

Abstract

Non-surgical management of metacarpal bone fractures in Army Hospital Sri Lanka

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Metacarpal fractures comprise between 18–44% of all hand fractures. Metacarpals except thumb account for around 88% of all metacarpal fractures, with the little finger most commonly involved. The majority of metacarpal fractures are isolated injuries, which are simple, closed, and stable. While many metacarpal fractures do well non-surgically, there is a lack of literature and persistent controversy to guide the managing surgeon on the best treatment option.

A retrospective observational study was conducted at the Army Hospital from 2023 January to 2024 January assessing 45 patients. They were aged between 20-60 years and presented with metacarpal bone shaft fractures except the thumb considering acceptable angulation, shortening and minimal rotation in fractures. They were managed non-surgically with ulnar gutter and radial gutter splints with buddy strapping for minimally up to 6 weeks. They were followed up to 6 weeks minimally.

These patients were reviewed in 2 weeks and 6 weeks with follow-up x-rays and the clinical condition was assessed. As a general principle, early mobilization should be considered when deciding the method of splinting.

In conclusion out of the 45 patients we analysed majority were male, and the mean age was 24.6 years. The most common mechanism of injury was accidental falls (28 patients, 62%). Immediately after splint removal, 90% had a full range of finger movement and 90% were pain-free. Few required occupational therapy. Five patients experienced minor complications, non-limiting extensor lag and minimal residual pain. Non-surgical management with a thermoplastic splint and buddy strapping is an effective, economical treatment for metacarpal fractures.

Keywords: Non-surgical management, Hand, metacarpal bone, Fractures

Declarations

None

Ethics approval and consent to participate

Not applicable

Consent for publication

Informed written consent for publication and accompanying images was obtained from the patients prior to collecting information.

Availability of data and material

All data generated or analyzed during this study are included in this published article.

Competing interests

The authors declare that they have no competing interests.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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