

to the second case reported by me at the end of August, the boy is now suffering from some paralysis of the soft palate, affecting his speech; his legs are weak, his gait uncertain, and there is an almost entire absence of knee-jerk. It appears therefore that antitoxin serum does not prevent these after-effects of the disease.

NIX.—Dr. T. G. WAKELING (Clacton-on-Sea) sends us the following notes on a fatal case of diphtheria treated by antitoxin:

A. C., a girl, aged 6½, complained of headache and earache on October 1st, and on October 2nd shivered and vomited frequently.

On October 6th the throat became sore, the earache persisted, and there was a slightly offensive discharge from the ears.

I first saw her on October 7th, and found membrane all over both tonsils, uvula, and soft palate. The glands behind the angles of the jaw were enlarged and painful. The temperature taken in the groin was 100.6° F., the pulse 130 and slightly irregular. The urine was scanty and highly albuminous. A mixture was prescribed containing perchloride of iron, quinine sulphate, and chlorate of potassium. The throat was sprayed with carbolic lotion (1 in 60).

On the morning of October 8th the child was weaker, and refused food. The temperature was 100.2°, and the pulse 132. During the afternoon there was slight epistaxis. At 11 P.M. the child's condition was very serious. There was marked "whistling" stridor and slight sucking in of the intercostal spaces. The temperature was 99.2°, and the pulse 132, weaker, and more irregular. At this time 5 c.c. of Aronson's antitoxin (kindly supplied with great promptitude by Messrs. Allen and Hanburys) was injected. Within a few minutes a large wheal surrounded by a zone of hyperæmia appeared at the seat of injection. This disappeared in the course of two or three hours.

On October 9th, at 12.30 A.M. (an hour and a-half after the injection), the temperature was 99°. There was no appreciable difference in the pulse, but the child seemed brighter, and said she felt better. At 1 P.M. the child expectorated some large pieces of membrane. There was much less stridor, and the cough was easier. At 2.30 P.M. the temperature was 98.8°, the pulse 120, steadier, and of better volume. Another injection of 3 c.c. of antitoxin was given; this time no local reaction was produced.

On October 10th the temperature was 97.6°, the pulse 108. Improvement still continued. The child passed three soft, green, offensive motions, and salol gr. v. and bismuth subnit. gr. iij. was given, and repeated in two hours. Raw meat juice was given at intervals, and ʒvi. of brandy ordered to be given every 24 hours. In the course of the afternoon a large quantity of membrane was expectorated. The glands at the angles of the jaw were much less tender, and nearly normal in size. The throat not sore. The temperature in the evening was 99° F. There was no difference in the pulse.

Up to 7 A.M. on October 11th the child continued to improve, taking fluids more freely, but shortly afterwards breathing again became difficult. At 8 A.M. she was drowsy and cyanosed, the intercostal spaces were sucked in. No more membrane could be seen in the mouth. Fluids were regurgitated through the mouth and nose. At 8.30 A.M. tracheotomy was performed. A very small piece of membrane was coughed up upon the trachea being opened. After the operation breathing improved, cyanosis disappeared, and there was general improvement up to 2 P.M., when the pulse began to fail, and the movements of the upper part of the chest ceased. The child was very restless. Four green, foul-smelling motions were passed. Feeding was carried on by nasal tube and nutrient enemata, as everything given by the mouth was rejected through the nose and tracheotomy tube. A hypodermic injection of strychnine gr. ʒv produced no effect. By 10 P.M. the breathing was purely abdominal. The child died suddenly at 11 P.M.

REMARKS.—The treatment of the case was rendered very difficult by the irritability of the child, who bit at the hands of anyone attempting to examine her throat, thus rendering the local treatment (which was continued) very difficult. Food also was constantly refused, and had to be given by

force. No urine could be obtained for examination after the first occasion, as very little was passed.

The President of the French Republic visited the Pasteur Institute on October 23rd and presented Dr. Roux with the Cross of Commander of the Legion of Honour. M. Roux, in thanking the President for the honour, gracefully accorded to Loeffler and Behring their rightful place in the series of discoveries which finally led to that of the serotherapy. After visiting the Institut Pasteur the President went to the Trousseau Hospital, where he donned the regulation blue blouse. His hesitation to do so was vanquished when it was represented to him that his omission would entail danger not only on himself, but on those who came near him. M. Moizard and his two *internes* explained the treatment to the President and inoculated a patient with the serum in his presence.

M. Casimir-Perier presented Madame Gigot, the superintendent of the diphtheria pavilion, with the "epidemic gold medal." Madame Daussoire, head nurse at the Children's Hospital, received the "Palme Académiques;" the same decoration was accorded to M. Martin, *préparateur* at the Pasteur Institute, and M. Chatillon, *interne* of the Children's Hospital.

The Versailles Municipal Council has voted £40 to the Pasteur Institute Antidiphtheria Fund. The subscriptions gathered at Havre will soon reach a sum sufficient to defray the expenses of a Havre service for preparing the serum.

M. Poincaré, Minister of Finance, has, in concert with General Mercier, War Minister, authorised the representatives of the Pasteur Institute to choose among the army horses no longer fit for service those suitable for producing the antidiphtheric serum. Sixteen out of twenty-nine have been chosen. The price will be fixed according to the average price fetched by the remainder.

The Austrian Government has ordered a sufficient supply of Behring's diphtheria antitoxin for its effect to be thoroughly tested in all the public hospitals in Vienna. The remedy is already in use in the St. Anne's Children's Hospital and the Kronprinz Rudolph Hospital.

In Dresden a supply has been obtained for the children's hospital at the public expense. The Municipality has voted 4,000 marks (£200) for the purpose.

In Italy the remedy is also being tried. In accordance with a Ministerial decree, only the serum prepared by Meister, Lucius, and Brunning, of Frankfort, and that prepared by M. Roux are at present admitted into Italy.

ERRATUM.—The name of the gentleman who reported Case XVI in the BRITISH MEDICAL JOURNAL of October 27th, page 933, should have been given as Dr. John T. MacLachlan, of Dornoch, Sutherland, and not as there printed.

## AMBULANCE ARRANGEMENTS FOR RAILWAYS.

THE recent accident to the Scotch express on the morning of October 4th, at Northallerton, leads us to describe what has been done on the North-Eastern Railway system for dealing with the injured under such painful circumstances.

As the result of a public meeting, held in York in 1890, presided over by Lord Wenlock, a director of the North-Eastern Railway, a circular was issued by the general manager, directing that when any of their servants qualify in first aid, and obtain the certificate of the St. John Ambulance Association, the company would pay their class fees. The locomotive superintendent was also empowered to supply the following articles: A stretcher suitable for railway use, with awning and blanket; a supply of splints of various sizes, a dozen triangular bandages, and a simple tourniquet; and that these were to be retained for permanent use in case of accident. The directors in this circular stated that they have agreed to the above rules with the view of encouraging the men in their service to acquire a knowledge of ambulance work, and station masters and others were urged to do their best to promote the formation of classes in ambulance instruction in their districts.

Subsequently, by a circular of January 1st, 1893, the directors further conceded the privilege of granting, free of cost, the bronze medallion of the St. John Ambulance Asso-