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PERFORATION OF THE URINARY BLADDER AND SMALL INTESTINE CAUSED BY A TROCHANTERIC PLATE

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A case is presented of a pertrochanteric plate which penetrated into the pelvis causing perforation of the urinary bladder and small intestine.

Key words: intestinal perforation; orthopaedic fixation devices; postoperative complications

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Pertrochanteric fractures are common in the elderly. The frequency of complications after internal fixation of unstable pertrochanteric fractures is about 25 per cent (Laros & Moore 1974). A common complication is penetration of the nail through the femoral head into the acetabulum and sometimes even into the pelvis as in the case presented below.

CASE REPORT

A 78-year-old female was admitted to our hospital because of a fresh pertrochanteric fracture of the femur.

Three days after the trauma the fracture was fixed with an ASIF 130° blade plate and a lag screw (Figure 1). The postoperative course was uneventful. The patient returned to the nursing home and was able to walk with support. Two months after the operation an X-ray examination revealed penetration of the plate through the femoral head and acetabulum into the pelvis (Figure 2). Since the patient was able to walk without pain reoperation was not considered necessary.

Eight months after the operation the patient was again admitted to hospital because of acute abdominal pain. X-ray examination showed large dilated intestinal loops and several fluid levels. There was no free gas in the peritoneal cavity. The roentgenological and clinical findings were typical of an ileus (Figure 3). An operation was performed on the same day. The ASIF plate was found to have penetrated 5 cm inside the pelvis. Three perforations were seen in the ileum and two perforations in the urinary bladder. The plate was removed, the ileum resected, and the perforations in the urinary bladder were sutured. The patient made a good recovery after the operation.

DISCUSSION

Fractures without medial support in the calcar region are considered unstable (Evans 1949, Steen Jensen & Michaelson 1975) with risk of fracture displacement into a varus position (Dimon & Hughston 1967). As a result, the nail used for internal fixation may penetrate through the head into the acetabulum. A complication of this type is most likely to occur in elderly patients with severe osteoporosis (Laros & Moore 1974) and in cases of unstable fractures.

The fracture presented above was unstable and the bone was osteoporotic. Furthermore the reduction was unsatisfactory and the patient walked without support. As a result of this the fracture collapsed and the femoral shaft segment migrated medially and proximally. The nail penetrated the hip joint and the pelvis and subsequently perforated

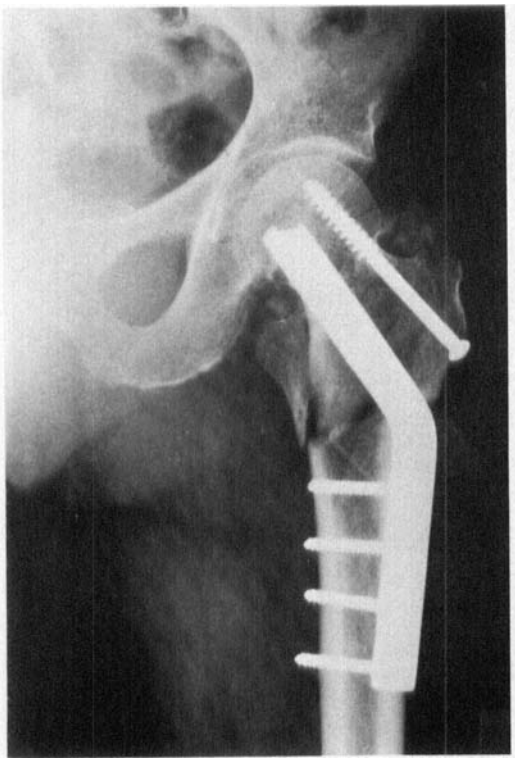

Figure 1. Comminuted pertrochanteric fracture fixed with an ASIF blade plate and a screw.

