

The Antitoxin Treatment of Diphtheria.

—H. Urquhart Walker, L.R.C.P. and S. Ed., late Medical Officer of Health, Worksop, Notts, writes: I was called in to see M. J., a girl, aged 8, on July 27th. I was told she had been ill for a day or two. She had passed a very restless night, and had been quite delirious. In the morning she had complained of her throat. Her temperature was 102° and her pulse 130. On examination, the tonsils and fauces generally were red and swollen, and on the right tonsil was a patch of membrane, but not very large. On the 28th the breathing was more difficult; the throat presented much the same appearance as on the previous day. On the 29th the breathing was worse, and the fauces on the right and left sides were covered with membrane. In the evening the respiration was very quick. On the 30th the membrane was well formed, even extending well over the soft palate and hanging down into the mouth. Up to this time the child had been treated with iron and chlorate of potash internally, and the constant use of the lime-water spray. It was evident that something more must be done, so I resorted to antitoxin, a supply of which I had procured on reading Dr. Goodhart's case in the *British Medical Journal* of July 28th. Eleven minims of antitoxin were injected into the forearm with strict antiseptic precautions. The temperature at the time of injection was 103° and the pulse 140. Four hours after the injection the child was much improved. There was no fever and the pulse quite quiet. She had a good night, and had to be roused by the nurse to receive her nourishment. On the 31st the same improvement continued, although the membrane was still present, although loosening on the right side. The temperature was normal. During the day much of the membrane came away. The last patch to form had disappeared. All that was to be seen was on the uvula and on the left side. On August 1st all signs of membrane had disappeared. From that date uninterrupted recovery took place. I wish to call attention to the fact that within a few hours after using the antitoxin the temperature was reduced 4°, and remained normal. The constitutional disturbance was at once checked, although the membrane still remained on the uvula and left side of the throat. The new patch on the soft palate at once disappeared, and the appear-

ance generally became more normal. The injection was followed neither by local nor by general disturbance. I should add that I was induced to try the effect of antitoxin in this case by Dr. Norman Walker, of the Edinburgh Royal Infirmary, then on a visit to Worksop.—*British Medical Journal*.

How to Compute the Dose for Children.

—Dr. P. Bolognini contends that the formulæ in general use for computing the doses of remedies suitable for different ages are unsatisfactory. He has computed the average weight of children for each month of the first year and for each year thereafter up to the eighteenth, and upon this basis has formulated the following rules:

1. From birth to end of the first year: let d stand for dose and m for the age of the infant in months. Then the fraction of the adult dose will

be represented by $d = \frac{1}{20 + m}$. 2. For a child from two to eighteen years of age the formula is:

$$d = \frac{2 + a}{25}$$

d = dose, and a = age of the child in years.—*Archives of Pediatrics*

Infection of Fresh Wounds.—Schimmelbusch (*Deut. med. Woch.*, July 12th, 1894) relates his investigations into the taking up of bacteria by fresh bleeding wounds. Amputation of a limb several centimetres above such an infected wound, even after a short time, is unable to ward off the fatal event. He refers to Nissen's experiments with reference to anthrax in this respect. Animals were inoculated by the author, along with Ricker, with pure anthrax cultures or anthrax containing tissue. Anthrax was found by means of cultivation experiments in the internal organs when the animal was killed, even as early as half an hour after the infection. The author further made some eighty experiments with saprophytic micro-organisms. In the shortest possible time these micro-organisms could be demonstrated in the internal organs. Five minutes after the infection of a wound in the thigh of a rabbit with *b. pyocyaneus*, these micro-organisms were found in the organs. Large portions of the organs in question must be taken and cut up into the smallest pieces. The