



## A CASE OF HEMI HAMATE ARTHROPLASTY OF FRACTURE SUBLUXATION OF INTER-PHALANGEAL JOINT

### Orthopaedics

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### ABSTRACT

**Background-** Proximal interphalangeal (PIP) joint injuries are commonly seen in athletes, both amateurs and professionals. The injury is initially considered to be "minor" by either the patient or treated by unnecessarily long immobilization or surgery, both of which may lead to permanent stiffness or deformity. This bicondylar joint has extreme flexibility and stability throughout its arc of motion, which are difficult to replicate after the joint has experienced injury or degenerative changes. Arthroplasty is a well-established treatment option for the PIP joint that has developed pathological characteristics in pilon fractures of PIP joint. **Case -** We have discussed a 48 year old gentleman with history of fall from ladder following which he complains of pain, swelling over the middle finger of right hand. X ray shows right hand chip fracture base of middle phalanx of 3rd finger with subluxation. Patient was operated for Hemi hamate arthroplasty. **Conclusion :** Hemi-hamate resurfacing arthroplasty procedure is definitely a useful adjuvant in the treatment of intra-articular pilon fractures of middle phalanx involving PIP joint.

### KEYWORDS

Hamate , Arthroplasty , Interphalangeal Joint , Bicondylar joint , Pilon Fracture

### INTRODUCTION

Hemi-hamate arthroplasty is a surgical procedure to repair complex fractures or osteochondral defects of the proximal interphalangeal (PIP) joint. It involves harvesting a segment of the hamate bone to reconstruct the damaged joint surface, restoring stability and motion. This technique is ideal for chronic injuries or failed traditional treatments, offering long-term joint functionality. Frequently used in active patients, it ensures improved joint congruity, enabling better hand function and quality of life.

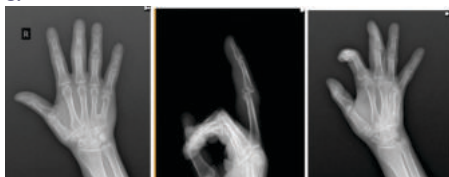
#### • Case History And Examination

- 48 years old gentleman came with history of fall from ladder following which he complains of pain, swelling over the middle finger of right hand

#### • On Examination Of Right Hand

- Mild Swelling present over the middle finger
- Tenderness present over the PIP joint of middle finger
- Crepitus felt.
- ROM flexion at the inter phalangeal joint of middle finger was painful.
- Sensations intact
- CRT < 2sec
- No DNVC

### Radiology



X-ray Of The Right Hand Shows Chip Fracture Base Of Middle Phalanx 3<sup>rd</sup> Finger With Subluxation.

### Procedure



- Patient was posted for Open Reduction Internal Fixation With Hemi Hamate Arthroplasty.
- A size-matched segment of the distal hamate articular surface is carefully shaped to match the contour of the middle phalanx and fixed using 1.3mm cortical screws.

### Post Operative Protocol

- Post Operatively - PIP joint immobilized in splint for 1 week followed by gradual mobilization.
- Early range of motion encouraged to prevent stiffness and achieve good range of motion.

### DISCUSSION

- Proximal interphalangeal (PIP) joint injuries are commonly seen in athletes, both amateurs and professionals. The injury is initially considered to be "minor" by either the patient or treated by unnecessarily long immobilisation or surgery, both of which may lead to permanent stiffness or deformity. This bicondylar joint has extreme flexibility and stability throughout its arc of motion, which are difficult to replicate after the joint has experienced injury or degenerative changes.[1] Arthroplasty is a well-established treatment option for the PIP joint that has developed pathological characteristics.
- Hemi-hamate resurfacing arthroplasty procedure is definitely a useful adjuvant in the treatment of Type 4 unstable intra-articular pilon fractures of middle phalanx involving PIP joint.
- Our patient was surgically treated to achieve good range of motion.
- This modality gives good result in this presentation of PIP joint fracture-dislocations.

### REFERENCES

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