Multiple Hereditary Exostoses of the Forearm: A Problem of Balance

Michael Garcia, MD
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Florida Orthopaedic Institute
Shriners’ Hospital for Children: Tampa University of South Florida

Disclosure

• Disclosures: I am a paid consultant for Arhtrex
• I have no specific disclosures regarding this talk

Treatment of the Forearm in MHE

• The degree of forearm involvement is directly proportional to the severity of the disease. (More involved = more severe presentation)
• Bowing of the radius relative to the foreshortened ulna leads to ulnar translocation of the carpus and ultimately, radial head dislocation
• Radial head dislocation leads to loss of pronosupination and forearm dysfunction
Treatment of the Forearm in MHE

- Ulna deformity and foreshortening is a huge problem in these children
  - This leads to dysfunction both at the wrist and proximal radial-ulnar joint
- Treatment should be directed at early forearm rebalancing or late salvage depending upon time of presentation

Treatment of the Forearm in MHE

- Distal radius:
  - If not causing deformity, but symptomatic, simple excision is warranted
  - If causing deformity – concentrate on forearm rebalancing
    - Simple radial osteotomy versus osteotomy and distraction osteogenesis
  - Goal should be a balanced wrist and reduced radio-capitellar joint/proximal radio-ulnar joint

Treatment of the Forearm in MHE

- Distal Ulna:
  - Often seen in association with deformity in the radius
  - Forearm rebalancing paramount
  - Excision of the lesion and lengthening is treatment of choice to balance the wrist and forearm
When The Cow is Out of the Barn...

- Once the radial head is dislocated
  - Either due to imbalance or proximal radial deformity
  - Attention turns to functional positioning of the hand

The One Bone Forearm

- The One Bone Forearm or Ulnius is a solution for improved function
  - Reduction of the radial head and rebalancing is not possible
- Goal is to achieve a mildly pronated position
  - Ideal for modern activities of daily living
- Compensatory prono-supination achieved through midcarpal joint and shoulder
**The One Bone Forearm**

- **Technique:**
  - Through an extensile incision, the radial nerve is identified.
  - The proximal radius and the distal ulna are excised and debrided of all pathologic tissue.
  - The Forearm is positioned in the appropriate position.
  - Transfixed with three cannulated lag screws.
  - Long arm cast until healed via radiograph.

References


Thank You