Stiffness of the Knee in Normal and Osteoarthritic Subjects, by R. GODDARD, D. DOWSON, M. D. LONGFIELD, V. WRIGHT (*Leeds*).

Radio-isotope Studies of Rheumatoid Knees before and after Synovectomy, by A. KAY, A. KATES, E. N. COOMES, C. B. CAMERON, E. CHANDLER (*London*).

Athetoid Movements in Cervical Spondylosis, by E. R. BICKERSTAFF (*Birmingham*).

Hypospray Treatment of Tennis Elbow, by G. R. HUGHES, H. L. F. CURREY (*London*) (*Annals*, 28, 58).

Thyroid Disorders presenting with Musculoskeletal Symptoms, by D. GOLDING (*Harlow*).

Rheumatic Disease in Patients suffering from Scleral Disease, by P. FOWLER (*Manchester*).

Assessment of the Anti-Inflammatory Effect of Intra-Articular Steroids by Means of External Temperature Measurements, by F. LLOYD WILLIAMS, F. J. RING, J. A. COSH (*Bath*).

In vivo Observations on the Tensile Properties of Human Skin, by R. GRAHAME, R. BLUESTONE, P. J. L. HOLT (*London*).

Clinical Meeting

At the Annual General Meeting on November 22 and 23, 1968, the following papers were given:

Tendon Involvement in Rheumatoid Arthritis. By K. M. BACKHOUSE, A. KAY, A. KATES and E. N. COOMES (*St. Mary Abbots and St. Stephen's Hospitals*): Tenosynovitis is one of the common features of rheumatoid arthritis in the hand. It affects both the extensor and flexor tendons, sometimes leading to granulomatous involvement and tendon rupture. The commonest sites of rupture are well known but the areas of more general tendon involvement are less understood.

More frequent surgical intervention early in the disease has increased the opportunity in recent years to analyse the sites of tendon involvement. These sites and also of the much more occasional rupture were examined and plotted in eighty hands (48 flexor and 32 extensor tendons). The tendons most involved were found to conform to a fairly constant pattern. This indicated a correlation between disease activity, the functional roles of the tendons concerned, and the possible stresses which might be relevant to the changes. For example, in the palm, the flexor digitorum profundus is always far more involved than the flexor digitorum sublimis and this corresponds with the relative use of these muscles and tendons in everyday activity.

Discussion.—In reply to a question by DR. J. BALL (*Manchester*), MR. BACKHOUSE stated that it was well known that loss of blood supply had been suggested as a cause of tendon rupture. He thought, however, that in many cases it was simply a question of the tendon becoming weaker, stretching, and breaking.

DR. J. BALL (*Manchester*) said that, in the hand, when looking at the end of a ruptured tendon, he had been

struck by the paucity of granulation tissue. This might be against the hypothesis that the inflammatory granulation tissue, with which the tendon bundles were surrounded, was responsible for the rupture.

PROF. E. G. L. BYWATERS (*Taplow*) said that he had sometimes seen transformation of a tendon into a necrotic rheumatoid nodule. In these circumstances the tendon would be weakened very considerably and, if rupture occurred, the necrotic ends should be recognizable.

DR. J. BALL (*Manchester*) said that a certain amount of necrosis would occur simply because of the trauma to which the ruptured end of the tendon was put. It was not possible to distinguish between necrosis of granulation tissue and of the ruptured tendon.

The Hip Joint in Ankylosing Spondylitis. By E. N. GLICK (*London*): The features found in a retrospective study of 240 cases of spondylitis in which details of the hip joints were available were analysed. Abnormalities were found in approximately one-third but these were commonly mild. The changes found were described, particularly in reference to radiological abnormalities. Classical bony ankylosis was found in only 12 per cent. of the affected hip joints. Changes undistinguishable from rheumatoid arthritis were seen in 6 per cent.

It was suggested that the most frequent abnormality was a "ruff" of new bone formation around the femoral head.

A 5-year Follow-up of Fifty Cases of Idiopathic Osteoarthritis of the Hip. By M. H. SEIFERT, C. G. WHITESIDE, and O. SAVAGE (*London*): Patients with primary osteoarthritis of the hip were admitted to a prospective study of this disease initiated in 1961 in the department of Rheumatology and Physical Medicine at the Middlesex Hospital.

After 5 years, 125 patients had been seen. Of these 42 were lost to follow up mainly because of their advanced years (75 per cent. being 65 years or over). This left 83 of which 39 came to surgery and were assumed to have deteriorated.

The study was carried out on the remaining 44 to find what parameters of measurement were of value in the 5-year follow up, after being checked each year with x rays and special measurements. It was found that the only useful parameters in the series were night pain, time for stairs, and radiology. Eighteen of 44 patients who were finally left in the series showed an increase in time of more than two seconds for ascending and descending a flight of stairs, and of these twelve had complained of night pain when first seen.

Radiologically it was found that those who initially presented with cystic changes, fared worse after 5 years of follow-up, suggesting that when no cysts were seen in the initial x ray the prognosis was better.