

# STAPHYLOCOCCUS SEPTICEMIA WITH SEPTIC ARTHRITIS OF THE KNEE TREATED WITH SULFAPYRIDINE

## *Report of a Case*

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The following case is reported because of the very favorable result obtained from the oral use of sulfapyridine and multiple aspirations and irrigations of a septic joint.

### REPORT OF A CASE

A boy, 14 years of age, came to the Clinic on May 3, 1939, complaining of pain in the left knee which had begun 5 days previously. The patient was an active boy. Shortly before the onset of the pain there had been definite trauma to the knee in the form of a bruise. This had not been sufficient to disable him. Following the injury an acute febrile reaction occurred and pain developed in the left knee. Treatment prior to admission to the hospital had been palliative.

The family and personal histories revealed nothing of importance. He had had the usual childhood diseases but no serious illnesses. During the past year he had had recurrent attacks of tonsillitis.

*Physical examination* showed a patient obviously acutely ill. The temperature was 103° F., the pulse rate 122 per minute, and the respirations 20. The tonsils were moderately enlarged, cryptic, and injected. Examination of the chest, heart, and abdomen revealed no abnormal findings. The left knee was maintained in a position of flexion and any slight movement caused excruciating pain. There was very definite evidence of peri-articular thickening and acute tenderness was present over the medial aspect of the joint adjacent to the joint line. The synovial reaction was marked as shown by an increase in the joint fluid and distention of the quadriceps pouch.

Roentgen examination of the bones showed no pathological change. There was rather marked widening of the joint space due to the distention of the joint with fluid.

*Laboratory Findings:* Examination of the blood showed 3,770,000 red cells with 68 per cent hemoglobin. There were 8,050 white cells with a differential count of 67 per cent polymorphonuclear cells, 28 per cent lymphocytes, 2 per cent monocytes, and 2 per cent eosinophils. The urine was normal.

A clinical diagnosis of septic arthritis of the left knee was made.

The patient entered the hospital on May 3, 1939. On the following day the knee was aspirated and 70 cc. of thick, greenish, purulent fluid

## J. I. KENDRICK

was withdrawn. Microscopic examination of the fluid revealed many white blood cells but the culture was negative. A blood culture taken on the day of admission was positive for *staphylococcus aureus*. On May 7th, the knee was again aspirated and 70 cc. of thick, flocculent fluid withdrawn. Culture of the fluid on this occasion was positive for *staphylococcus aureus*.

The immediate treatment consisted of general supportive measures and extension of the leg. A transfusion of 500 cc. of whole blood was given. During the first 5 days in the hospital sulfanilamide was administered but the septic temperature continued. On the fifth day sulfanilamide was discontinued and sulfapyridine started. The knee became so distended it was necessary to aspirate the joint at intervals of two to three days. Following aspiration, the joint was irrigated with 500 to 1000 cc. of normal saline solution. After starting sulfapyridine, the septic temperature gradually subsided. Five days later the temperature was normal and continued so throughout the rest of the stay in the hospital. While in the hospital the knee was aspirated and irrigated eight times.

The patient left the hospital on the twenty-eighth day (May 31, 1939). There was full range of motion without pain in the knee. The only significant physical finding was a slight increase of fluid in the joint.

Following discharge from the hospital, activity was limited for 7 weeks. An examination on July 22, 1939, revealed full range of motion in the joint and no evidence of peri-articular change or areas of tenderness. The roentgen examination of the knee at that time showed no abnormal bone or joint change. Following this observation more activity was permitted.

He was again observed on August 3, 1939, at which time there were no findings of significance. Normal activity was allowed.

## SUMMARY

This case has been reported because of the importance of early diagnosis and treatment of septic arthritis of a joint and also because of the very favorable result obtained from the oral use of sulfapyridine and multiple aspirations and irrigations. It is difficult to evaluate the exact role which the sulfapyridine had in the treatment but, because of the prompt fall in temperature following administration of this drug, it was probably of definite benefit. It is doubtful if any other method of treatment could have effected a more favorable result.