

CASE REPORT

RECURRENT TRAUMATIC DISLOCATION OF THE HIP JOINT AT THE AGE OF 13 AND 17 YEARS. A CASE REPORT

A. M. BOSCH, E. R. HAMMACHER, C. VAN DER WERKEN

We report a case of a recurrent traumatic dislocation of the hip joint in a young man at the age of 13 and 17. The patient had retroversion of the femoral neck, instead of a physiological anteversion. We found no consensus about the management of a recurrent traumatic dislocation of the hip joint in the literature. The various therapeutic options are discussed. We advised posterior capsulorrhaphy with femoral rotation osteotomy. The patient refused surgery.

Key words : hip-joint, child, traumatic recurrent dislocation.

Mots-clés : hanche, luxation traumatique récidivante, enfant.

CASE REPORT

A 13-year-old boy fell while playing the ball at soccer and injured his right hip. Physical and radiographic examination revealed a posterior dislocation of the right hip without fracture. This dislocation was immediately reduced in a closed procedure. Postreduction treatment consisted of limb traction for a few days, and the boy was then permitted to walk with crutches. He regained full weightbearing in six weeks. The function of the hip recovered completely. Radiographic examinations in a follow-up period of two years showed no disturbance in growth and no signs of avascular necrosis of the femoral head.

When the boy was 17 years old, he again presented at our hospital after having slipped on a tramrail. Again traumatic posterior right hip dislocation was diagnosed (fig. 1), this time however accompanied by sciatic nerve palsy. The dislocation

was reduced under general anaesthesia, followed by limb traction for five days. The nerve palsy recovered during the days of traction, and in six weeks he was able to increase his mobility to complete weightbearing.

Computerised tomography showed retroversion of the femoral neck of 3° on the right side and 5° on the left side (fig. 2) instead of a physiological anteversion of approximately 15°. Except for the

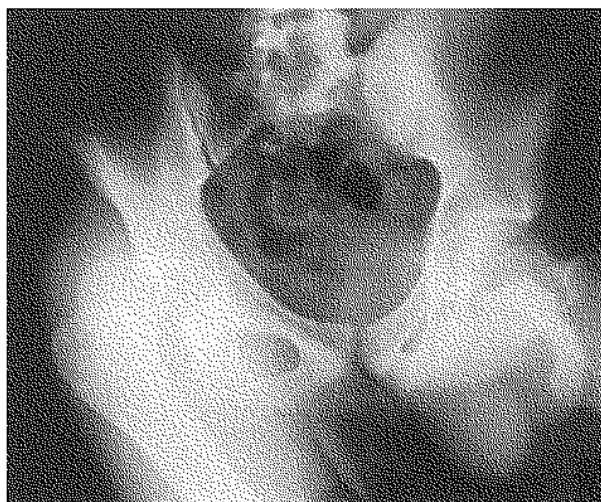


Fig. 1. — Xray of the second traumatic dislocation of the right hip without a fracture.

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retroversion of the femoral neck, no other abnormalities were noted. In particular the acetabulum and femoral head showed no signs of dysplasia. In view of the transient sciatic nerve palsy, we advised capsulorrhaphy combined with bone block augmentation of the posterior rim of the right acetabulum. For the left hip no specific therapy was proposed. The patient however refused surgery. Three years after the second and last hip dislocation the patient has no complaints and the range of motion of the affected hip is normal.

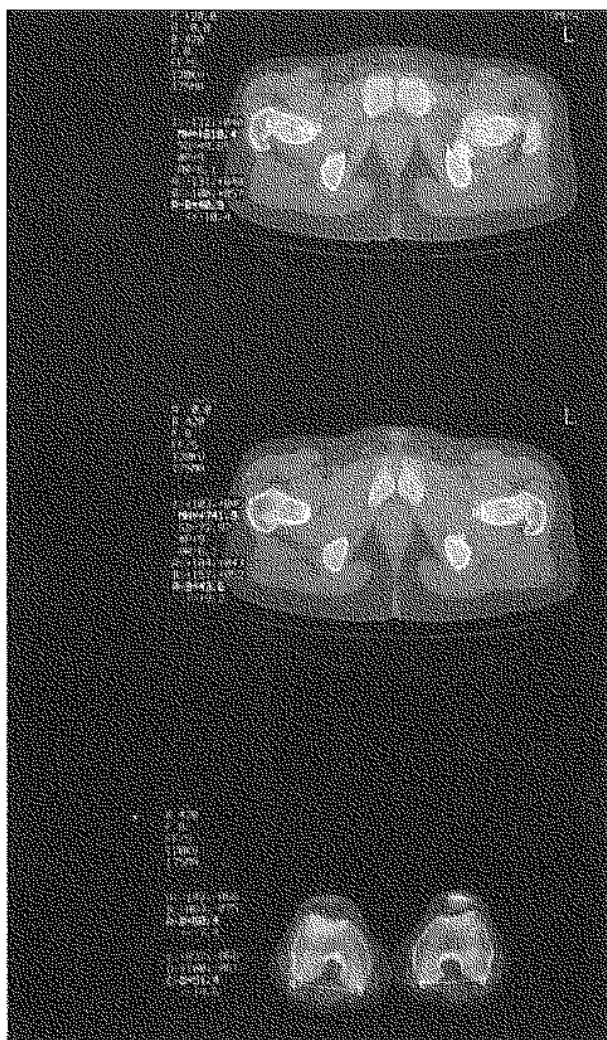


Fig. 2. — CT-scan of both proximal and distal femurs two months after the second hip dislocation. Retroversion of the femoral neck is present.

