RAPID DEATH FROM SCARLET FEVER ACCOMPANIED BY ACUTE GASTRO-INTESTINAL SYMPTOMS.

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THE two following cases, which came under our notice last summer, throw considerable light upon the four cases recorded in the *BRITISH MEDICAL JOURNAL* of April 9th by Drs. W. G. Smith and A. R. Parsons.

CASE I.—P. B., aged 7 years, was seized quite suddenly during the night of May 30th, 1891, with vomiting, purging, intense abdominal pain, and muscular cramps. He had previously been in good health except for an attack of bronchitis some eighteen months earlier. We first saw him at 2.30 P.M. next day. He was then suffering severe abdominal pain, accompanied by convulsive movements of nearly all the voluntary muscles. The fingers were drawn into the palms of the hands and the arms, and the legs were flexed and rigid. He vomited all that was given him, and was passing frequent involuntary motions of a yellowish colour mixed with mucus. The temperature was 105° F., the pulse very quick and feeble. He rapidly became unconscious, and died comatose at 3.15. Post-mortem staining and rigor mortis became marked within a few minutes of his death.

As the symptoms were suggestive of irritant poisoning the coroner was communicated with, and a *post-mortem* examination was ordered. The necropsy made twenty hours after death showed the following points, careful notes of which were taken at the time. "Great prominence and injection of Peyer's patches, increasing in severity as the ileo-cæcal valve is approached, but there is no ulceration. Slight enlargement of the mesenteric glands, both conditions much resembling what is found in early typhoid. The stomach, which contains about an ounce of bile-stained fluid, shows no signs of the action of any irritant poison. The kidneys are natural in appearance, the liver slightly mottled, the spleen large and firm. The right lung shows points of collapse and some compensatory emphysema, and is adherent to chest wall; left lung healthy, heart natural. The vessels on the surface of the brain are engorged with dark blood, and the brain itself is so soft as to break down on the slightest touch." On June 1st another child in the same family developed typical scarlet fever, which ran a normal course.

CASE II.—E. W., aged 5 years, was seized at 6 P.M. on June 19th with great abdominal pain and collapse, followed by vomiting and purging. Two other children in the same family were at the time suffering from well-marked scarlet fever. After a short time the urgent symptoms subsided and the child passed a fairly good night. Early next morning, however, the symptoms returned, and were accompanied by muscular spasms, wandering, and partial unconsciousness. She was not seen till 8 P.M., when her condition was as follows: There was complete unconsciousness, accompanied by muscular rigidity. The fingers were drawn into the palms of the hands, the teeth clenched, and the sphincters relaxed. After some few minutes the convulsion passed off and a little milk and brandy was given, but was immediately vomited. The motions passed had a very foetid odour. The pulse was almost imperceptible and quite uncountable. The temperature was 106.0°. A very severe convulsion followed a few minutes later. Tepid sponging was begun and persevered with for some time, but without any good effect. Cold sponging was then tried, but despite this the temperature still rose, reaching 109.9° at 10 P.M. The convulsions, which occurred at frequent intervals, became more violent than ever, and death took place at 10.30 P.M.

We are inclined to attribute both these cases to the poison of scarlet fever, and to explain the severity of the symptoms—especially those referable to the gastro-intestinal tract—by supposing that in each case a very large dose of the poison had been imbibed, possibly through the medium of tainted milk. Milk at a summer temperature would form a suitable

cultivation medium for the scarlatinal microbe, the products of whose action, when introduced into the stomach, etc., in large doses, might produce such symptoms as the above.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A SIMPLE AND ECONOMICAL FORM OF TRACHEOTOMY TUBE.

A VERY efficient tracheotomy tube, for use after the track has become fairly free by wearing a silver tube for two or three days, can be easily made with a piece of india-rubber drainage tube in the following manner: An oval piece is cut out of one side of the tube, the shorter diameter of the oval reaching about half way round the tube. Two longitudinal cuts are then made, one on the same side as the oval opening and the other opposite to it, reaching from the end of the tube to a point about a quarter of an inch from the opening; this distance will, however, vary with the depth of the wound that the tube is to be inserted into. In the lateral flaps made by these longitudinal incisions holes are cut for tapes. The piece of tube beyond the oval opening is the part which is put into the trachea, and it is advisable that it should be made rather longer than the vertical part of a metal tracheotomy tube usually is. In inserting the tube the opening must be turned towards the back of the trachea, so that it may take the place of the window which is found at the

angle of many metal tracheotomy tubes; the part below the window then lies in the trachea without any tilting. I have lately used tubes made in this way in two cases of tracheotomy for diphtheria, in which the metal tubes were causing irritation, so that the mucus and membrane coming up were increasing, and keeping the patients almost constantly coughing; the metal tubes were very often blocked with mucus, and required frequent changing, to the very serious annoyance of the patients, who were able to get only very broken sleep. All these symptoms disappeared at once on inserting rubber tubes made in the above manner, and sufficiently long to extend about half an inch below the lowest point reached by the metal tubes, where ulceration had probably been caused; and the patients rapidly got well.

The tube seems to me to have the following advantages:

1. It fits the trachea well, having an angle instead of a curve, as Baker's tubes have, and tilting of the lower end cannot occur to cause pressure and ulceration.