KJELL BERGMAN, MALMÖ:

OSTEO-CHONDROMA CYSTICUM COLLI FEMORIS

History: Boy, aged 7, nothing of note as regards family history. There seems to have been no skelletal tumours among his nearest relations. He has always been a weak boy but has had no illnesses of any account but for the ordinary infectious diseases of childhood. More specially do I wish to draw attention to the fact he has never had rickets, as several authors consider some connection existing between this disease and the formation of enchondroma. Three weeks before admission the patient was kicked by another boy on the posterior part of the left hip-joint. Ever since then he has been limping and off and on been complaining of pains. These, however, have been of slight nature and have never attained that intensive character as is usual in osteitis fibrosa. Was admitted to the Malmö General Hospital on April 22, 1928.

Condition on admission: Internal organs normal. *Left hip-joint:* Some swelling of the trochanteric region but no proper tenderness over it. Slight atrophy of the left thigh muscles. No enlarged lymphatic glands. Limited movements in all directions though of no marked degree. Gait slightly limping on account of the weight bearing on the left leg being somewhat reduced in time. Radiogram (Fig. 1) of the left hip-joint shows nearly the whole of the neck of the femur to be occupied by some pathological process, mostly reminding of a multicellular cavity. This cavity is sharply limited and extends upwards to the neighbourhood of the epiphyseal line and below to the region of the trochanter. The wall at the lower margin of the neck is very thin, the upper margin thicker. No periosteal thickening can be seen at the region of the trochanter. In

Lauenstein's position the anterior wall proves to be thicker, the posterior thinner. The other long bones have also been radiographed on the possibility of a present multiplicity of the trouble; the pathological process in question, however, proved to be confined to the part mentioned.

Bony cysts in the upper end of the femur are not so very rare phenomena. As a rule, however, they are usually situated

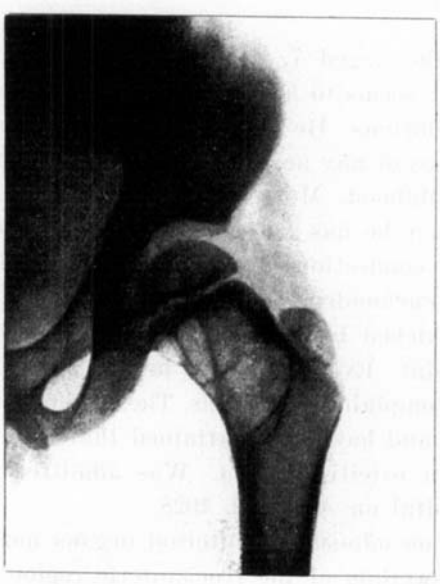

Fig. 1.

lower down in the metaphysis, just below the trochanteric region. They exist very rarely, however, in the collum femoris itself. In regard to their genesis these cysts vary greatly. The appearance of the formation described here, with its sharp limitation and characteristic structure, is certainly mostly in favour of a chondroma having undergone cystic transformation. A definite detailed diagnosis cannot be made without autopsy.

The question may now be raised whether operative interference be indicated in a case like the present. The cyst occupies almost the whole of the neck of the femur and the corti-

calis is reduced to a thin shell. Besides this the neck is in itself a weak point. Under such circumstances the risk of spontaneous fracture seemed to me very great, and this was the factor that determined me to operate.

The operation was carried out on May 22, 1928. After exposure of the trochanter by a Rydyghier's incision it was severed by saw and turned back. In so doing the cyst also became opened. This was at least the size of a walnut and contained a clear, thin, nearly colourless, fluid; this is in itself worthy of note as in all cases of chondroma cysticum described the contents have been strongly brown-coloured. On bacteriological examination of the fluid no bacteria could be found. The wall was very uneven, partly on account of the presence of rounded nodules of different sizes, partly because of thin bony ridges raised above the surface. It had a bluish opalescent appearance macroscopically quite like that of hyaline cartilage; this was also verified by subsequent microscopic examination. Clearly, then, this was a case of chondroma with cystic degeneration. Since it is well known that chondromata are in nature somewhat doubtful tumours and not a few cases have been described showing marked malignancy, one cannot help asking oneself when dealing with a case of this nature, whether the tumor should be completely removed or whether one should be contented with a more conservative mode of treatment. Resection of the neck and making good the defects by free transplantation of bone is an operation doomed to failure. If a radical operation be undertaken it ought to consist of removal of the neck and head of the femur with subsequent implantation of the apex of the trachanter into the acetabulum, a considerably mutilating operation resulting in great invalidity. Under such circumstances I decided upon a more conservative procedure, the more so, since the enchondromata are not so markedly malignant tumours as not to justify a more lenient method being considered. The very cartilagenous wall was thus left untouced but for a small portion excised for examination. A piece of bone was cut out from the tibia, divided in the middle after which both portions were grafted side by side in the bony cavity. What

was left of the cavity was filled up with fat, freely transplanted.

