

dition may be induced by slight injuries, the use of the joint when in a weak condition predisposing a favorable state for the attack of the bacillus. Case three (3) shows the pain and joint trouble coming on five (5) days after rising from bed apparently recovered.

What is the nature of the joint trouble? We are familiar with the frequency of periostitis most commonly, and osteomyelitis in the bones following typhoid, but the exact nature of the joint affection is not well understood. Sometimes the joints are infected by an extension into them of the above-named conditions, still primary infection is the rule.

Prof. Keen, of Philadelphia, whose recent work, "Surgical Complications and Sequels to Typhoid Fever," embraces a chapter on Joints, has contributed the most complete and exhaustive treatise on the subject up to the present time. He also sums up the literature most comprehensively, and the clinical classification which he makes is a very satisfactory one. He speaks of typhoid arthritis proper, and, besides this form, rheumatic typhoid arthritis and septic typhoid arthritis.

*The rheumatic variety* is well illustrated by:—

CASE I, F.Q., æt. 12, M.G.H., exhibits multiple ankylosis, commencing late, one year, after an illness, possibly typhoid. As a child of seven she received a kick in the ankle, in the month of May, it was stiff a few days only; as late as August no sign of trouble, then joint began to swell; in two months knee of same side was involved, and contraction began to take place. Was put in plaster of Paris, remained some time, and when it was removed was said to be all right. Then some time afterwards, namely, four years ago, the other foot and knee gave trouble and both hips. She was put on an extension and kept straight on a wheeled carriage for a year and a half, then allowed to sit up. When spine, shoulders, elbows and wrists were found involved. She came under my charge in the Montreal General Hospital last spring, after being without treatment for some four months, during which time she was allowed to sit up in a chair, and from this bad position became much deformed, flexions of knees, hips, elbows, wrists, spine and neck, the ankles also. There is strong fibrous ankylosis in these positions and pain on attempted passive motion, but no osteophytic growth nor apparent eburnation of the joint surfaces can be made out. By Bilioth splints and traction in line of deformity on a frame, nearly all the deformity has been overcome, but ankylosis persists and forcible movement sets up fresh arthritis. We have used the hot air baths for some months up to 325°F., but stopped them as no appreciable benefit was observed. The patient is in good health otherwise.

*Typhoid arthritis proper*, illustrated by cases two (2) and three (3).—This variety may be either poly or mon-articular, the hip being the joint usually attacked in the latter instance, and being the most serious in its results. These cases are rarely fatal and recover with very little deficiency of the joint. Ankylosis is not usual, as a result. Faulty