A PHYSICAL SIGN DENOTING IRREDUCIBILITY OF A DISLOCATED KNEE

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Traumatic dislocation of the knee is often associated with vascular, neurological and ligamentous complications, which may lead to amputation (Kennedy 1963). Rotatory dislocations are the least common variety (Taylor, Arden and Rainey 1972) and posterolateral dislocation is extremely rare, only 27 cases having been reported in the English orthopaedic literature by 1981 (Hill and Rana 1981). The purpose of this paper is to describe a physical sign which constitutes an indication for open reduction.

Patients. Four patients with posterolateral dislocation of the knee are reported: three were in young men, two after a motor-cycle accident, one followed a violent tackle at football, and the fourth was in a 68-year-old woman who fell from a ladder. All four sustained posterolateral dislocations without neurological or vascular injury. In all cases, initial attempts at reduction resulted in a skin furrow appearing between the medial femoral condyle and the tibial condyle (Fig. 1). Further attempts at closed reduction resulted in this furrow becoming more marked, denoting incomplete reduction of the dislocation. Open reduction was performed in all cases and it was found that the irreducibility was due to 'buttonholing' of the medial femoral condyle through the medial joint capsule, with invagination of the medial collateral ligament into the joint, causing tethering of the skin. In all four patients there was complete disruption of the medial collateral ligament, and in three there was also complete disruption of both the cruciate ligaments. One man had an intact posterior cruciate ligament; three had peripheral detachment of the medial meniscus.

Three of these patients underwent repair of the medial capsule and medial collateral ligament alone, while the fourth also had primary repair of the anterior cruciate ligament and suture of the medial meniscus. All the affected limbs were immobilised in plaster cylinders for six weeks. The female patient had a delay of 18 hours between injury and admission, and a further delay of 24 hours before open reduction; she developed an area of skin necrosis over the medial aspect of the joint which required a skin graft before healing after 10 weeks. At review, between two and five years after injury, all the knees were clinically satisfactory.

Discussion. The association of a skin furrow below the medial femoral condyle and posterolateral knee dislocation was first described by Clarke (1942). The presence of this physical sign, even if the dislocation appears to have been reduced, must be regarded as an indication for open reduction, since it denotes rupture and invagination of the medial joint capsule. Delay in reduction has been previously reported as a cause of skin necrosis (Hill and Rana 1981), and this occurred in one of our patients. Early and complete reduction is essential to prevent this complication.

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REFERENCES


