

NOTE ON A CASE OF CEREBRO-SPINAL FEVER OCCURRING IN A CHILD THE SUBJECT OF LYMPHATISM.

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On March 11 a girl, aged five years, was brought to the Adelaide Hospital about five o'clock in the afternoon, and the following history was obtained:—She had been in apparently perfect health until two hours previously, when she was suddenly seized with an attack of vomiting and diarrhœa. It was supposed by her mother that these symptoms were due to some dates which she had purchased and eaten on her way home from school. Convulsions setting in, and being unable to rouse the child, her mother brought her over to the hospital.

On admission it was found that her pulse was rather small and weak. There was some slight spasm of the arms and legs. A few purpuric spots were noted on the buttocks, legs and fore-arms. She resented examination, drawing away her body from the stethoscope when it was applied. I saw her about nine o'clock in the evening, and she was then unconscious, but resisted attempts to examine her. Her temperature was 101.2°. There was little to be made out on physical examination. The head was very slightly retracted as she lay on the pillow, but there was no stiffness of the muscles of the neck. Kernig's sign was absent, the knee-jerks could not be elicited, and, indeed, were it not that cerebro-spinal fever is present as a slight epidemic I would not have even suspected its presence.

The child vomited once after admission, but the vomit was very small in quantity, and consisted of some black coffee she had been given a short time previously. The attacks of convulsions which had occurred at intervals after her admission increased in frequency and severity, and the child died at 2 a.m.,

just eleven hours after the appearance of the first symptom. Some time before death the retraction of the head became more pronounced. The same evening we made a *post-mortem* examination. The child was well nourished and evidently well cared for. The inguinal and axillary glands were palpable, but only slightly enlarged. There were several purpuric spots and patches of irregular size and outline scattered over the body, the largest being about the size of a sixpenny piece. These spots, as before mentioned, were most numerous on the buttocks, thighs, legs, and arms, but a few were to be seen on the trunk. On opening the thorax the thymus was seen to be considerably enlarged and bulky. The lungs were healthy. In the abdomen the mesenteric glands were found to be enlarged, and scattered over the peritoneal surface of the intestines were numerous punctiform purpuric spots. The spleen was larger than normal, and on section the Malpighian bodies stood out as small distinct whitish granulations. On opening the intestines both Peyer's patches and the solitary follicles were found to be hypertrophied, the appearance resembling that seen in the early stage of enteric fever. The meninges of the brain appeared normal, except a small area over the cerebellum which appeared cloudy and rather opaque. The brain was to all appearance normal. The cord was not examined.

The examination of the cerebro-spinal fluid was undertaken by Dr. Harvey, and he has kindly furnished me with the following report:

About a test tube full of fluid was drawn off by lumbar puncture some eight hours after death and divided into two sterilised test tubes. The fluid was of a turbid, almost milky, appearance. One test tube was allowed to stand for twenty-four hours, when its contents were found to have settled into two layers—an upper layer of clear fluid and a white deposit—which microscopic examination proved to be almost entirely cellular. From this deposit smears were made and stained by Leischmann's method.

In such preparations numerous cocci answering to the descriptions of Weichselbaum's meningococcus were present. Occurring in pairs, and occasionally in fours, they exhibited much difference

in size, and were often intracellular, though for the most part lying apart from the cells. These latter were for the most part either multinuclear leucocytes or large mononuclear cells. Lymphocytes were few. From the second test tube cultures were made. The organisms which appeared to be in pure culture grew well on hydrocele agar and glycerine agar (less well) forming white opaque viscid colonies. Sub-cultures continued to grow well for about a week, when the organism somewhat suddenly ceased to grow. The cocci stained well by the usual stains, but were completely negative to Gram's method.

The case was thus proved to be one of cerebro-spinal fever occurring in a child who was the subject of lymphatism- the *post-mortem* appearance being very typical of the latter condition.

That death would have ensued from the meningitis in any case is extremely probable, but I think the rapidly fatal issue may be accounted for by the fact that the child was the subject of lymphatism. As yet we know little or nothing about the pathology of this obscure condition. Though a large number of cases have been recorded and the condition is described in some of the text-books we are unable to satisfactorily explain the connection between lymphatism and sudden death. The fact is one that is now beyond all question.

In a very large number of the cases sudden death has followed some trivial circumstance, such as sudden immersion in cold water and the classical case in Germany after an injection with anti-diphtheritic serum, or a simple attack of convulsions conditions which in healthy children would not be followed by any serious results.

I am inclined to think that it may also be a determining factor in causing a rapidly fatal issue to some of the acute diseases.

The present case is an instance in point, and I have

recorded a case of pneumonia in a boy aged six years, the subject of lymphatism, who died twenty-four hours after the onset of symptoms.

For some reason, which is as yet obscure, it would seem that the pathological conditions associated with lymphatism indicate a diminished vital resistance and special liability to sudden cardiac paralysis.

DR. HARVEY explained the microscopic slides.

DR. KIRKPATRICK asked if a diagnosis of the condition of lymphatism had been made before death, and if there was any way by which it could be recognised. The condition had been found in a number of cases in which sudden death had occurred during the administration of anæsthetics for operations, and the diagnosis of lymphatism before death was a matter of practical importance.

PROFESSOR WHITE thought it possible that the condition of lymphatism had a good deal to say to the question of infection. Most of the cases that died of cerebro-spinal meningitis had had trouble with adenoids, and a good deal of lymphoid tissue at the back of the nose, and it was possible that they became infected in that way. The organisms existed in some healthy people. At the back of the nose there were many kinds of diplococci, many difficult to distinguish from the organism in cerebro-spinal fever. The only case in which he saw a *post-mortem* in the present outbreak had the condition which Dr. Peacocke called lymphatism.

DR. PEACOCKE, in reply, said the idea of lymphatism did not occur to him during the patient's life. The symptoms before death were, unfortunately, practically nil, and the only physical sign likely to be detected would be the presence of a very large thymus showing dulness.