CASE REPORT

Avulsion fracture of the anterior superior iliac spine following apophysitis

H Pointinger, P Munk, G P Poeschl

The case of an avulsion fracture occurring in an 18 year old athlete after repeated running is presented. The fracture involved the tensor fascia lata muscle and the external oblique abdominal muscle. It was treated by open reduction and internal fixation with two screws. The patient returned to full training, including long distance running, only four weeks after the operation.

CASE REPORT

An 18 year old athlete had pain in the right side of his pelvis and back pain during sporting activity and long distance walks. After four months he presented at a hospital where radiographs of the pelvis, the hip, and the lumbar spine were performed. Only open apophyses at the iliac crest could be seen. Apophysitis was diagnosed and the patient was told to stop his sporting activities, but not activities of daily life, for one week; he was treated with oral non-steroidal anti-inflammatory drugs. Within two weeks, he was free of pain and the treatment was stopped. He immediately returned to his training programme.

Three weeks later he felt a sudden pain in the hip, heard a snapping noise, and was unable to move his right leg. He was taken to hospital by ambulance. A hip luxation was suspected.

On physical examination, pain in the right iliac crest was found, mainly in the anterior superior iliac spine. Movement of the hip was reduced to 0–10–30° in the sagittal plain; rotation was impossible. Peripheral sensibility and circulation were regular at all times.

A radiograph showed a dislocated avulsion fracture of the anterior superior iliac spine (fig 1).

Open reduction and internal fixation with two screws was performed (fig 2). The drain was removed two days after the operation, and the sutures were removed after 10 days. Walking with full weight bearing was allowed immediately after the drain had been removed. The patient returned to full weight bearing training only four weeks after the operation and was free from pain.

DISCUSSION

Avulsion fractures of the anterior superior iliac crest in open apophyses are rare injuries, occurring in younger patients aged 11–23 years.1–7 They are more common in boys (a ratio of 13:1).6 All patients described in the literature were involved in sport.4 6 8–10

Fractures of the anterior superior iliac spine always occur as an acute onset injury, but chronic stress fractures, which can present as iliac apophysitis,11 can be predisposing factors. Stress injuries are often missed at the time of the initial presentation.7 Many patients do not even consult a doctor because these lesions are often self diagnosed as distortions or muscle lesions.

The cause is a sudden and forceful pull on the sartorial and tensor fascia lata muscles to the anterior superior iliac spine.
Pain in the immature pelvis of juvenile athletes should always be considered a serious problem requiring conscientious and careful treatment to avoid secondary damage to the juvenile skeleton.

**Take home message**

**REFERENCES**

1 Buch K, Campbell J. Acute onset meralgia paraesthetica after fracture of the anterior superior iliac spine. *Injury* 1993;24:569–70.