

# Wadia Journal of Women and Child Health

## Clinical Image

# Imaging in congenital proximal radioulnar synostosis

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A 9-year-old boy with deformity and progressive limitation of right elbow supination was referred for imaging. There was no history of trauma. On examination, there was a right elbow varus deformity [Figure 1a]. Frontal radiographs showed right proximal radioulnar synostosis [Figure 1b-c]. Multidetector computed tomography scan with three-dimensional computed tomography (3DCT) reconstructions showed fused radial and ulnar heads with hypoplastic radial head [Figure 2].

Congenital radioulnar synostosis results from failure of longitudinal separation of radius and ulna in the 7<sup>th</sup> gestational week. This condition usually presents bilaterally and is often associated with chromosomal and developmental abnormalities.<sup>[1]</sup> 3DCT and multiplanar reconstructions provide a detailed assessment of bony and soft tissue relations for precise surgical planning.<sup>[2]</sup>



**Figure 1:** (a) Clinical image of a 9-year-old boy showing varus deformity at right elbow; (b and c) frontal radiograph of right (R) elbow joint showing proximal radioulnar joint synostosis with no such abnormality being noted in left (L) elbow joint radiograph.

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**Figure 2:** (a) 3D reconstruction; (b) plain computed tomography scan of right elbow showing fusion of radial and ulnar heads with hypoplastic radial head.

Congenital proximal radioulnar synostosis (CRUS) should be considered a differential diagnosis in children with limited supination and pronation at the elbow. Our report is a rare case of unilateral CRUS with no other anomaly or family history.

#### **Ethical approval**

The Institutional Review Board has waived the ethical approval for this study.

#### **Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent.

#### **Financial support and sponsorship**

Nil.

#### **Conflicts of interest**

There are no conflicts of interest.

#### **Use of artificial intelligence (AI)-assisted technology for manuscript preparation**

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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