

ACUTE INFANTILE PERITONITIS.<sup>1</sup>

BY T. M. ROTCH, M. D.

PERITONITIS may occur in the infant and child as it does in the adult.<sup>2</sup> As an idiopathic disease it is so rare in infants and children that the cases where it has been studied post mortem have occurred almost exclusively during uterine life, and many of these have presented a history of syphilitic infection. Dr. West<sup>3</sup> in his large experience has seen but one case, an infant seven months old. The septic form of peritonitis is not infrequently met with in the early weeks of life, especially under conditions unfavorable to health, but it is exceedingly rare after the first six weeks. At the Hospice des Enfants Trouvés it was found<sup>4</sup> in six per cent. of the deaths which occurred in one year; there were thirty-nine cases, and though the patients consisted of children of all ages, no case over the age of ten weeks was attacked by it, while thirty-five of the thirty-nine cases were less than two weeks old.

This septic form is supposed to start from the umbilicus,<sup>5</sup> and is a phlebitis umbilicalis, caused either by the diseased umbilicus itself or by puerperal disease in the mother. Infants and children<sup>6</sup> of any age may be attacked by acute peritonitis, following burns, traumatic causes, tuberculosis and infectious diseases, syphilis, the exanthemata, especially scarlet fever, and rheumatism.

Where no cause can be found for the disease we speak of idiopathic or the rheumatic form, opinion being divided as to whether a true idiopathic peritonitis really exists, some maintaining that in the cases reported as such the original lesion has been overlooked, while others consider that an inflammation of the peritonæum may occur of itself, as it does in the pleura, pericardium, etc.

Acute peritonitis in any of the above forms is exceedingly rare between the ages of six weeks and two years. Where some direct cause, such as one of those just enumerated, cannot be found the diagnosis is at times difficult from a want of prominence of some of the symptoms, such as the tympanites, which may be but slightly marked, and it is therefore of importance for the purpose of advancing our knowledge of the differential diagnosis and ætiology of the disease to record those cases where the clinical history has been carefully taken, and where the autopsy has been made by a competent observer, especially as in nurslings the prognosis is so unfavorable, the disease usually proving fatal in a few days.

It is with this view that I have thought it worth while to present to your notice the history of three cases of acute infantile peritonitis.

CASE I. A male infant, two months of age, was seen July 5, 1875, by Dr. Minot, who has kindly allowed me to make use of his notes. Dr. Gordon, of Quincy, took care of the case and performed the autopsy. The infant was healthy and breast fed, the mother a primipara with plenty of milk. For several weeks the infant gained a pound a week. June 28th he began to have dyspeptic symptoms, represented by pain, vomiting, and passages of undigested milk. The

symptoms were not urgent, but the infant began to fail in weight and strength, and soon refused to nurse. Various diets were tried, and each was at first eagerly taken but soon rejected by the infant, which was almost moribund when seen by Dr. Minot. Some tenderness of the abdomen was found but no great tympanites, and the vomiting was not a prominent symptom. Cyanosis was marked throughout the attack, and there was some œdema of the hands and feet. Pulse 100; temperature (per rectum) 101° F. There was some suppression of urine. Death took place July 7th. At the autopsy, which was made by Dr. Gordon, the peritonæum was found injected, and there was an effusion of serum and a slight amount of fibrinous exudation; there were no adhesions. The kidneys were much enlarged for an infant of two months, but no disease was detected.

The interesting features of this case, supposing that it was a case of idiopathic peritonitis, was the age, two months, and the want of prominence of the vomiting and tympanites.

CASE II., which is typical of the idiopathic form, occurred under the care of Dr. C. P. Putnam in an infant six months of age at the Infant Asylum, June 17, 1874. The infant was vigorous and well nourished up to the time of the attack, the symptoms of which were continuous vomiting, slight distention of the abdomen, and great tenderness, running a rapid course and terminating fatally in thirty-six hours.

Dr. Fitz, to whom I am indebted for a record of the autopsy, found no lesions of any importance excepting reddening of the peritoneal surface of the intestine and a small quantity of pus in the peritoneal cavity. The case is important from having passed through the hands of an observer like Dr. Fitz without any lesion such as could constitute a source for the peritonitis being found.

CASE III. occurred at the West End Nursery under the care of Dr. Haven, who has allowed me to make use of his careful record of the case.

F. B., a male infant nineteen months old, was first seen at the West End Dispensary by Dr. Haven, March 15, 1882. The infant had a good family history, and weighed 3400 grammes at birth; he was breast fed until the age of six weeks, when he was weaned and put on Mellin's food and cow's milk, and at three months he was receiving mixed table diet. When seen, March 15th, he was well nourished and vigorous, and came to the dispensary to be vaccinated; his weight was 9340 grammes.

April 12th I first saw the infant at the dispensary, he being brought to me for cough and restlessness, which had begun two days previously, and having been up to that time strong and well. His appetite was poor; he was fretful, and his food seemed to distress him; his bowels had not been moved for two days; he was feverish and thirsty. A physical examination showed his flesh to be firm and his color and development good; he had eight teeth (the incisors); his tongue was slightly coated; both tonsils were enlarged and reddened; nothing abnormal was discovered anywhere on palpation or percussion. Auscultation gave coarse mucous and sonorous râles in both backs.

The patient was next seen by Dr. Haven, June 3d, when the report was bad cough for two weeks and poor appetite.

June 10th he was reported as improved, and eating and sleeping better.

<sup>1</sup> Read before the Boston Society for Medical Observation, December 18, 1882.

<sup>2</sup> Vogel. Diseases of Children.

<sup>3</sup> West. Diseases of Children.

