There were two minor complications: one patient developed a bone spur after an open approach, and one had a small local haematoma after the percutaneous technique. In this patient the protocol had not been followed and a drain had not been used; the wound settled, however, without surgical drainage.

**Discussion.** In the percutaneous method, the incision is below the crest, through the muscle bulk of the glutei. In the open method it usually lies over the crest. The percutaneous incision is smaller, and less likely to damage the subcutaneous nerves passing over the crest into the thigh. The technique requires less dissection and less muscle stripping from the outer table of the iliac wing.

For non-structural graft we now routinely use the percutaneous technique provided that not more than 10 ml of bone are required. We have found it safe, reliable and associated with decreased early and late morbidity.

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**


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**PULLED ELBOW IN AN ADULT PATIENT**

A. ADENIRAN, W. F. MERRIAM

‘Pulled elbow’ is thought to occur only in young children. We believe that there are no previous reports of its occurrence in adults.

**Case report.** A 21-year-old woman presented with a history of sudden onset of pain in her left elbow caused by a strong pull on her forearm. The joint was held immobile in slight flexion and pronation. There was tenderness over the radial head, and pain was aggravated by passive movement. During the positioning of her elbow for radiography, the patient felt a sudden click in the joint, with complete relief of pain. Movement returned to normal and the radiographs showed no abnormalities.

**Discussion.** Pulled elbow is thought to be due to radial head subluxation in young children as a result of sudden traction on the extended elbow. Jongschaap, Youngson and Beattie (1990) reported an annual incidence of 1.2% in children aged between 5 and 66 months. Illingworth (1975) reviewed 100 cases; most were under two years of age and none was older than six years. Cyriax (1982) considered that it occurred only under eight years of age and we have been unable to find any reference to the condition in older patients.

Some deny that the syndrome exists, but others claim to have demonstrated it in cadaver experiments on stillborn infants (McRae and Freeman 1965). Amir, Frankl and Pogurnd (1990) found a significant association with general joint hypermobility.

In our patient the diagnosis was made because the presenting features, apart from age, were typical, as was the ‘spontaneous’ reduction by the gentle supination needed for the anteroposterior radiograph.

The clinical presentation of pulled elbow is typical enough to allow an experienced doctor to manipulate without radiological examination except for the exclusion of other injuries or for medicolegal documentation. Successful reduction by full supination of the slightly
flexed elbow produces a characteristic click over the radial head, and is usually followed by the immediate return of normal movements. Immobilisation is usually unnecessary. Second subluxations are reported to occur in 5% of cases (Meer 1986), and third recurrences have been reported (Illingworth 1975; Michelman 1991).

Pulled elbow can occur in an adult patient. Treatment, as in children, is simple and the result of manipulation is dramatic.

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REFERENCES


