

A Brand New, Modified Thumb

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INTRODUCTION:

The thumb is the most important finger. It plays a crucial role in hand function. This is our experience doing pollicization to reconstruct the hand after sarcoma resection.

REPORT:

48-year-old gentleman presented with pain and swelling over his right thenar region. Clinically, a non-mobile, well-defined lobulated mass sized 9x6cm over the thenar eminence extending to the wrist joint. Sensation over the median nerve distribution was reduced.

Magnetic resonance imaging showed an infiltrative intramuscular mass arising from thenar muscles extending into carpal tunnel and encasing the radial artery. Tru-cut biopsy showed a high-grade spindle cell sarcoma.

Wide resection of the sarcoma, with a thumb amputation, proximal row carpectomy, index finger pollicization and wrist fusion were performed. Subsequently, the wound was closed with contralateral free radial forearm flap.



Figure 1: Clinical pictures of the hand

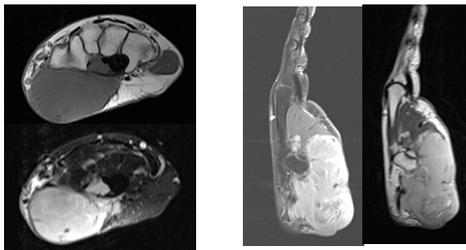


Figure 2: MRI images



Figure 3: Post operation images

Pollicization is a procedure to substitute a finger to restore the function of the thumb.¹ It is performed for aplasia or hypoplasia of the thumb.¹ This is a rare indication of pollicization to reconstruct a sarcoma hand.

After the sarcoma resection, the second metacarpal bone was resected, keeping its base. The finger was rotated on its longitudinal axis in an opposed and abducted position that allows thumb flexion. The adductor pollicis longus tendon was repaired to extensor indicis proprius while flexor pollicis longus was repaired to flexor digitorum profundus of index finger.

This is a rewarding procedure for patients in terms of hand appearance, hand function, and social interaction.² Close monitoring for local recurrence is still mandatory.

CONCLUSION:

Single-stage hand sarcoma excision with pollicization using long finger can reduce morbidity toward patients and restore basic thumb function to improve patient satisfaction.

REFERENCES:

1. Kozin et al., The concept, Technical details and Outcome. Clinics in Orthopedic Surgery 2012;4(1):18-35
2. Staines et al., Functional outcome for children with thumb aplasia undergoing pollicization. Plastic and reconstructive surgery 2005;116(5):1314-1323