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SURGICAL EXPOSURE OF THE LESSER TROCHANTER AND THE MEDIAL PROXIMAL PART OF THE FEMUR

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An exposure of the medial proximal femur between the femoral artery and vein medially and the femoral nerve laterally is described. As far as the authors know, this exposure has not been described in the literature before. In their opinion it is to be preferred to the exposures already published when lesions of the medial proximal part of the femur are to be treated. Moreover, the exposure can be extended distally as described by Henry (1970).

Key words: surgical approach; lesser trochanter; proximal femur

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Exposure of the medial proximal part of the femur, i.e. the region of the lesser trochanter and that part of the femur distal to this, is not easy because of the presence of blood vessels and veins medioventrally and of the thick muscle layer medially and mediodorsally.

We therefore use a new method of exposure. As far as we know, it has not been previously described in the literature.

TECHNIQUE OF OPERATION

The patient lies with his hip in flexion, abduction and external rotation. This position is assisted by a cushion under the contralateral half of the pelvis. The incision runs from the middle of the groin longitudinally lateral to the blood vessels (Figure 1).

The M. sartorius is prepared from the medial side, and is retracted laterally. This exposes the femoral vessels and nerve. At this level, nearly all the branches of the femoral nerve run laterally, providing the innervation of the musculature at the front of the thigh. One of the most medial branches is the saphenous nerve, which passes through the adductor canal together with the femoral artery and vein. The branches of the femoral nerve are prepared and retracted laterally. It is not necessary to prepare the femoral artery and the femoral vein separately. These can be left in the sheath, which facilitates re-exploration, should this be necessary (Figure 2). The M. vastus medialis and the tendon of the M. iliopsoas are now further prepared. In this process some blood vessels from the femoral vein and the femoral artery to the M. vastus medialis have to be cut. This does not give rise to problems, as there is ample collateral circulation in this region. The descending branch of the lateral circumflex femoral artery is situated proximally in the wound (Figure 3). The M. vastus medialis can now be stripped from proximal to distal, exposing the medial part of the femur (Figure 4).

CASE REPORTS

So far five operations have been performed on four patients (one male and three female) by this method, in all cases for an osteoid osteoma of the medial proximal femur.

In two cases, the diagnosis of osteoid osteoma

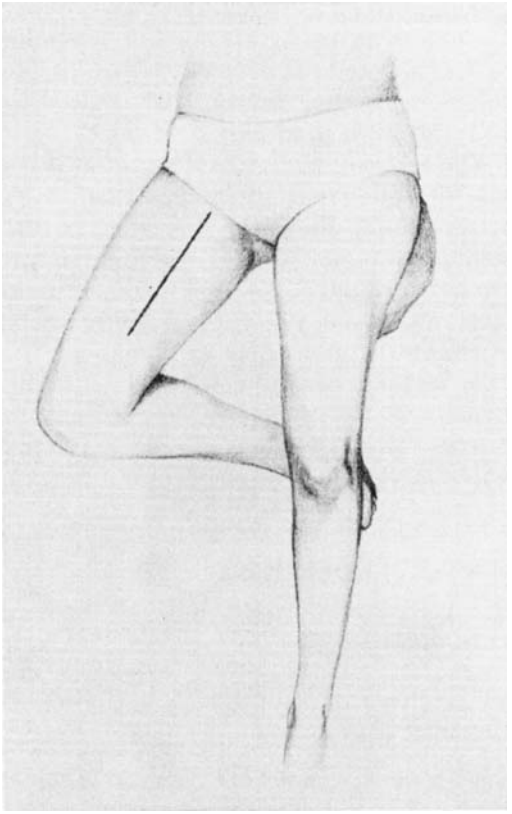

Figure 1. Position of the limb. Flexion, abduction and external rotation in the hip joint. A cushion is placed under the contralateral buttock.

Figures 1–4. Exposure of the lesser trochanter and the medial proximal part of the femur through an anteromedial approach.

