

Radiologic and Clinical Outcomes of Ollier Approach with Screw Fixation for Displaced Intra-Articular Calcaneal Fractures – Comparative Study with Extensile Lateral Approach with Lateral Plating

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Introduction/Purpose: This study aims to assess the detailed radiologic outcomes which used uninjured side weight-bearing radiograph as a template as well as clinical results to compare the Ollier approach with screw fixation and the extensile lateral approach with lateral plating.

Methods: We performed a retrospective review of intra-articular calcaneal fractures treated operatively in our hospital from January 2009 to November 2014. Radiologic outcomes were assessed using radiologic parameters such as Böhler angle, calcaneal height, and talar sagittal angles represent calcaneal deformation by the comparison of the final follow-up bilateral weight-bearing lateral radiograph. Functional outcome was assessed through the American Orthopaedic Foot and Ankle Society (AOFAS) scores and Visual Analog Scale (VAS) pain scores. Postoperative complications were investigated.

Results: Ninety-seven unilateral fractures were appeared to match our inclusion criteria: forty-six fractures were treated by using the extensile lateral approach with lateral plating (the ELP group), and fifty-one fractures were treated with the Ollier approach and screw fixation (the OS group). The operation time was significantly shorter in the OA group ($p < 0.05$). There were no significant difference of the final follow-up radiologic parameters between two groups. The mean AOFAS scores were significantly higher in the OS group ($p = 0.020$) and both groups showed similarity in the VAS pain scores ($p = 0.175$). Overall soft-tissue complications were 28.3% in the ELP group and 9.8% in the OS group ($p = 0.034$).

Conclusion: No difference could be shown in the postoperative and final follow-up radiological outcomes between the Ollier approach and the extensile lateral approach, but the Ollier approach had better functional score and lower soft tissue complication rate with shorter operative time.

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