

Our Experiences In The Surgical Treatment Of Radial Club Hand

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INTRODUCTION:

Radial club hand (RCH) or radial dysplasia is a complex congenital difference occurring in a longitudinal direction resulting in radial deviation of the wrist and shortening of the forearm. The primary goals of treatment are to correct wrist angulation, maintain wrist and hand function, ensure regular growth of the radial bone, and achieve a cosmetically pleasing result. The aims of this study are to discuss the results of centralization in our cases of radial longitudinal deficiency.

MATERIALS & METHODS:

We reviewed 5 cases of congenital radial longitudinal deficiency in 4 patients from 2016 to 2024. Classified by Bayne, only type III-IV deformities needing centralization were included. Two patients had type IV and two had type III deformities. All hands had a nonfunctioning thumb associated with the deficiency. After centralization, we performed pollicization on the index finger.

RESULTS:

The median age of patients was 2.8 years (range: 2-11 years). The sex ratio was 3 males to 1 female. All patients underwent centralization. The median follow-up time after centralization was 3 years (range 2-9). The outcome was good in 3 cases and fair in 1 case. Radial deviations regenerated in all cases. During follow-up, a radial deviation of 30 degrees developed in one patient after broken wire post centralization; this deviation requires surgical correction. Hand and wrist movements were acceptable. A cosmetically pleasing appearance is ensured.

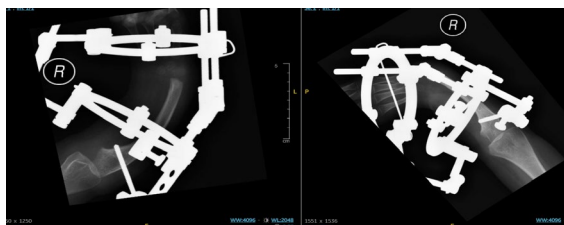


Figure 1: Plain radiograph during distraction



Figure 2: Plain radiograph after centralization

DISCUSSIONS:

The common global approach involves soft-tissue distraction, followed by surgical centralization or radialization with tendon transfers to reposition the hand. Treatment aims for type 3 and 4 radial longitudinal deficiency are to protect wrist deformities, enable movement, maintain ulna growth, and improve appearance.

CONCLUSION:

The distraction technique was uniplanar but was simpler than and at least as effective as other reported techniques.

REFERENCE:

1. Radial club hand treated with soft-tissue distraction and subsequent pin stabilization: mid- to long-term results, Georges Pfister, Malo Le Hanneur, Manon Bachy and Franck Fitoussi, Journal of Hand Surgery (Eur) 0(0)