DISCUSSION

Traumatic redislocation of the hip in an otherwise healthy joint is rare, with a reported incidence of 1.5% of all hip dislocations (1).

Decreased anteversion or even retroversion of the femoral head, as in our case, is mentioned in the literature as a predisposing factor for posterior dislocation of the hip joint (2, 6). Dreinhöfer *et al.* however found no positive correlation in their 421 patients with a primary traumatic hip dislocation in comparison with normal volunteers (3). Only de la Caffinière and Ould Ouali mentioned decreased anteversion of the femoral neck as a possible etiologic factor for recurrent dislocation of the hip joint (2). Retroversion alone is indeed not an important etiologic factor in primary hip dislocation, but our example suggests that absence of anteversion may have increased the risk for redislocation. Other predisposing factors for redislocation are probably related to the initial trauma mechanism, the therapy and complications from the earlier dislocation. These factors are: severe trauma with associated femoral head or acetabular fracture, labrum defect or local defect in the joint capsule, as well as a delayed reduction. Even early weightbearing and inadequate immobilisation of the hip after reduction are thought to be of importance (1, 5).

In the literature over the last 35 years, we traced 20 patients who suffered recurrent traumatic posterior hip dislocation without fracture in an otherwise "normal" hip joint (1, 2, 4, 5, 7). Patients described were of relatively young age (mean 15.7 years, range 2-60 years) when they suffered their first hip dislocation. The mean reported interval between two dislocations was 38 months, ranging from a few days to 32 years.

There is no clear consistency in the literature on the diagnostic strategy in case of a recurrent traumatic hip dislocation. Since Brav only found one redislocation without a fracture in a series of 264 posterior hip dislocations (1), extended investigations do not seem to be useful after a single traumatic hip dislocation unless there are indications for predisposing factors from the history or on physical examination. The relation between decreased

anteversion of the femoral neck and recurrent dislocation of the hip is not clear, and ultrasound or CT-scan to detect a possible anteversion defect is not indicated after the first dislocation.

Arthrography after recurrence of the dislocation may reveal a capsular tear or pouch and/or a labral lesion (5). However arthrography will not always exclude a labral defect.

Capsular repair or repair of the labral avulsion was sufficient treatment in 14 case reports of a recurrent traumatic posterior hip dislocation without a fracture (2, 7). De la Caffinière and Ould Ouali (2) found capsulorrhaphy to be the simplest treatment. However for redislocation in case of an anteversion defect the technique was judged to be insufficient. They suggested capsulorrhaphy together with femoral rotation osteotomy for this specific combination.

A rotational intertrochanteric osteotomy turning the distal femur into endorotation alone is not a logical therapy. This will force the femoral neck into anteversion during normal walking, but it will not change the mechanism of dislocation of the hip joint under extreme conditions. A periacetabular osteotomy is a fourth possible correction to prevent redislocation. None of the reported patients in our review underwent such a periacetabular osteotomy.

Some authors performed augmentation of the posterior rim of the acetabulum by a bone block on the posterior wall, always combined with capsulorrhaphy (4). Results were excellent.

None of the authors reported redislocation after any type of surgical procedure. In view of the transient sciatic nerve palsy, we advised surgery. Because of the probably predisposing retroversion of the affected hip we suggested enlargement of the posterior rim of the acetabulum combined with capsulorrhaphy as a simple, effective and logical therapy, but the patient refused surgery.

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SAMENVATTING

A. M. BOSCH, E. R. HAMMACHER, C. VAN DER WERKEN. *Recidiverende traumatische heupluxatie op 13 en 17 jarige leeftijd.*

Dit artikel beschrijft een ziektegeschiedenis van een jongeman die op 13 en 17 jarige leeftijd een traumatische heupluxatie opliep. Bij deze patiënt bestond een retroversie van het collum femoris in plaats van een fysiologische anteversie. In de literatuur bestaat geen consensus over de handling van recidiverende traumatische heupluxatie. Verschillende therapeutische mogelijkheden worden beschreven. Het advies tot een achterste kapselreving gecombineerd met een roterende femurosteotomie werd door de patiënt niet opgevolgd.

RÉSUMÉ

A. M. BOSCH, E. R. HAMMACHER, C. VAN DER WERKEN. *Luxation traumatique récidivante de la hanche à 13 et 17 ans. Présentation d'un cas.*

Les auteurs présentent un cas de luxation récidivante de la hanche, d'origine traumatique, qui s'est présentée chez un garçon à l'âge de 13 ans puis de 17 ans. Il présentait une rétroversion du col fémoral, au lieu de l'anteversion physiologique. Les auteurs n'ont pas trouvé dans la littérature de consensus sur le traitement d'une luxation traumatique récidivante de la hanche. Ils discutent les différentes options thérapeutiques. Dans le cas rapporté, ils ont conseillé une capsulorrhaphie postérieure associée à une ostéotomie de dérotation du fémur mais le patient a refusé l'opération.