This scheme allows us to observe a certain number of exactly circumscribed principles for all the numerous anomalies of the auricle, and to give a mathematical and physical explanation of the law of the folding.



Scheme of the four Cycloids, drawn by Dr. F. Rohrer.