ACUTE RHEUMATISM AND SEPSIS.

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THERE are many considerations which suggest that acute rheumatism, with its varied manifestations, such as arthritis, endocarditis and pericarditis, and pleurisy, is a microbic disease, and of late a micrococcus has been repeatedly isolated which some bacteriologists regard as a distinct and specific micro-organism. The question, however, appears to be still sufficiently unsettled to make it interesting to consider certain clinical reasons for thinking that the common septic bacteria are capable of setting up acute rheumatism in a predisposed subject.

An ordinary infectious follicular tonsillitis, which is said to be usually due to the streptococcus pyogenes, is apparently the commonest exciting cause of an attack of acute rheumatism, though no doubt a predisposition strong or weak must also exist, and symptoms very closely resembling or identical with rheumatic fever occur, with scarlet fever and the scarlatinal sore throat. That other local septic processes may precede and apparently cause attacks of acute rheumatism is not so generally recognized. In the following cases (I, II, and IV), an acute local septic process appears to have set up acute rheumatic symptoms. In Case III the arthritis caused was more like what is usually considered a septic arthritis, but the patient was a rheumatic subject. In Case IV there was no history of acute rheumatism in any blood relation, but the joint pains yielded to salicylates, and the patient had an appearance suggesting the rheumatic predisposition.

In acute rheumatism, as in other diseases, predisposing as well as exciting causes are recognized, and there is evidence pointing to the alimentary canal as the seat of the secondary or predisposing cause. This source is suggested by the great effects which constipation and changes in diet have on the symptoms of acute rheumatism, and by the therapeutic value of calomel and salicylates, which both have antiseptic action. The most obvious hypothesis, then, is that the septic products derived from the septic focus are much assisted in producing an attack of acute rheumatism by a poison which is absorbed from the intestinal canal. If the predisposition is strong, the exciting cause may only need to be slight, and, on the contrary, if the predisposing cause is slight or the exciting cause is very strong, similar symptoms may nevertheless be evoked; but under these circumstances they may more resemble septicaemic processes usually recognized as such and pyaemia. It appears to be the predisposing element in the cause which is affected by salicylates, as they, generally speaking, act best in classical cases of acute rheumatism, where there is often a strong personal and family predisposition. These remarks are largely speculative, but the cases seem to suggest a view of the connexion between septic and rheumatic arthritis which is not commonly taken.

CASE I.—R. M. was a little girl, aged 4, amongst whose near relatives one at least had had several attacks of acute rheumatism. Her illness began in August, 1897, with an acute axillary abscess on the right side, the result of a small septic wound on the hand. After the axillary abscess had been opened, it was noted on September 7th that both knees were swollen and painful, there being fluid in the joints, and the right elbow-joint was also painful. An abscess had developed on the back of the left hand; the temperature was 104°, and there were two rigors in the afternoon. The abscess on the left hand was opened and thick pus escaped. On September 8th the knees were much less swollen. On September 14th the temperature was lower; there was no swelling of or effusion into any joint, but there was resistance to full extension of the left knee, and on September 30th a small abscess was opened in the left popliteal space; at this date the temperature had been normal for some days. Recovery was rapid and complete. In this case obvious septic foci induced a simple synovitis, which quickly subsided, the patient having a decided family history of rheumatic fever.

CASE II.—C., a girl of 12, belongs to a family with a tendency to acute rheumatism, her father having had rheumatic fever twice, and an elder sister chorea twice. Her illness began with high temperature and an erysipelatosus inflammation of the side of the nose, which spread on to the cheek. A small subcutaneous abscess formed in the cheek, and was incised. Within a few days pleurisy, with effusion on the left side, developed, and then an abscess in the anterior part of the right labium majus, which was incised. The pleurisy cleared up and the child recovered completely.

Here the rheumatic tendency seems to have been awakened by the septic inflammations to the extent of producing pleurisy and serous effusion.

