In a note dated July 17th, the patient writes that she thinks there has been no special change in the conditions of the eye; that she is able to use her eyes as much as she wishes.

Embolism and thrombosis of the central artery are not very rare, cilio-retinal arteries are sufficiently common, and it is to be expected that the two conditions should occasionally coincide. That one observer should have had the fortune to meet two instances of plugging of the arteria centralis in which owing to the presence of a retino-ciliary artery the macular region has been free from haze and central vision preserved, would indicate that others must have occurred. I have made no special search, but do not remember to have seen such cases reported. There have been described instances in which a small area adjacent to the outer side of the disc has been free from haze and a small amount of vision retained.

NOTE.— Since reading the above paper Dr. Knapp has kindly called my attention to two cases reported briefly by him (*Bericht der ophth. Gesell.*, Heid., 1885), and an article by Laqueur (*Arch. f. Augenheilk.*, 18:6, German edition). In both of Knapp's cases the haze involved the macula; vision was of small amount at first; in one case fingers at 6 M., later rising to 1; in the other sinking to 0. In Laqueur's case a band of retina from the outer edge of the disc to the periphery was free from haze; V. at first 3, later 1. Laqueur collected 14 reported cases, including Knapp's. One, Mauthner's (V. 1), was first seen four months after the attack, too late to determine the original condition. In all the others the haze invaded the macular region; the free space next the disc was generally quite small; V. at first from light perception to $\frac{2}{60}$, eventually 0 to $\frac{3}{60}$.

ACUTE SUPPURATION OF THE MIDDLE EAR, FOLLOWED BY CARIES OF THE FALLOPIAN CANAL AND FACIAL PARALYSIS. NO INVOLVEMENT OF THE MASTOID CELLS.¹

BY FREDERICK L. JACK, M.D., BOSTON.

The following case came under my charge in January, 1896, and illustrates a very rare complication in suppurative otitis.

B. C., a man about forty-five years of age, had been having pain in the right ear for nearly six weeks. A discharge from the ear in the first few days gave temporary relief. After that he was fairly comfortable for several days, when pain returned, increasing in severity, and intense the last ten days. The temperature taken by his family physician was normal most of the time. At the end of the fifth week there had been suddenly noticed complete paralysis of the right side of the face.

When he came to me he was much debilitated, and described his sufferings as intense. There was a slight discharge. The membrana tympani was perforated in the posterior lower quadrant, no swelling in the canal. Mastoid tender on firm pressure over the antrum and tip, but without redness or swelling. Hearing fair; tuning fork by bone heard loudest in the affected ear.

It was decided to open the mastoid. The patient entered a private hospital, and was operated upon the following day, January 3, 1896. The drum membrane was first incised. The usual mastoid incision close to the insertion of the auricle showed the mastoid cortex to be absolutely sound and hard. The bone was opened with mallet and chisel, and the cells found perfectly normal. The cell walls were broken down by means of a curette, and an irrigating fluid passed freely from mastoid to ear. No pus or any indications of morbid

products, although the opening was fully one-half inch in depth. As the symptoms pointed so conclusively to pus or pent-up necrosed tissue, it seemed best to extend the opening, if possible, into the Fallopiian canal. This procedure was the more readily determined upon as the function of the facial nerve was evidently destroyed. I, therefore, chiselled deeper, about one-quarter of an inch, and penetrated through into a small pus cavity. A fine probe passed anteriorly towards the ear and posteriorly behind the inner table of the mastoid, showed the bone to be softened in both directions. The opening was carefully enlarged in the directions indicated, and curetted. After irrigating the wound with a 1 to 4,000 solution of bichloride of mercury, the cavity was loosely packed with iodoform gauze, and an antiseptic dressing applied. The pain was promptly terminated by the operation. Temperature 100° F. for twelve hours, when it dropped to normal and never went above 99° F. Detailed notes of the convalescence it is not important to give, sufficient to say that the wound was treated in the usual way, and healed rapidly. The facial paralysis has at the present time disappeared.

Medical Progress.

REPORT ON PROGRESS IN THERAPEUTICS.

BY FRANCIS H. WILLIAMS, M.D.

MARAGLIANO'S ANTITOXIN-SERUM TREATMENT OF PULMONARY CONSUMPTION.

In a leading article of the *New York Medical Journal*, August 15, 1896, the writer states that Dr. Zaeslein, of Genoa, in a paper on "The Serum Treatment of Pulmonary Tuberculosis" remarks that the serum treatment consists essentially in introducing into the human body substances which either of themselves oppose the germ of the disease or lead to the formation of such materials (antitoxins) in the organism. Animals have been treated with tuberculous matter in order to engender large amounts of antitoxins in their blood. For this purpose Maragliano used cultures of the tubercle bacillus, but without living bacilli; Behring, Wernicke, Kuorr and Niemann employed tuberculin; Babes and Broca made use of the bacilli of the tuberculosis of birds, human tuberculin, and dead or attenuated cultures of the human bacillus; and Paquin used "cultures" from tuberculosis. The serum of animals systematically treated with any of these materials annuls the action of tuberculin. Maragliano first announced this with regard to his product, in August, 1895. The writer goes on to say that the use of Maragliano's serum has passed the experimental stage and may safely be received into practical therapeutics, for the dose in antitoxic units is adjustable and calculated for long periods and the use of the remedy rests on adequate clinical observation.

For the inoculation of animals, Maragliano uses the filtrate of cultures that have been heated, as well as that of those that have not been heated. The first are prepared by steaming highly virulent pure cultures at a temperature of 212° F. for three or four days, and then treating them in the same way as is done for producing Koch's tuberculin; the last are filtered through a Chamberland filter at the ordinary temper

¹ Read before the American Otological Society, July, 1896.