

## Comparison Of Percutaneous Dorsal Blocking K Wire Versus Hook Plate In Acute Mallet Fracture – Experience In IIUM

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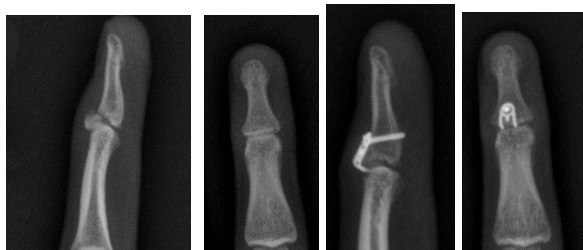
### INTRODUCTION:

Mallet fingers are avulsion of terminal extensor tendon with or without bone fragment caused by rapid flexion of extended distal interphalangeal (DIP) joint<sup>1</sup>.

### Case Report:

#### 1. Hook plate

21 years old, malay male had close mallet fracture over left middle finger (Doyle IVb). He underwent open reduction with hook plate under WALANT after 2 weeks post trauma. We use H incision to open the fracture and put the hook plate.



#### 2. Percutaneous Dorsal Blocking K Wire

18 years old, malay female had close mallet fracture over right ring finger (Doyle IVb). He underwent percutaneous dorsal blocking k wire (size 0.6mm) under WALANT after 10 days post trauma.



Each patient was followed up 2 weeks, 4 weeks, and 2 months after surgery. We examine range of motion (ROM), extensor lag, and calculate function using Michigan Hand Outcome Questionnaire (MHQ).

	Hook Plate	Percutaneous Dorsal Blocking Wire
Surgery Time	54 minutes	35 minutes
ROM	0-70 degree	10-45 degree
Extensor Lag	0 degree	10 degree
Usage of I/I	6	12
MHQ Score	95	88

### DISCUSSION:

The goal for surgical treatment in bony mallet finger fixation is a stable DIP joint and full, painless finger motion<sup>2</sup>. It is considered unstable if involving 30–50 % of the joint surface, and require surgery<sup>3</sup>. Several surgical techniques have been described, such as percutaneous wiring, extension block wiring, mini screws, figure-of-eight wiring, and hook plate<sup>3</sup>. Both open and percutaneous surgical techniques have potential complications as pin track infection, skin necrosis, nail deformity, fragment splitting, suboptimal reduction, functional limitation, and residual pain. Currently there are only 2 studies comparing hook plate with dorsal blocking k wire by Acar et al (2015) and Toker et al (2015). Although sample size was limited, there were no statistically significant difference in complication between 2 groups.

### CONCLUSION:

Both dorsal block pinning and hook plate fixation give good results. The percutaneous pinning is more cost effective compared to hook plate

### REFERENCES:

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2. Acar, M. A., Güzel, Y., Güleç, A., Uzer, G., & Elmadağ, M. (2015). Clinical comparison of hook plate fixation versus extension block pinning for bony mallet finger: a retrospective comparison study. *Journal of Hand Surgery (European Volume)*, 40(8), 832–839.
3. Alla SR, Deal ND, Dempsey IJ. Current concepts: mallet finger. *Hand (N Y)*. 2014 Jun;9(2):138-44. doi: 10.1007/s11552-014-9609-y