The Clinical Comparison of Extensile Lateral Approach and Sinus Tarsi Approach Combined with Medial Distraction Technique for Intra-Articular Calcaneal Fractures
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Category: Hindfoot

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Introduction/Purpose: To study and compare the clinical outcomes of open reduction and internal fixation via extensile L-shape incision and limited open reduction via sinus tarsi approach using medial distraction technique for intra-articular calcaneal fractures.

Methods: We performed a retrospective review of 65 intra-articular calcaneal fractures treated operatively between March 2012 and February 2015, including 32 cases of Sanders type? and 33 of Sanders type?. There were 49 men and 16 women. The mean age was 43.7 years old. They were divided into two groups: sinus tarsi approach group and extensile lateral approach group. No significant difference was found in gender, age, injury pattern, fracture classification between two groups (P>0.05). The Böhler angle, Gissane angle and calcaneal varus angle were measured before surgery, 1 week after surgery and at each follow-up visit respectively. The postoperative function was evaluated by the ankle and hind-foot score of American Orthopaedic Foot and Ankle Society (AOFAS) and visual analogue scale (VAS).

Results: All of the fractures were healed at about 10 weeks postoperatively. Böhler angle, Gissane angle and calcaneal varus angle were restored obviously, while there was no significant statistically difference between the two groups. Only the corrected value of calcaneal varus angle is statistically significant. At the last follow-up, the average AOFAS ankle and hind-foot score of minimal group was 88.4±6.6, and the VAS score was 1.9±0.7, while of extensile lateral approach group was 83.2±5.6 and 2.3±1.0 respectively.

Conclusion: Limited open reduction via sinus tarsi approach for intra-articular calcaneal fractures could reduce the incidence of wound complications effectively, and the medial distraction technique is helpful to correct the calcaneus varus deformity.

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