It would appear that, while no bone is exempt, yet some are more frequently involved than others. For instance, the ribs were affected in 40 cases; the humerus, in 11 cases; the ulna in 15 cases; the pelvis in 8 cases; the femur, in 22 cases; the tibia in 91 cases; the fibula in 3 cases; and the foot in 8 cases. The extraordinary frequency of bone disease in the lower extremities is noticeable. This may be due to the frequency of injuries, or, as Keen thinks, to their being more distant from the centre of the circulation and where nutrition is more sluggish and its activities most easily disturbed and impaired. The date of onset has been ascertained in 186 cases, and is as follows :—

In the first two weeks, 16.

From the third to the sixth week, 66.

From months to years after the fever, 104.

So that bone disease is more frequently a sequel than a complication of typhoid.

Usually the first symptoms are local pain, tenderness, and swelling. Frequently there is a slow subsidence of the symptoms. Recovery may follow, or the parts may become red and soon after may fluctuate. In other cases, after a slow subsidence, the pain and swelling may reappear. Osler and Parsons refer to excellent examples of such oscillating cases.

The surgical treatment of typhoid bone lesions although often tedious, operative measures being repeated in some cases more than once, is in the end almost always satisfactory. The surgical treatment is generally called for when the patients are fully recovered and their reparative power fairly good. When fluctuation can be perceived, unquestionably immediate operation should be done, and it is still better to operate before fluctuation appears, unless resolution is fairly certain to follow. I have had, in the Montreal General Hospital, some cases of very extensive necrosis of the long bones, which early operation would probably have limited.

In operating upon typhoid abscesses and bone lesions great thoroughness is requisite. The bacilli are found more in the abscess walls than in the pus. If the periosteum is involved, it must be removed and the bone beneath chiselled away. If indications are present that the medulla is involved, the trephine must be used and all the infected area gouged out. Repeated operations are sometimes needed because of the lack of thoroughness in the first instance. Chantemesse relates a case in which, for osteomyelitis, the tibia was trephined three times. No pus was found, but the disease persisted, and the patient was only cured a year later by opening the tibia by an extensive operation, forming a long gutter in the bone. In my own cases I have found at times a mixed infection, and in other cases a pure culture of the bacillus of Eberth. Recently I had to deal with an extensive abscess over the left