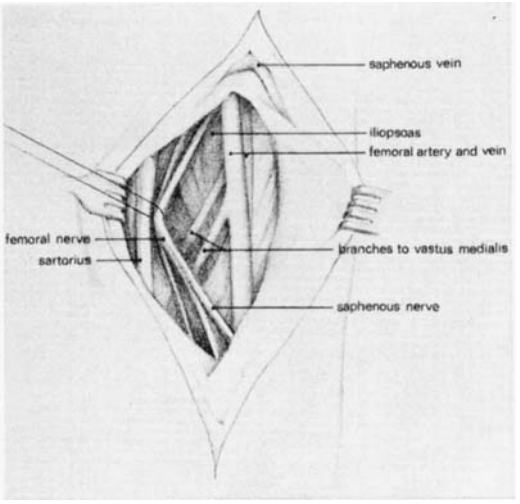

Figure 2. After opening the superficial fascia. Dissection of the femoral artery and vein mediodorsally and the femoral nerve and sartorius ventrolaterally.

was confirmed by the pathological examination. In one patient, a 5-year-old girl, the resection performed initially was inadequate. The diagnosis of osteoid osteoma could not be confirmed by pathological examination. A recurrence of the complaints was found with this patient. The osteoid osteoma was removed in the second operation, which was performed without problems by the same route. The removal of the osteoma was confirmed by pathological examination. The other patient in whom the diagnosis of osteoid osteoma could not be confirmed by pathological examination is free of complaints. The minimum follow-up period is 3 years.

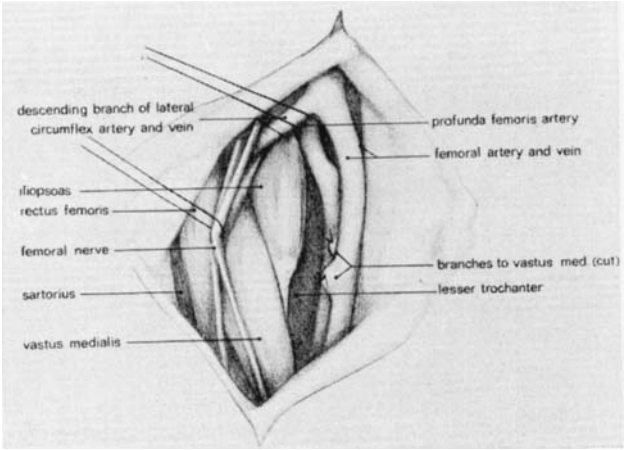

Figure 3. After cleavage of the vessels to the vastus medialis. By further dissection the lesser trochanter and iliopsoas come into view.

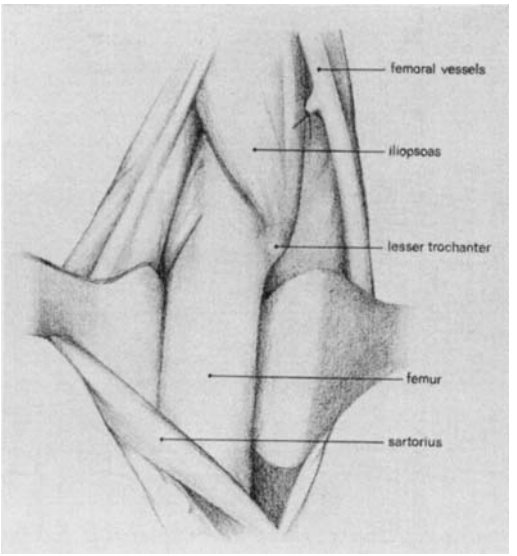

Figure 4. After stripping the vastus medialis. Medial aspect of the proximal femur is widely exposed.

DISCUSSION

Various exposures of the proximal femur giving access to the region of the lesser trochanter have been described in the literature. Henry (1970) gives an anterolateral approach, which also permits exposure of the medial femur. Banks & Laufman (1953) describe a posterior exposure of the femur. Ludloff (quoted in Campbell's Operative Orthopaedics) describes a medial exposure through the adductor muscles. Nicola (1966) describes a dorsal exposure of the lesser trochanter. These techniques give either limited exposure of the medial proximal part of the femur, or an exposure of the dorsal or ventral femur with poor visibility of the medial part.

The technique described by the authors has the following advantages when used in lesions of the lesser trochanter and medial proximal part of the femur: Approach through a relatively thin muscle layer and good visibility of both lesser trochanter and medial proximal femur. This method can be combined with the medial distal exposure according to Henry (1970), giving exposure of the whole medial part of the femur.

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