On repeated X-ray examinations the defect was very soon found to be replaced by new bone, at the same time as the bone grafts disappeared. Already after six months the bony cavity was almost completely filled up. (Fig. 2). It seems to me that under such circumstances the object of the transplanted

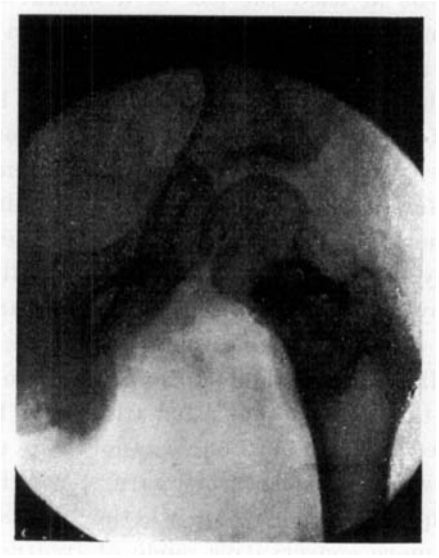

Fig. 2.

bone grafts in this case was chiefly to stimulate the formation of new bone. It is uncertain from where the latter originated. I should think the simplest explanation would be that the new bone had grown through the cartilage left behind at the operation, the latter having then become absorbed. This is, of course, a hypothesis, the correctness of which I am unable to prove. I have quite recently (about a year after the operation) had the opportunity of re-examining this patient. It was then found that no undue changes whatever had occurred in the operated hip-joint, movements and gait being quite normal. To recapitulate, then this is a case of bone cyst, rare in regard to its

pathological nature, with an equally rare localisation and which, under a relatively conservative treatment, was rapidly and completely restored, clinically as also from radiological point of view.

DISKUSSION:

Sinding-Larsen, Oslo,

demonstrated another »cyste« in the upper end of the femur. The speaker had »cured« a serious acetabular coxitis with abscess in a girl, three years old, living the extremity in a good position. During several years the patient was without pain and underwent ambulatory treatment, she wore a short hip plasterbandage, (there was no definite ankylosis). Suddenly last year, 5 years after the beginninng of the disease and following an attack of influenza, there occurred a large abscess in the adductors. The radiogram showed a considerable cystelike clear area in the upper end of the femur, but there was no soreness of the bone. The speaker at first considered the »cyste« to be a tubercular boneabscess, the origin of the adductorabscess, and intended to operate, but a new radiogram, taken after an injection of iodoform, showed that the adductorabscess (the iodoform shade) led to the acetabulum and had no connection with the »cyste« in the femur. Consequently the »cyste« was looked upon as a mere local halisteresis and was left untouched. After a fistular stage the adductorabscess was healed, the patient has recovered, is without pain and can walk again. For the time being a short hipbandage of plaster has been applied, so as to prevent an adduction in the hip.

Bülow-Hansen, Oslo:

In connection with Bergmann's communication I wish to relate a case of osteochondroma cystica colli femoris.

In a girl, 10 years old, a spontaneous fracture occurred and I treated it operatively by scraping out the tumour and compressing the remaining bone fragments of the collum. The result was good consolidation with a slight shortening and good function of the hip-joint.

I have had occasion for observing her later on. No relapse has occurred and the motive faculty is almost normal.

Asplund:

A. legte zwei Fälle von *osteochondritis ischio-pubica* dar. Die betreffende Krankheit, die zuerst von van Neck beschrieben wurde, ist durch eine Ossifikationsstörung bedingt, die zwischen os ischii und os pubis ihren Sitz hat, und sie durfte mit Calvé-Perthes, Schlatters Krankheit u. a. gleichgestellt werden. (Der Vortrag erscheint in extenso in Acta Chir. Skan.).