

DIPHTHERITIC CROUP, TRACHEOTOMY.

BY ANGUS MCKINNON, M.D., GUELPH.

Case 1. W. B., aged 3 years. It was noticed on the 22nd of June that he had lost his voice completely, though he appeared quite well in all other respects. On the 24th he had slight fever. Temp. 100°, pulse 96, croupy cough and some difficulty in breathing.

On the 26th strangulation seemed so imminent that tracheotomy was indicated as affording the only chance for the child. In this view, Dr. Howitt, who saw the case with me, fully concurred, and after putting the patient under the influence of chloroform a double silver tube was put into the trachea. As soon as the trachea was opened, the violent spasm of cough that always follows the free entrance of air, threw out several pieces of membrane. He soon became quiet, and was able to take abundance of nourishment. On the ninth day it was found that the use of the tube could be dispensed with. By the fifteenth day, the child was convalescent, though he still had a little hoarse cough, and could only speak in a whisper. On the 23rd day the wound was completely healed, and by making a special effort he could speak out loud. He had no cough remaining. In the case of this patient, there was very little external swelling, and only two small patches of membrane could be seen in the pharynx. The preceding week an older child in the same family died strangulated, having suffered a few days from the ordinary symptoms of croup.

Case 2. W. A., aged 6 years. On June 28th this little patient was found in high fever, the two tonsils, uvula, and the greater part of the pharynx covered with thick membrane. He also had a croupy cough, though the respiration was not at all embarrassed. Next day the voice was extinct. He had violent croupy cough, the breathing was labored, the sternum heaving with each effort, the lips and nails were blue. It was decided to operate at once, and with the assistance of Drs. Haskin and Cowan, tracheotomy was performed. During the first five days, he coughed up through the tube

pieces of thick tough membrane occasionally. In this case considerable difficulty was experienced in maintaining easy respiration, notwithstanding the frequent removal of the inner tube and the most thorough cleanliness. It would appear that tough mucus collected in the trachea just below the end of the tube, though both tubes were removed, there was no relief. The difficulty did not come on suddenly as if due to spasm. It was first noticed that the respiratory act was prolonged, soon it became whistling in character, and finally the child was almost asphyxiated. Having removed the tubes, I passed down several feathers, a camel's hair brush, etc., but though cough was caused, his condition was only aggravated. Having no better instrument at hand, I used a long hairpin suitably curved, which I passed through the wound, at least an inch further down the trachea than the tube extended. By this means I fortunately dislodged a large mass of pasty, mucopurulent matter, and the cough caused by the instrument expelled it through the wound. Immediate relief followed, and after the tubes were reintroduced the respiration again became easy, free, and regular. Several attacks of a similar character occurred, but relief was obtained each time by persevering in like measures.

The membrane disappeared from the tonsils about the 6th day, but not from the uvula till the 9th day. About the same time the external swelling subsided. On the 8th day, and before the membrane had wholly disappeared from the uvula, it was noticed that he had difficulty in swallowing, due no doubt to paralysis of the muscles concerned in deglutition. Much of anything he tried to swallow passed into the trachea and was coughed out through the wound. The pulse became irregular. He had occasional vomiting. He became gradually weaker, and died on the 15th day. The use of the tube was discontinued on the 9th day, and there was no difficulty in breathing. There was no pneumonia, and only slight bronchial catarrh. Though this little patient died from exhaustion, yet by saving him from immediate strangulation the operation was successful. It is well known that death occurs occasionally in diphtheria, even when there is