

## عنوان مقاله:

Retrograde Intramedullary Nailing and Locked Plating for the Treatment of Periprosthetic Supracondylar Femur Fractures: A Meta-Analysis and Quantitative Review

## محل انتشار:

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## خلاصه مقاله:

**Background:** As the prevalence of Total Knee Arthroplasty increases, there is still debate over the preferred method of treatment of supracondylar periprosthetic femoral fractures. The aim of this study was to compare two of the common methods of fixation: Locked Plating and Retrograde Intramedullary Nailing with respect to nonunion, delayed union and surgical revision rate. **Methods:** A comprehensive database search via Pubmed was conducted, yielding ۱۶ eligible studies. Six of those studies were comparative and were used in the meta-analysis section. All ۱۶ studies were used in the pooled sample analysis section. The primary outcome analyzed was nonunion and delayed union rate while the secondary outcome was the surgical revision rate. Odds ratios (ORs) and corresponding ۹۵% confidence intervals (CIs) were calculated by comparing incidences of nonunion and delayed union, and surgical revision rates among the studies. **Results:** The meta-analysis showed that there is no statistically significant difference among the two groups in terms of nonunion and delayed union rate ( $OR = ۱.۴۳$ ,  $CI = ۰.۷۴, ۲.۷۴$ ,  $P=۰.۲۸$ ), but there is a significant difference in the surgical revision rate favoring locked plating over retrograde intramedullary nailing ( $OR = ۲.۷۱$ ,  $CI = ۱.۴۲, ۵.۱۷$ ,  $P=۰.۰۰۳$ ). The pooled sample analysis showed that there is no significant difference in the nonunion and delayed union rates ( $P=۰.۲۱۰$ ) or the surgical revision rates ( $P=۰.۰۳۸$ ). **Conclusion:** Both locked plating and Retrograde Intramedullary Nailing are reliable options for treating supracondylar femoral fractures around Total Knee Arthroplasty. Locked plating demonstrated a trend towards decreased nonunion and delayed union rates and a significantly lower surgical revision rate in the meta-analysis. Level of evidence: IV

## کلمات کلیدی:

locked plating, Periprosthetic Femoral Fracture, Retrograde Intramedullary Nailing, Total knee arthroplasty

