

EXPERT OPINION ON PUBLISHED ARTICLES

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Chondrolysis, osteonecrosis and slip severity in patients with subsequent contralateral slipped capital femoral epiphysis

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This is a very interesting article for the orthopaedic community at large, especially for registrars. It would seem that the days of the controversies surrounding the pinning of the contralateral normal hip in slipped capital femoral epiphysis are numbered.

The aim of the study was to identify the prevalence of chondrolysis, osteonecrosis and the degree of the slip in contralateral hips with subsequent slipped capital femoral epiphysis. The authors demonstrated that the complications associated with a subsequent contralateral slip were greater than the risk of prophylactic pinning of the normal hip.

In this retrospective study the incidence of a subsequent slip following pinning of the primary slip was 36%. Current literature reports a range of between 25% and 40%. The authors reviewed 227 patients operated between 1993 and 2003 at a single hospital. The average follow-up was 24 months or until skeletal maturity. A total of 82 patients had subsequent slips.

Definitions

Four important definitions are reviewed in this article:

- Chondrolysis: Joint space = 3 mm or less
- Acute: Symptoms less than three weeks
- Chronic: Symptoms three weeks or more
- Acute on chronic: Exacerbation of symptoms of more than three weeks' duration.

The Southwick grading system was used to determine the degree of the slip. The younger the patient at the time of the slip, the greater the chances of a subsequent slip on the contralateral side as demonstrated by other authors such as Hagglund and Loder *et al*.

The incidence of major complications (osteonecrosis, chondrolysis) in the subsequent slipped capital femoral epiphysis was 23%. Kocher *et al* reported complication rates of 0.2% in contralateral hips that were pinned prophylactically and other authors reported no complications.

Recommendations

The authors of this article therefore recommend pinning of the contralateral hip for the following reasons:

- Studies have shown a low turn-up rate for the close follow-up visits in the patients with contralateral hips that were not pinned prophylactically.
- Pinning of the normal contralateral hip is technically easy and can be done at the same time as the primary hip.
- Prophylactic pinning diminishes the need for repeated screening during the remaining growth period.
- Prophylactic pinning allows the patient to be more active without the constant fear of a sequential slip.
- Prophylactic pinning eliminates the risks associated with a second administration of anaesthesia.
- It makes salvage procedures such as proximal femoral osteotomies, total hip arthroplasty, lateral shelf osteotomy and hip arthrodesis unnecessary.

Shortcomings of the study

- The authors of the study do not state clearly how many pins or screws were used in their pinning of the hips. They showed one X-ray of a subsequent contralaterally pinned slip that developed osteonecrosis of the femoral head. It is, however, clear that two screws were used to pin the hip but the authors do not discuss this case in more detail.
- It is a retrospective study.

References

1. Hagglund G. The contralateral hip in slipped capital femoral epiphysis. *J Pediatr Orthop B* 1996;**5**:158-61.
2. Schultz WR, Weinstein JN, Weinstein SL, Smith BG. Prophylactic pinning of the contralateral hip in slipped capital femoral epiphysis: evaluation of the long-term outcome for the contralateral hip with use of decision analysis. *J Bone Surg Am* 2002;**84**:1305-14.