

## OUTCOME OF HUMERAL SHAFT FRACTURES TREATED WITH INTRAMEDULLARY NAIL

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**Introduction:** The purpose of this study is to measure the outcome of humeral shaft fractures treated with antegrade intramedullary nail (IMN) concerning the complication risks, union and function.

**Methodology:** It is a cross-sectional study of humeral shaft fractures treated surgically with IMN from 1st January 2017 till 31st Dec 2020 at Tengku Ampuan Rahimah Hospital, Klang. Primary fixation cases are included in the study. Patients with pre-operative neurological impairment or those whose functions are unable to be assessed were excluded. Medical records and radiographs of the selected patients were reviewed. During follow-ups at clinic, their functional status was assessed using American Shoulder and Elbow Surgeon Score (ASES) at least 3 months post-surgery.

**Discussion:** It is a cross-sectional study of humeral shaft fractures treated surgically with IMN from 1st January 2017 till 31st Dec 2020 at Tengku Ampuan Rahimah Hospital, Klang. Primary fixation cases are included in the study. Patients with pre-operative neurological impairment or those whose functions are unable to be assessed were excluded. Medical records and radiographs of the selected patients were reviewed. During follow-ups at clinic, their functional status was assessed using American Shoulder and Elbow Surgeon Score (ASES) at least 3 months post-surgery. Restriction of shoulder movements and risk of delayed union have been suggested as concerns with IMN. Shoulder impingement due to proximal nail migration, rotator cuff violation or adhesive capsulitis may result in impaired shoulder function with IMN. From our limited observations, majority of our patients scored good to excellent in terms of pain and functional status. Low risk of complications related to union, infection or neuropraxia were also observed.

**Conclusion:** IMN for humeral shaft fracture offers good outcome with low risk of complication.