CASE REPORT

Translocation of the Radius and Ulna Associated with Fracture of the Radial Neck

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ABSTRACT
A 9-year-old girl injured her right elbow after falling from a bicycle. The initial diagnosis was radial neck fracture. Closed reduction of the fracture failed and translocation of the radius and ulna at the elbow joint was noted. Closed reduction of the translocation and open reduction with internal fixation of the radial neck fracture were performed followed by long arm dynacast immobilisation. Four months later, the patient had a limited pronation of 45°, compared with 70° in the left elbow. Translocation of the radius and ulna is rare and thought to result from forced pronation of the forearm. It is easily missed because the patients’ X-rays appear normal. This case report records only the ninth case in the literature. Seven of the 9 reported patients (including this patient) required open reduction to correct the translocation.

Key Words: Radius, Translocation, Ulna

中文摘要

尺桡骨交叉脱位合并桡骨颈骨折：病例报告

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一例九岁女童于单车意外时右肘受伤。初步诊断为桡骨骨骨折，闭合复位不成功，至检才发现尺骨与桡骨于肘关节交叉脱位（尺桡骨错位）脱位闭合复位成功，桡骨颈骨折则用开放式复位内固定方法来治疗。术后用石膏固定肘关节。伤后四个月，骨折愈合，右前臂旋前四十五度，较左肘的七十度为少。尺桡骨交叉脱位为极罕见之脱位损伤，此病例为全球文献中的第九例。而因为此脱位之X光片看似正常，所以极易误诊。文献中的九例中有七例需要开放复位。

CASE REPORT
A 9-year-old girl injured her right elbow after falling from a bicycle. The exact mechanism of the elbow injury was not known. She was immediately examined at the Prince of Wales Hospital, which revealed diffuse swelling and tenderness around the right elbow and limited supination of the forearm. There was no neurovascular deficit. X-rays of her right elbow were taken (Figures 1 and 2) and a diagnosis of fracture of the radial neck was made. The patient underwent reduction and fixation of the fracture. Closed reduction of the fractured radial neck failed. It was only at this time that the relationship between the distal humeral articulating surface and the proximal radius and ulna was noticed to be abnormal: the ulna was articulating with capitulum and the radius with trochlea (Figure 2).

Closed reduction was achieved for the translocation of the radius and ulna by hypersupination. Then closed reduction of the radial neck fracture was attempted, first using digital pressure and then using a Kirschner wire (K wire). Although reduction was achieved, it was very unstable. Therefore, open reduction and internal fixation with a customised implant from a one-third tubular plate1 were performed (Figure 3). A long arm