

by Keen. If effusion is great aspirate strictly antiseptically. If pus is found open up and treat antiseptically. Sometimes necrosis is found.

*The third class of case is that of mixed infection*—due to infection by typhoid and pyogenic bacteria. This condition may be very serious, indeed. Infection may take place from bed sores (*Case 4*), boils, ulcers, and even typhoid ulcers themselves. It is usually poly-articular; the symptoms are those of acute suppurative arthritis, but more severe. Death may occur from septic absorption within a few days, or rigors and a succession of chills be experienced, high temperature  $105^{\circ}$  and  $106^{\circ}$ , bounding pulse soon becoming weak, tongue dry and brown—Sordes, delirium, and death from poisoning. This requires most vigorous treatment. Free incision and drainage to save the joint and life—and the earlier the better. If the synovial membrane is not all destroyed a certain degree of motion may be re-established. In mild cases, elevation, with cold and compression, light diet and bowels kept open, with rest is sufficient.

Differentiate this condition from other forms of joint trouble, such as simple arthritis, suppurative, pyæmic, puerperal, exanthematic, urethral, gouty, rheumatic, osteo-arthritic, tubercular arthritis, and senile tuberculosis. The flexions in these cases are due to reflex contraction of muscles due to joint irritation. The typhoid bacillus infections are usually late, the mixed early in convalescence.

CASE II. A. J., 19, student, taken ill with typhoid fever, Jan. 2nd, this year, delirium three weeks, then progressed favorably for a time when the high temperature recurred, of an intermittent type. He became convalescent and got up and about in two weeks, when he had to take to bed again with pain in the right hip joint and flexion of the thigh upon the abdomen. Rest in bed one week only, with the use of hot water bag brought about a subsidence of the pain and the contraction relaxed. Pain was referred to the right thigh and testis, although no inflammatory trouble existed in the latter organ. Is now up and about again (May 1st), but still has contraction of right hip joint—cannot be extended beyond  $180^{\circ}$ .

CASE III., J. de S., æt. 11. On Jan. 23rd, this year, was called in consultation to see a young girl who had typhoid fever, a mild attack, commencing October 3rd last autumn. She remained in bed two weeks, was then allowed up and after five days complained of a sore leg, returned to bed and then drawing up of the limbs took place—both lower extremities—this continued up to the time I saw her. She then lay in the recumbent position, hips and knees flexed, hips about  $90^{\circ}$ , knees about  $45^{\circ}$ , left adduction marked, with abduction of right thigh, apparent shortening of left thigh two inches, rather greater than the adduction should indicate. Tenderness in the region of the left hip was great