A METHOD OF CONTROLLED BONE DIVISION IN THE McMURRAY OSTEOTOMY

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The oblique osteotomy of McMurray is a simple operation. Nowadays it is frequently performed, often on patients not fulfilling the criteria laid down by the originator of the operation, and complications from faulty technique occur. Acquaintance with several orthopaedic centres has revealed three sources of failure even in the most experienced hands: 1) failure of displacement of the fragments because of a spike of calcar femorale retained on the distal fragment; 2) anterior displacement of the femoral shaft after flexion deformity of the hip; and 3) injury to the sciatic nerve in the presence of lateral rotation of the femur at the hip.

The first two of these complications are quite common and all three are easily prevented by dividing the femur with a Gigli saw. Although not acknowledged in standard works of operative technique or sundry papers in surgical journals, the method has been practised in this department for some years; it is simple, easily controlled and equally applicable whether the fragments are fixed internally by a spline or externally by plaster.

Technique—The upper end of the femur is approached in the usual way through a vertical mid-lateral incision dividing the fascia lata and splitting the vastus lateralis. After the bone has been bared the lesser trochanter is located. The guide, a disused relic of the days of circumferential wiring (Fig. 1), is inserted from the front of the femoral shaft immediately proximal to the lesser trochanter in contact with the bone until it presents again in the back of the wound. The Gigli saw is then introduced through the guide, the withdrawal of which leaves the saw in contact with the medial circumference of the bone. Consequently the bone is divided from within outwards under full control. In addition to the usual obliquity the osteotomy can be directed from before backwards and proximally in order to prevent forward displacement of the lower fragment. As division of the bone is completed the shaft of the femur spontaneously falls into the desired position of displacement.

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FIG. 1

The guide used for the insertion of the Gigli saw.