CASE III.—S. S., aged 22, was the wife of a labourer, who had had rheumatic fever some years before, and had been delivered of her second child four weeks before I saw her. She had not got on well since her confinement,

but had not been attended by a doctor. On December 28th, 1899, I first saw her, and found that she had a bad headache and severe pains in the legs, her pulse was 130, and her temperature was 104.5°; two days before she had had a shivering fit and general pains. On December 29th there was effusion into both knee-joints, and the right knee was the most affected. On December 30th she was still suckling her baby, although there was not much milk in the breasts. The apex beat of the heart was felt in the nipple line, and a soft systolic murmur was heard at the same spot and in the axilla. On January 1st a shivering fit occurred, and the temperature, which had been lower, again rose to 104°. On January 2nd she was perspiring very freely, and the hypogastrium was tender on pressure, but examination per vaginam revealed no induration around nor fixation of the uterus. There was a reddish offensive discharge. By January 26th the temperature had gradually fallen nearly to normal, but was still generally raised a little in the evening; there had been moist bronchitic sounds at the base of the left lung. On January 31st the temperature again rose to 103°, and the pulse to 120; while the swelling of the knees, which had subsided a little, became greater again. On February 12th the right knee was cool, and slight movement was possible, but the left was very tense and tender; an exploring needle drew off a few drops of blood-stained serum. After this the tenderness and swelling of the knees got less. On May 27th she could walk about the house, the right knee could be flexed to a right angle, but very little movement was possible in the left knee-joint.

This was a case of arthritis in a patient with a tendency to acute rheumatism, the exciting cause being probably puerperal sepsis.

CASE IV was that of a married woman, Mrs. P., aged about 25, who had never had rheumatism before, nor could any family history of rheumatic fever be obtained, but her complexion was bright, with injected venules on the cheeks and dark brown hair, a combination which seems to be often associated with a predisposition to acute rheumatism. It is worth remarking that her husband and several of his relations had had rheumatic fever severely, though he had not had an attack recently. She was delivered of twins in August, 1899, not being attended by a medical man. Since then she had been up and doing some house work. Five weeks after confinement on September 21st she had several rigors, and pains all over her. I saw her first on September 24th. She then had very severe general pains, and was unable to move her legs on account of pain in the joints, and her right shoulder also was very painful. The hypogastrium was very tender on pressure; the pulse 120 and temperature 103°. She was given 20 gr. of sodium salicylate in solution every two hours, but this was vomited, and she had several more rigors. On September 26th she began to take salicin in 20-grain doses every two hours, and on September 30th the temperature was 99° 100°, and there was considerable improvement in the pain. On September 31st the temperature had again risen to 101°-103°, and there was delirium with hallucinations. Salicin was stopped. On October 2nd 15 gr. of sodium salicylate was again given every two hours in powders, and was retained. By October 5th the pains were much better and the temperature normal; there was no heart murmur. On October 16th there was only slight tenderness of the joints, the abdomen was not at all tender. Recovery was complete.

This was a case of acute rheumatism or multiple septic arthritis, differing from ordinary acute rheumatism in the rigors, and probably elicited by a local septic condition connected with parturition.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

IODIDE RASH.

ON April 14th, 1903, I was called in hurriedly to see a patient, E. W., aged 12, who was said to be dying. I found her reclining on a sofa and conscious. Her mother said the girl had just had a fit. What immediately called attention was the condition of the girl's face. The forehead, cheeks, lips, and chin were covered with a rash. Papules, hard and shotty, were felt; some of these were becoming vesicles, and some were fully-developed vesicles, loculated and umbilicated; some were becoming purulent, and were surrounded by a narrow zone of inflammatory redness. The pustules were most abundant under the eyelids, where they were confluent, and on the forehead. There was one vesicle as large as a split pea in the right wrist, and five or six papules on the back of the right wrist and hand. There were no other spots anywhere on the body or in the mouth. The rash had exactly the appearance of that of small-pox. The temperature was 101.4°. There had been no headache or backache, and the child had only been confined to the house for three or four days.

On inquiry, I was given the following history: The child suffers from leucocythaemia (there is also heart disease present), and on March 30th had visited a hospital in Liverpool and received a prescription which I found advised 3-gr. doses of potassium iodide three times daily. The next day some