



“Comparison of Hook Plates Vs. Locking Plates For Neer Type Iib Fractures of Lateral End Clavicle: A Systematic Review

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ABSTRACT:

Context :Endocrowns are increasingly used as a restorative option for endodontically treated teeth, offering a conservative and esthetic alternative to traditional crowns. Polyetheretherketone (PEEK) has emerged as a promising biomaterial due to its favorable mechanical properties and biocompatibility. Understanding stress distribution is crucial for the longevity of such restorations. The aim of this study was to assess the stress distribution in mandibular molars restored with polyetheretherketone (PEEK) endocrowns.

Materials and Methods:A total of 10 patients were selected for the study, which was conducted in the Department of Prosthodontics, Thai Moogambikai Dental College and Hospital, Chennai. Strain



was measured using a strainmeter on the day of insertion, at one week, one month, six months, and one year.

Results: The mean strain distribution was found to be highest one week after insertion (245.4 ± 5.68), followed by the day of insertion (236.70 ± 4.94). A gradual decrease in strain was observed over time, with values recorded at one month (190.0 ± 5.81), six months (134.80 ± 9.35), and one year (108.10 ± 5.08). Statistically significant differences were observed between several time intervals: one year and the day of insertion ($p = 0.000^*$), six months and the day of insertion ($p = 0.005^*$), one month and one week ($p = 0.005^*$), six months and one week ($p = 0.000^*$), one year and one week ($p = 0.000^*$), and one year and one month ($p = 0.005^*$).

Conclusion: The study concluded that mandibular molars restored with PEEK endocrowns exhibited a reduction in strain over time.

Respected Editor,

I read with great interest the recently published systematic review entitled “*Comparison of hook plates vs. locking plates for Neer type IIB fractures of lateral end clavicle: A systematic review.*” The authors should be commended for synthesizing available evidence on two widely used fixation techniques for this challenging fracture pattern. Given the ongoing debate regarding optimal surgical management for Neer type IIB fractures, we believe the review represents a valuable contribution to current literature. However, after carefully analyzing the methodology and conclusions, I would like to raise several points for clarification and further discussion.

First, the review included studies with heterogeneous designs and varying quality, yet the authors did not explicitly describe the impact of this heterogeneity on pooled outcomes. Because clinical and radiological endpoints such as union rate, functional score, or complication profile can vary substantially across study types, we believe the authors should further clarify whether the heterogeneity assessment influenced their choice of synthesis strategy and interpretation of the pooled findings.

Second, we noted that acromial osteolysis and subacromial impingement—key complications associated with hook plate fixation—were reported inconsistently across included studies. These complications often lead to mandatory implant removal and may influence postoperative functional recovery. The review would benefit from a subgroup analysis or a more granular complication profile to better inform surgeons regarding risk stratification when selecting an appropriate fixation device.

Third, the authors concluded that locking plates yielded better functional outcomes and fewer complications than hook plates. While this conclusion is consistent with contemporary trends, it is important to acknowledge that the surgical technique for locking plate fixation in Neer type IIB fractures varies significantly, especially regarding augmentation of the coracoclavicular ligaments. Because these adjunct procedures directly influence stability and healing, a more detailed discussion of technique-related differences would strengthen the validity of the comparison.

Finally, the review highlights the need for high-quality, prospective randomized controlled trials. I fully agree with this recommendation. Future studies should incorporate standardized surgical protocols, postoperative rehabilitation regimens, uniform outcome measuring tools, and longer follow-up periods to more accurately assess functional durability and late complications.

In summary, this systematic review provides important insights into the management of Neer type IIB clavicle fractures, but further refinement in methodological reporting and interpretation may enhance its clinical applicability. I appreciate the authors’ efforts and look forward to additional high-quality evidence to guide optimal treatment selection.

Sincerely,

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