

Congenital Proximal Radioulnar Synostosis (CRS): A Rare Disease With Promising Surgical Outcome

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INTRODUCTION:

Radioulnar synostosis is divided into two types: post traumatic and congenital. CRS is an uncommon condition that causes the radius and ulna to fuse together from birth due to failure of bony segmentation[1]. CRS limits the elbow joint's ability to supinate and pronate, which impacts the daily activities of the patients.

REPORT:

We are reporting a case of a 12-year-old child who is right-handed and has painless limited right elbow motion for the last five years. The parents noticed that ever since, the child was experiencing difficulties feeding himself with awkward right elbow motion. There was no previous history of trauma or infection. The child's births and developmental histories were normal. On examination, child had flexion deformity of the right elbow with range of motion (ROM) 30°-90°. The supination and pronation were also limited to 0°-20° respectively. Otherwise, no obvious swelling or palpable mass, no tenderness and no overlying cutaneous changes. His neurological function of the right upper limb was unremarkable. There were no clinical and laboratory findings that could suggest an infection, tumor or metabolic issues. Plain radiograph of the right elbow and forearm showed bony fusion at the proximal radio-ulna joint region. We proposed an open osteotomy of the synostosis with vascularized subcutaneous fascio-fat flap interposition. Two weeks post operatively, we allowed assisted active motion of the elbow. At 6 weeks post operatively, the elbow ROM show significant improvement with flexion of 0°-150°. Pronation-supination were 25°-45°. Both the parents and the child were satisfied with the outcome as the child was able to feed himself with no difficulty.

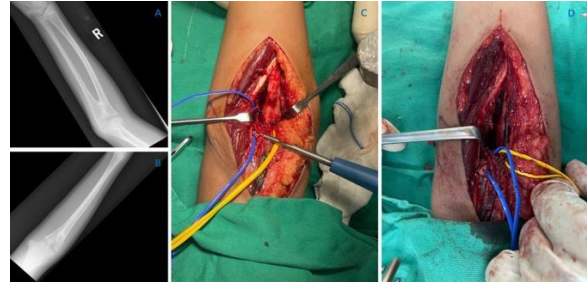


Figure 1: Synostosis proximal radio-ulna joint. Osteotomy and vascularized fascio-fat flap interposition.



Figure 2: 6 weeks post-surgery. Marked improvement elbow motion. Radiograph; no recurrence seen.

CONCLUSION:

The overall surgical outcome in patients with CRS had positive impact in the current literatures. However, there are still debates and uncertainties about whether to undergo surgical excision or conservative treatment[2]. We advocated open osteotomy and vascularized fascio-fat flap interposition in CRS patient as it offers good upper limb function, improve quality of life and reduce risk of recurrence.

REFERENCES:

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