Toeplitz (max)

Clinical Contribution to the Study of Aural Syphilis.

BY

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#### CLINICAL CONTRIBUTION TO

# THE STUDY OF AURAL SYPHILIS."

BY MAX TOEPLITZ, M.D.,

AURIST TO THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE; SURGEON TO THE NEW YORK NOSE, EAR, AND THROAT DISPENSARY; AND LARYNGOLOGIST TO THE MONTEFIORE HOME.

Aural syphilis may be manifested during the secondary and tertiary stages, and some rare cases also even of primary induration of the auricle have been reported.

Secondary affections are, as a rule, transmitted from the pharynx and nasopharynx through the Eustachian tubes into the middle ear, or they appear in the external meatus as condylomata or ulcers.

Tertiary syphilis is characterized by chronic inflammation of the periosteum of the labyrinth with subsequent hyperostosis or exostosis of the petrous bone, or of the cavities of the labyrinth, leading to stenosis or even occlusion of the latter.

All cases, however, exhibiting syphilitic affections of the labyrinth are due to hereditary or to acquired syphilis of long standing.

\* Read before the Otological Section of the Pan-American Medical Congress held at Washington, September 5, 1893. The case which I have but recently observed is remarkable by the fact that the labyrinth was affected primarily in the course of a freshly acquired case of syphilis, and that the aural affection began simultaneously with the appearance of roseola.

The patient, a physician, aged forty-one, married, of excellect repute and standing, presented himself at the Aural Department of the New York Ophthalmic and Aural Institute on August 1, 1892, with the only complaint of deafness in the left ear, other symptoms being absent.

Otoscopy revealed moderate congestion of Shrapnell's membrane, which seemed to have disappeared on the following day upon application of two leeches to the tragus. Politzerization, used for diagnostic purposes, did not improve the hearing.

Hearing power, horologium, A. S.  $=\frac{contact}{36}$ ; A. D.  $=\frac{18}{36}$ . On August 2d hearing had improved to A. S.  $=\frac{1}{36}$ .

August 3d .- Hearing worse; leeches to the mastoid.

On the fourth day of observation the right ear, which had been endowed with very acute hearing, had also become affected.

The examination with tuning forks, which did not give any distinct results in the very beginning as to the relation of bone and air conduction and seemed to be leaning more toward a decrease of bone conduction, revealed on August 4th positive Rinné in both ears, but there existed almost as much bone conduction as air conduction, the former having decidedly decreased.

My diagnosis of otitis interna was now fully justifiable, on account of the sudden development of deafness and the great difference of the course of the affection from that of otitis media.

In order to ascertain the ætiology, I questioned the patient about former attacks of syphilis, but with entirely negative result. After repeated inquiries for fresh lesions, the doctor presented the middle finger of his left hand, which bore in the center a round, hard tumor of the size of a large cherry, representing a genuine, primary chance contracted during gynæcological examinations. Dr. Sigmund Lustgarten confirmed my diagnosis of syphilis. At the same time, pharyngeal mucous patches and a beginning roseola were found. Energetic treatment with inunctions of blue ointment were immediately resorted to, and injections of pilocarpine were independently made by the patient.

The further course of the affection ran as follows:

10th.—Patient experienced a tendency to fall upon rising in the morning, and especially when awakened out of sleep.

The walls of the building seemed shaking. He felt once or twice, for a minute, as if he would like to put his hands against the wall, but the phenomenon was not very marked.

16th.—Hearing power, horologium, A. U. =  $\frac{contact}{36}$ . Tuning fork perceived as above.

Ordinary conversation is well understood, but the patient has to pay strict attention.

Whisper: A. D.  $=\frac{8'}{20'}$ ; A. S.  $=\frac{18'}{20'}$ .

Conversation: A. D.  $=\frac{10}{60}$ ; A. S.  $=\frac{6}{60}$ .

17th.—Result of examination with tuning forks unchanged.

Weber's experiment: Tuning fork perceived in either side equally well. Tuning forks, both high and low, are perceived when placed upon right mastoid in A. S., but when right ear is closed, in A. D. R. E. does not hear all the high notes of the piano above g'.

I. E. does not hear all the high notes of the piano above last e; the high notes were perceived as mere taps without the faintest musical sound.

October.—In the beginning of October the hearing of A. D. was almost normal, A. S. somewhat improved.

November 23d.—Whisper: A. S. =  $\frac{15}{20}$ .

Watch: A. S. =  $\frac{4''}{36''}$ .

Conversation:  $=\frac{60}{60}$ .

Rinné: A. S. negative.

Weber's experiment: Diapason vertex not perceived in either ear.

High and low tuning forks equally well perceived. T. F. placed upon right mastoid, best perceived in A. S. Hearing for the watch, whisper, conversation, and tuning fork, and musical hearing were normal.

Mucous patches of the soft palate were not quite healed.

The special features of this case are as follows:

- The affection of the labyrinth occurred after the appearance of the pharyngeal mucous patches and simultaneously with the appearance of roseola.
- 2. The aural lesion took place during the secondary stage without attacking the middle ear.
  - 3. The diagnosis of syphilis was made from the ear.

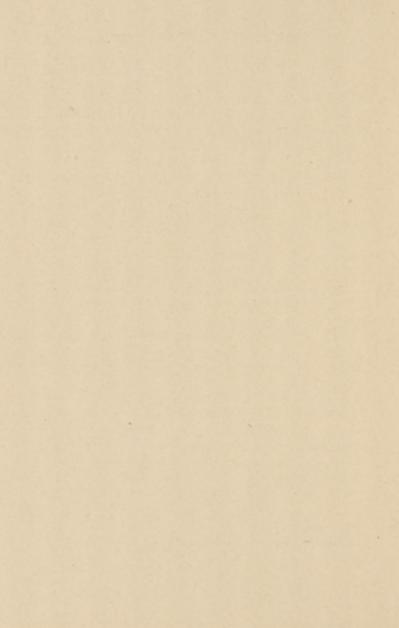
It may be doubted that the affection was located in the labyrinth, and, in its stead, the outer wall of the labyrinth, and more especially the region around the oval window may be preferred for its location. The entire course of the disease, however, contradicts such an assumption, and also the suddenness of the beginning, the well-nigh entire absence of inflammatory signs in the membrana tympani, the mutual relation of both ears during the attack, the relation of bone conduction and the vertiginous attack—all speak in favor of labyrinthine disease.

The pathological changes produced by the syphilitic poison, which entered the lymphatic and blood current of the labyrinth from the pharynx through the aqueduct and the blood-vessels, probably consisted in inflammatory alterations of the membranous portion, the periosteum and the surrounding lymph of the vestibule, and the first turn of the cochlea, with an increase of cellular elements and hæmorrhages. All these changes disappeared after energetic antiluetic treatment.

I have looked over the literature on the subject and have not found a similar case of labyrinthine disease due to secondary syphilis in its early stage without implicating the middle ear. Politzer\* only mentions in general that "in affections of the middle ear due to syphilis the perception of the tuning fork through the skull may be lessened or absent (complication with syphilitic disease of the labyrinth), a fact which essentially supports the diagnosis of specific aural affection when other syphilitic symptoms are present," but he does not mention the early appearance of labyrinthine disease during the secondary stage of syphilis.

123 East Sixty-second Street.

<sup>\*</sup> Politzer. Text-book, first edition (German), p. 693.







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FRANK P. FOSTER, M.D.

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