<sup>4</sup> M. Thore. Archives gén. de Méd., August and September, 1846.

<sup>5</sup> Vogel.

<sup>6</sup> Rehn. Gerhardt. Handb. der Kinderkrank., vol. iv.

June 19th the dejections were green and slimy; the gums were slightly swollen over the canines; restless. Put on milk diet again.

June 23d. Bowels had been moved more frequently for some days; four movements on the previous day, green, slimy, and with a little blood. This state of affairs, with occasional remissions, continued until June 30th, when he was found to be decidedly better, having two movements daily; he still had some cough, and it was found that he lived in a damp basement.

November 14th. He appeared to be well.

November 15th. He vomited twice.

November 16th. He had six movements, green, with blood.

November 19th. He had five movements early in the day, none later; has vomited more or less since the 16th and had cough.

November 20th. Weight 8092 grammes, a loss of 125 grammes since March 15th; appetite poor; face pale; nares acting slightly. Respirations 36; temperature 39.4° C; grunting expiration. Nothing abnormal was found in the chest excepting a few fine râles over right apex. Nothing found in throat. Admitted to nursery. Was quiet during the day, and took milk well. The respiration gradually increased in frequency during the day and the abdomen became distended. At six p. m. temperature 40.3° C; respirations 74. Abdomen very much distended. One dejection, dark, clayey, green, homogeneous, large, good consistency, offensive. At eight p. m. face pinched and pale; expression anxious; respiration very quick; expiration grunting; abdomen very much distended and tense, tender all over. Percussion showed nothing abnormal. On auscultation respiration rather weaker over left lower back. Did not sleep until three a. m.

November 21st, 1.55 a. m. Temperature 38.6° C. 5.10 a. m. Temperature 38.6° C. Slept till five a. m.; since then restless; abdomen less distended; respirations 74. Nothing abnormal found in lungs; abdomen very tender all over; restless all day. 3.30 p. m. Two dejections during the day; urine scanty. Temperature 41.2° C. 5.20 p. m. A pack at 90° F. was given, in which he was kept until 6.40. At 5.30 the temperature was 40.4° C, and at 6.50 40° C; respirations 66. 9.55 p. m. Temperature 40.8° C; respiration 74; more restless. Ten p. m. Pack at 90° F. Eleven p. m. Temperature 40° C. Pupils noticed to be contracted; not contracted before. Died at 11.10 p. m. At instant of death the pupils dilated widely; death very quiet.

November 22d. Autopsy at eleven a. m., by Dr. Whitney.

The loops of intestine were found bound together by a yellow fibrinous exudation and were easily separated; there was no reddening on the surface of the intestine.

The heart was normal, and there was a small amount of fluid in the pericardium.

The lungs were normal, excepting that both lower lobes were dark reddish in color, did not crepitate, and that only a small amount of air could be squeezed from them. Both lower lobes, but especially on the right side, were bound down by a firm fibrous band.

The spleen was enlarged, was covered on the surface with a fibrinous exudation, and the follicles were very much enlarged, distinct, and rather firm.

The kidneys were pale and normal in size.

The liver was covered with flakes of recent lymph,

and on section showed the acini red and their periphery yellowish and opaque.

The mesenteric lymph glands were enlarged, varying from the size of a pea to that of a small cherry; the smaller were all translucent on section, and presented only evidences of hyperplasia. A small pocket of the larger glands were found to have become cheesy in the central portions, and in two of these the process had extended through the substance of the gland, broken through its peritoneal covering, and about these points of rupture there was a small zone of reactive inflammation.

**PATHOLOGICAL DIAGNOSIS.** — *Acute general peritonitis*, which, from an absence of any other source, must be considered to have been caused by the rupture of the above spoken of cheesy degenerated mesenteric glands; *follicular hypertrophy of the spleen*, *atelectasis of the lungs*, *chronic fibrinous pleurisy*.

In this case the high temperature and distended, tender abdomen rendered the diagnosis comparatively plain, but the case is doubly rare and important on account of the cause,<sup>1</sup> when we consider that there is seldom any noticeable enlargement of the mesenteric glands under the age of three years, and that these glands seldom soften, but either retrograde or harden from calcification.

## ARSENICAL PARALYSIS.<sup>2</sup>

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HAVING presented this case as fully as possible, I will give in a few words all the information I have been able to obtain as to paralysis and other nervous symptoms shown by the other victims of the poisoning.

Six others altogether, besides our patient, were poisoned. One of these was a little boy, four years old, I. S., to whom a piece of the fatal pie was given as a reward for going on an errand. He died within ten hours, and I have no knowledge of observations as to paralysis or other manifestations of involvement of the nervous system. Probably his death occurred too soon to allow any such observation to be made.

M. S., a sister of the little boy, ate a very little of the pie, and suffered to some extent, but not seriously.

C. H. G., the father of the patient, died November 8th, six days after the ingestion of the arsenic. Besides severe gastro-intestinal symptoms he suffered with pain in his head, back, and limbs, was delirious for some hours, and was almost completely paralyzed.

Mrs. G., mother of the patient, ate a little of the pie November 2d, and had an attack of vomiting. On the 4th she ate a piece of custard, which was also found to contain arsenic, and was attacked with vomiting. A few days later weakness of the legs, with aching and numbness, came on, and the right foot and leg became swollen and inflamed. She gradually recovered.

Mrs. V. ate a mouthful or two of the pie and custard containing the arsenic, and suffered with vomiting, etc., for three days. She has since had paresis and paræsthesia of the legs.

<sup>1</sup> West. The Wasting Diseases of Children.

<sup>2</sup> Concluded from page 248.