

## OUTCOMES OF LOCKED INTRAMEDULLARY NAIL PROCEDURE IN CLOSED DIAPHYSEAL FEMUR FRACTURE IN RELATION TO TIMING OF SURGERY

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**Introduction:** Diaphyseal femur fracture is one of the commonest fractures following blunt trauma. Many literatures have advocated that fixation should be done early within 24 hours to reduce risk of respiratory complications for stable cases. However, performing intramedullary fixation for all diaphyseal femur fractures within 24 hours are not possible for all centers. In this study, we compared the outcomes of closed diaphyseal femur fracture fixation with locked intramedullary nail procedure done within 1 week to those done after 1 week.

**Methodology:** This is a retrospective single centre study which was done by reviewing the patient's record from Hospital Tengku Ampuan Rahimah, Klang. Outcomes such as union rate, duration till ambulation, length of hospital stay post-operatively, and total length of hospital stay in relation to timing of surgery were measured. Complications such as respiratory complication, infection, and risk of open reduction in relation to timing of surgery were also analyzed.

**Discussion:** A total of 221 patients were selected. There were 120 cases done after 24 hours but within 1 week and 94 cases done after 1 week. The most common occurring complications in this study were delayed union, pneumonia, fat embolism and non-union. However, these complications are not statistically significant between the groups.

**Conclusion:** From this study, we concluded that there is no significant difference between locked intramedullary nail cases done between 24 hours till 1 week compared to cases done after 1 week in terms of outcomes and complications except for the total length of hospital stays which is longer for cases done after 1 week. Earlier fixation with locked intramedullary nail does not have better outcome for cases done after 24 hours. However, we would still emphasize on treating the fracture as early as possible as prolong hospital stays impose significant cost to both patients and medical institutions.