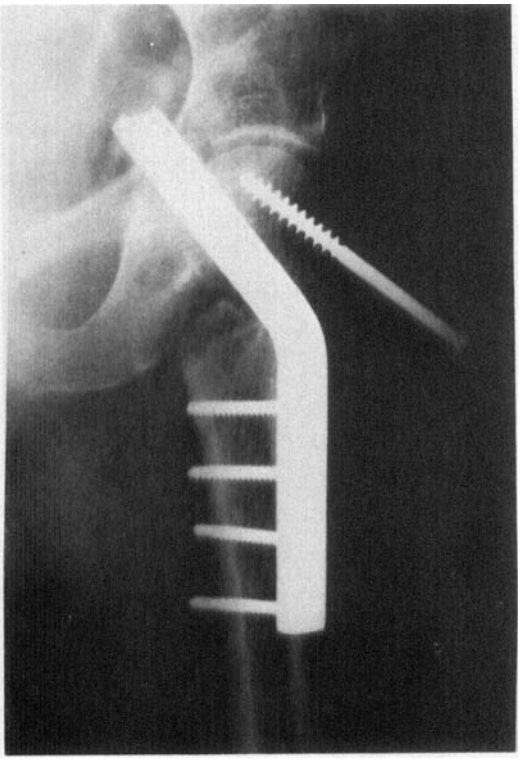

Figure 2. Two months after the operation the ASIF blade plate has migrated through the femoral head and acetabulum into the pelvis.

both the urinary bladder and the small intestine.

From our experience of the ASIF system, we consider the condylar plate to be preferable to the standard 130° blade plate for fixation of unstable pertrochanteric fractures. The condylar plate gives a better possibility of fixing the fragmented calcar region to support the medial cortex and there is less risk of the nail penetrating into the acetabulum.

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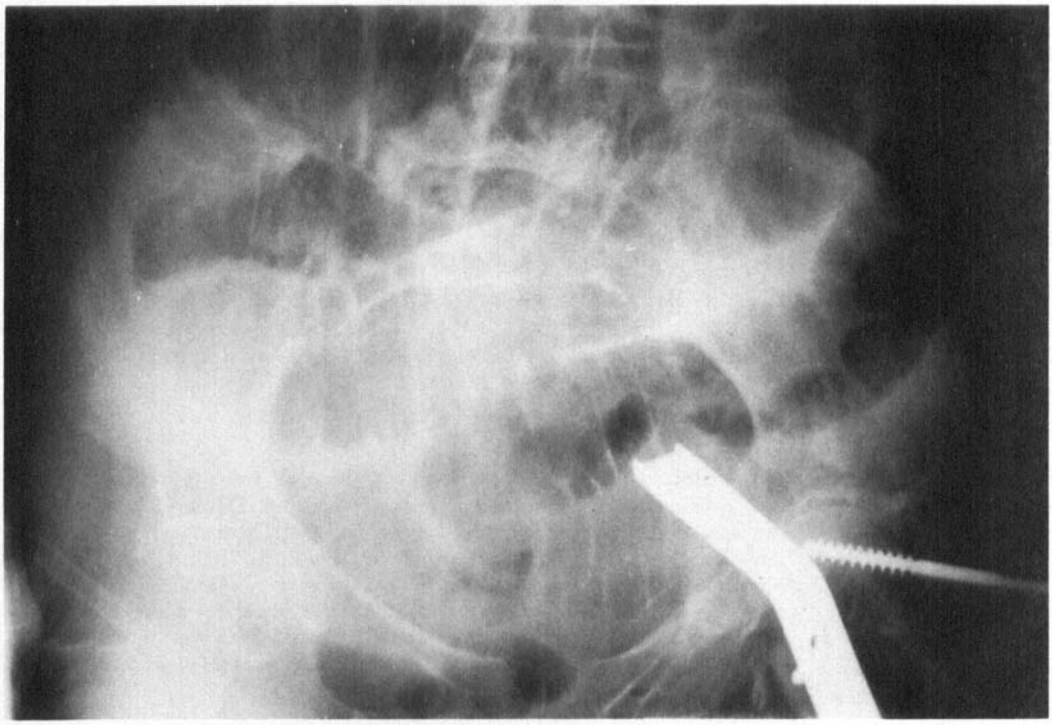

Figure 3. Conventional films of the abdomen 8 months after the operation. The plate has penetrated further into the pelvis. Large dilated intestinal loops and several fluid levels are seen. No signs of free air in the peritoneal cavity. Typical signs of an ileus.

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