

Biceps Rerouting After Forearm Osteotomy For Severe Supination Deformity In Brachial Plexus Birth Palsy

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INTRODUCTION

Brachial plexus birth palsy (BPBP) usually occurs as a result of a tractional injury during delivery. When there is recovery of the muscles innervated by C5 and C6 (biceps and supinator), with poor recovery of the distal roots, there is active flexion of the elbow and unopposed supination of the forearm¹.

CASE REPORT

A 6-year-old patient with BPBP, with recovery of the upper trunk, has undergone forearm osteotomy 3 years prior but there was recurrence of supination deformity. A biceps insertion rerouting was performed. The biceps tendon was then divided using a Z-lengthening method and rerouted around the radial head and reattached to its own end using a pulvertaft weave, to make the biceps an active pronator.

DISCUSSIONS:

Patients with supination deformity of the forearm usually undergo forearm osteotomy or biceps rerouting. Recently, experts have advocated adding biceps rerouting to forearm osteotomy in presence of severe supination deformity, to prevent recurrence¹. Whether forearm osteotomy and biceps rerouting should be performed at a single stage or sequentially after osteotomy has healed is still debatable. Most experts agree that sequential surgery is better, as patients with recurrent pronation deficit would benefit from biceps rerouting and this can prevent overtreatment. Cases with supination deformity recurrence can undergo biceps rerouting during the same seating as the hardware removal².

CONCLUSION:

Biceps rerouting is a good option of treatment in brachial plexus birth palsy with supination deformity, in combination with forearm osteotomy.

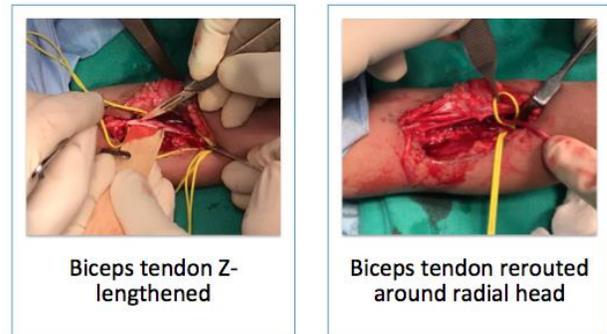


Figure 1 – Biceps tendon lengthened and rerouted around radial head



Figure 2 – Pre-op and Post-op attitude of the upper limb.

REFERENCES:

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2. Metsaars, W. P., Biegstraaten, M., & Nelissen, R. G. H. H. (2017). Biceps Rerouting after Forearm Osteotomy: An Effective Treatment Strategy for Severe Supination Deformity in Obstetric Plexus Palsy. *Journal of hand and microsurgery*, 9(1), 1.