

A TYPHOID CARRIER FIFTY-TWO YEARS AFTER RECOVERY.

BY DONALD GREGG, M.D.

(From the Laboratory of Hygiene of the Harvard Medical School.)

BETWEEN July, 1905, and April, 1908, there occurred among the inmates of a small boarding-house in a farming town in Middlesex County, 7 cases of typhoid fever, distributed as follows: August, 1905, Mr. H. and Mr. W. L.; later in the same year, Mr. C. L. and Mr. B.; September, 1906, Mr. G.; November, 1907, Miss P.; March, 1908, Miss M. The fact that practically all of the cases of typhoid fever that occurred in the town during this period were in the same house, came to the knowledge of Dr. Charles Harrington, who requested me to proceed to make an investigation of the matter, and particularly to ascertain whether the same person had been continuously employed preparing the meals and if so, and she had a typhoid history, to secure specimens of her urine and feces for examination.

Inquiry revealed the following facts: The keeper of the boarding-house was born in the town seventy-four years ago. In the autumn of 1856, there was there and in adjacent towns an outbreak of typhoid fever, and she and her mother and sisters were among the victims. Since that time she has been in good health, excepting that she has had at times considerable diarrhea and also occasional sick headaches. She has had no attacks of jaundice and no abdominal pain in the region of the gall bladder, and at no time has she had any fever or illness suggestive of a second attack of typhoid fever.

In 1862 she married, and after a time she began to take a few boarders. Her husband died in 1902 of phthisis. Neither he nor any of the boarders had ever been seized with typhoid fever. After his death she continued to take boarders and lodgers, and did all of the housework and cooking, without employing a servant.

The first two cases of typhoid fever occurred in August, 1905, when no others were known to exist in the neighborhood. When the two later cases occurred, the only other boarders were two elderly ladies, who escaped infection. In 1906, when the fifth case appeared, there were no other cases in the town or neighborhood. Of the other boarders, who included Mr. W. L., who was sick the year before, none was seized. The victim in November, 1907, had boarded in the house three or four months before she was infected. The other three boarders escaped. Her position as school-teacher was given to another, who succeeded her as a boarder also, and in about two months as a typhoid victim.

When the house was visited it was found to be very neat in all particulars. The water supply was good, and as there were no other cases in town, the milk supply could not have been at fault. The only constant factor for the 7 cases was the woman who had prepared all the food of the persons seized.

A specimen of her blood gave a negative Widal test. The urine contained no bacilli. The feces planted on a von Drigalski-Conradi agar plate

yielded many colonies, which had the appearance of typhoid colonies. One of these was transferred to bouillon, and from the pure culture thus obtained transplants were made to various media for further study. The organism proved to be an actively mobile bacillus. It neither coagulates nor acidifies milk; it forms no gas in glucose agar; it does not liquefy gelatin; it forms no indol. With serum from a rabbit immunized to typhoid it gives a positive Widal reaction at 1 to 100, in less than an hour, but with that of another immunized to the colon bacillus it gives no reaction. With the serum of a patient ill with typhoid fever at the Massachusetts General Hospital, it gave a positive Widal reaction at 1 to 50. Thus, it responds to all the tests like the typical typhoid bacillus.

Specimens of urine and feces obtained two weeks after the first were examined gave the same results: the urine was negative and the feces yielded the typhoid organisms in abundance.

Evidence cannot be adduced to prove that the 7 cases had a common origin; but that they did, seems highly probable. Similarly, it cannot be proved that the housekeeper has been excreting typhoid bacilli for fifty-two years, but in the absence of any history of a second infection, one must conclude that she is entitled to the distinction of having established a new record for typhoid carriers.

OBLITERATING ENDARTERITIS: TYPES AND THEIR SURGICAL IMPORTANCE.

BY CHARLES F. PAINTER, M.D.,

Professor of Orthopedic Surgery, Tufts College Medical School, Boston, Mass.

(Concluded from No. 2, p. 40.)

V. ARTERIOSCLEROSIS. SYPHILIS. SENILE GANGRENE. CASES 9 AND 10.

UNDER this head may be grouped cases in which there are obvious lesions of the vessel walls or positive evidences of syphilis in the past history, or senility measured not only by "length of days," but by the hardening of arteries and elevation of blood pressure. Russell,²⁸ in discussing the causes of arteriosclerosis, cites Thoma's views. The latter believed that a hypertonus of the vessels led to a dilatation of the walls, hypertrophy of the muscular coat and thickening of the intima. The thickening of the walls was a necessary consequence of the hypertonus and dilatation, in order that the rate of flow might be kept up and a normal quantity of blood might be steadily delivered. Russell agreed with Thoma as to the method by which the observed arterial changes were brought about, but thought that behind it all there must be some other explanation and this he believed would be found in the occurrence of toxic material circulating in the serum and causing an irritation of the intima and media.

Virchow, in discussing Haga's paper, "Ueber spontane Gangran,"¹⁷ raised the question of the syphilitic origin of the lesions which Haga had