CASE REPORT

An Unusual Case of Fracture of the Proximal Radius in a Child

Wong CW, Lam TP, Ng BKW

1Department of Orthopaedics and Traumatology, Queen Elizabeth Hospital, and 2Department of Orthopaedics and Traumatology, Prince of Wales Hospital, Hong Kong

ABSTRACT

This report is of a 4-year-old girl with displaced fracture of the unossified radial head. This fracture is rare and difficult to assess. Although the unossified radial head cannot be visualised on plain X-ray, there are some important radiological signs that can help to make the diagnosis.

Key Words: Fracture, Radius

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A 4-year-old girl was admitted to the Department of Orthopaedics and Traumatology via the Accident and Emergency Department after she fell in the playground and landed on her outstretched left upper extremity. She complained of left elbow pain and swelling. There was no other injury. She was unwilling to move or use her left arm.

At physical examination, she was apprehensive. There was moderate swelling and tenderness over the proximal end of the radius. The radial head could hardly be palpated at the usual site due to a feeling of emptiness. Her elbow was kept in pronation and 30° flexion. She had very limited range of movement in forearm rotation and some degree of flexion and extension. There was no sensory and motor deficit in the extremity.

X-rays of the left (Figures 1a and 1b) and right elbows were taken. There was some soft tissue swelling noted at the lateral aspect of the left elbow. Anterior fat pad sign was positive. There was a faint radio-opaque shadow noted at the lateral aspect of the proximal radius and a crack was also noted over the olecranon process. The radial head was not yet ossified as noted in the contralateral elbow (Figure 2).

The uncertainty about the exact diagnosis after patient assessment was raised because of marked pain at the elbow that was out of proportion to a ‘simple sprain’ and the abnormal radiological findings.

Urgent magnetic resonance imaging (MRI) was done (Figures 3a and 3b), which showed a markedly displaced type II epiphyseal injury at the neck of the proximal radius. In view of the severity of the displacement, open reduction and Kirschner wire (K wire) fixation with long arm cast were performed (Figures 4a and 4b). The K wire, together with the cast, was removed after 6 weeks. Gentle mobilisation exercise of the elbow then followed. Three months after the operation, the patient had full range of movement in flexion, extension, and supination. However, her forearm pronation was limited to neutral only and she will receive further mobilisation exercise as an outpatient.

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