BRIEF REPORTS

MYOSITIS OSSIFICANS: CALCIFICATION OF THE ENTIRE TIBIALIS ANTERIOR AFTER ISCHAEMIC INJURY (COMPARTMENT SYNDROME)

N. HYDER, D. L. SHAW, S. R. BOLLEN

Myositis ossificans is relatively uncommon; it causes calcification and later ossification in muscles or soft tissues. Two-thirds of cases are traumatic in origin and it has most often been described around the elbow, although it is equally common in the thigh and calf and is also reported in the foot, hand and scapular region (Nuovo et al 1992).

We report a case of traumatic myositis ossificans which involved the entire anterior and part of the deep posterior compartments of the leg after an ischaemic injury (compartment syndrome). We are aware of no previous description.

Case report. A 31-year-old man presented 14 years after a road-traffic accident in which he had sustained fractures of the lower third of the femur and the proximal tibia, with damage to the popliteal artery. The artery had been initially repaired using a saphenous vein graft, but an unsatisfactory result had required further exploration and the use of a dacron mesh graft. The fractures were treated in skeletal traction and had united after about seven months. During this time, the patient gradually developed an increasing equinus deformity which became worse in the next few years with fixed-flexion deformities of the toes.

At 14 years after the injury, there was extreme limitation of ankle movements with some pain in the leg, particularly on walking. Radiography showed extensive myositis ossificans of the anterior compartment and the distal part of the deep posterior compartment of the leg (Fig. 1). CT showed that the lesion involved the whole of tibialis anterior, with clear demarcation between the outer cortical and inner cancellous bone (Fig. 2). No treatment was given; the patient has remained mobile and leads an active life.

Discussion. Myositis ossificans is a misleading term: the lesion is not inflammatory and an origin in muscle is not a prerequisite for the diagnosis (Ackerman 1958). It is most common in the third decade and shows a slight male preponderance. The traumatic variety is usually associated
with fractures, since haematomas at fracture sites have an osteogenetic potential (Mizuno et al 1990). In some cases there are no identifiable fractures.

The condition is self-limiting and usually painless, but mechanical problems may be caused by a large lesion in the vicinity of a joint. Surgical excision is rarely justified.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

REFERENCES


Table I. Risk factors for the development of CDH

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<td>1. Positive family history</td>
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<td>3. Congenital postural deformities</td>
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<td>4. Persistent click in a stable hip</td>
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RADIOLOGICAL SCREENING FOR CONGENITAL HIP DISLOCATION IN THE INFANT ‘AT RISK’

LESTER D’SOUZA, DARRAGH HYNES, FRANK McMANUS

Despite screening for congenital dislocation of the hip (CDH), children still present with a ‘late’ diagnosis of dislocation. The incidence is 0.4 to 2.0 per 1000 live births in most series (Dunn et al 1985; DHSS 1986; Bernard et al 1987). Risk factors for the development of CDH have been identified (Table I), and it has been suggested that up to 60% of children with a late diagnosis have identifiable risk factors (Jones and Powerll 1990). It has been proposed that such children should have pelvic radiography at four to seven months. At this age the ossific nucleus can be seen and a diagnosis of dislocation or dysplasia can be made (Bernard et al 1987; Garvey et al 1992; Krikler and Dwyer 1992).

We have therefore assessed our experience with a group of children referred after radiography at four months.

Patients and methods. Between 1989 and 1992, a total of 18 627 children were born in the National Maternity Hospital, Dublin which has an active clinical screening programme for CDH. Of these, 280 (356 hips) were referred to our CDH clinic in the neonatal period for assessment of hip instability. All with risk factors for CDH had radiography at four months of age (Garvey et al 1992); 210 infants (160 female and 50 male; 291 hips) were referred with a radiograph which was reported to show acetabular dysplasia. None had radiological hip dislocation or subluxation. They were regularly reviewed clinically and had repeat radiography at four-monthly intervals until acetabular development was deemed to be normal and they were walking normally.

Results. All hips were clinically stable at the time of initial assessment. Dysplasia was graded as mild, moderate or severe on the pelvic radiographs. Mild dysplasia was diagnosed as that with an acetabular angle between 28° and 32°, moderate as between 33° and 38° and severe as more than 39°. Of the 291 hips, 190 were classified as having mild dysplasia and 3 as having severe dysplasia. The remaining 98 hips had acetabular angles of less than 28°. Of those with mild dysplasia, 183 (96%) had reverted to normal by the time of the second radiograph at eight months of age and the other seven at 12 months. The three hips with severe dysplasia at four months were all normal by 12 months of age. No infant had any further investigation or required any splinting or surgical management.

Discussion. Clinical examination of neonates will identify 10 to 20 unstable hips per 1000 live births. This incidence is greater than the acknowledged incidence of CDH (MacAuley and McManus 1973; Dunn et al 1985; Bernard et al 1987; Bennett 1992). Despite this, late diagnosed cases have been reported in centres where specialised screening is performed for CDH, with an incidence varying from 0.4 to 2.0 per 1000 live births. Children with risk factors are in danger of ‘late’ dislocation, and it has become routine in