**New Techniques and Emerging Evidence NT22**

**Upper Extremity & Wrist**

## Long-Term Clinical Outcomes of Bioabsorbable Plate Fixation for Metacarpal Fractures

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**Purpose:** Since 2008, we have been treating mainly upper extremity fractures with a bioabsorbable plate (Super Fixorb MX40: BAP) made of a composite of poly-L-lactic acid (PLLA) and hydroxyapatite (HA). 15 years have passed since the start of treatment, and its long-term results and pitfalls have become clear. This report reviews cases of metacarpal fractures treated with the BAP, presenting representative cases with long-term follow-up and detailing the technique with video clips.

**Methods:** We operated on 45 patients with metacarpal fractures in 52 fingers (35 males and 10 females) with a mean age of 51 years (range, 13-90): thumb: 3, index: 3, long: 7, ring: 27, and little: 12 cases. Therefore, a plate was made intraoperatively to cover the metacarpal fracture site.

**Results:** Bone union was achieved in an average of about 3.5 months. Only 1 patient with a metacarpal fracture had a delayed union, and this was observed 1.5 years after surgery. Postoperative complications included 1 case of extensor pollicis longus rupture in the metacarpal of the thumb and 2 cases of screw backout in the neck of the metacarpal—no evidence of necrosis or pseudoarthrosis in any of the cases, as noted with similar bioabsorbable materials.

**Conclusion:** This implant, which does not require removal, is beneficial for patients with no metal allergy or desire for implant removal.