VESICO-ACETABULAR FISTULA

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In 1975 a 19-year-old woman received a Howse total hip replacement to treat hip pain due to protrusio and joint degeneration secondary to Still’s disease. Revision of the acetabular component was required for loosening within the first year. A serous wound discharge developed immediately after the revision, and throughout the succeeding years she suffered recurrent bouts of discharge and abscess formation, requiring formal exploration and drainage on three occasions, and resulting in four chronically discharging sinuses in the right thigh. Two of these were situated very proximally, one in the hip flexion crease anteriorly, and the other medially. A third was in the upper lateral third of the thigh and the fourth was in the popliteal fossa. On many occasions the patient noted a “watery” discharge, mainly from the upper two sinuses. All were actively discharging at the time of excision arthroplasty, and were the principal indication for surgical intervention; there was also radiographic evidence that both components were loose and the cup had migrated medially (Fig. 1).

Excision arthroplasty was performed through a lateral approach, combined with extra-peritoneal control of the iliac vessels through an abdominal incision, as arteriography had shown the acetabular component to be closely related to the intra-pelvic vascular structures. No evidence of a vesical fistula was seen at operation, but clear fluid was noted in the acetabular bed on removal of the component. Suction drains were included in the thigh closure.

Postoperatively the wound drainage was excessive and biochemical analysis of the fluid showed 68 mmol/l of urea consistent with urine contamination. A cystogram showed a fistula between the bladder and the acetabular bed (Fig. 2). Continuous bladder drainage for five weeks resulted in spontaneous closure of the vesico-acetabular fistula and healing of the multiple thigh fistulae. Removal of the urinary catheter was uncomplicated when repeat cystography had confirmed closure of the track between the bladder and the operation site.

Discussion. Vesico-acetabular fistula formation is very rare after hip surgery and we could find only one previous report (Lowell et al. 1975). The bladder injury may have occurred at the time of revision by thermal damage from medially extruded cement. Unfortunately, the cement used was radiolucent, but the presence of the cement restrictor seen in Figure 1 confirms that a medial wall defect had been produced at revision. Alternatively, the
injury may have occurred by gradual erosion as the cup and its cement migrated medially.

Whatever the precise mechanism, treatment depends on early recognition. In our case prolonged urinary drainage by catheter was the only treatment needed; after five weeks drainage from the wound had stopped, the fistulae had all healed, and a repeat cystogram showed no extravasation of contrast medium into the area of the acetabulum.

ANEURYSM AFTER ARTHROSCOPY

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A 23-year-old man twisted his right knee whilst playing association football. When seen seven weeks after the injury, he had a small effusion, slight quadiceps wasting, and tenderness over the medial joint line. There was no obvious instability and radiographs were normal.

Diagnostic arthroscopy was performed under general anaesthesia, with a pneumatic thigh tourniquet. Medial and lateral joint-line stab incisions were made, and he was found to have a complete tear of the anterior cruciate ligament. The wounds were closed with two Prolene skin sutures and a wool-and-crêpe dressing applied before releasing the tourniquet.

At an outpatient clinic two weeks later the dressing (more bloodstained than usual) was removed. The wounds were clean and dry, but beneath the lateral wound was a pulsatile swelling 1.5 cm in diameter with a bruit over it. The knee was bandaged, but the swelling slowly enlarged and six weeks later he was readmitted. Under general anaesthesia and a pneumatic thigh tourniquet the lateral incision was reopened and slightly enlarged. A false aneurysm was found and excised. The vessel feeding the aneurysm, the inferior lateral geniculate artery, was doubly ligated and the tourniquet was then released to ensure that haemostasis had been secured. The skin was sutured. He made an uneventful recovery but has subsequently needed prosthetic replacement of the anterior cruciate ligament.

Discussion. Arthroscopy has become a commonly performed procedure with few reported complications. In a review of 2611 arthroscopies, a 1.4% incidence of haemarthrosis was seen (personal communication, Sherman et al. 1985), whilst Dick et al. (1978), in their review of 3714 arthroscopies, recorded no haemarthroses nor any other complication of vessel damage. The development of a false aneurysm after arthroscopy has not previously been described.

The inferior lateral geniculate artery, because of its course along the lateral joint line, is clearly at risk when exposing the lateral side of the knee. The vessel is probably damaged more often than is realised, but complete division would result in vessel retraction with little bleeding. A lateral injury to the vessel, unusual because of its small lumen could, however, lead to a false aneurysm. Fairbank and Jamieson (1951) reported such aneurysms in two patients after open lateral meniscectomy and demonstrated the vulnerability of the anterior part of the inferior lateral geniculate artery as it passes through extra-synovial fat at the level of the upper margin of the meniscus. Their patients presented with recurrent haemarthroses because the false aneurysm communicated with the knee joint and also had pulsatile swellings with a bruit. Our patient presented with a subcutaneous false aneurysm, probably caused by the sharp trocar used to make a path for the arthroscope.

The rarity of this complication would not lead us to advocate a different approach for arthroscopy but we would recommend that, if the complication is suspected, exploration should be performed forthwith.

We would like to express our thanks to Mr R. Johnson for allowing us to report his case.

REFERENCES
