

## Bone Block Graft from Calcaneus for Foot and Ankle Reconstruction

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**Introduction/Purpose:** The correction of foot and ankle deformities often require the use of a bone block for proper reconstruction. The iliac graft is the most used, but the additional approach in the hip region increases the morbidity, the risk of complications and prevents the execution of the procedure through the peripheral anesthetic block. The objective of the study is to demonstrate the clinical and radiological results of using a bone block graft from calcaneus for reconstruction of the foot and ankle region as an alternative to procedures that require bone lengthening .

**Methods:** Between September 2013 and November 2014 eight patients underwent surgery with the use of bone block graft from calcaneus for reconstruction of local bone defects . In four cases the bone graft was used for reconstruction of calcaneal fracture malunion, two cases for ankle fracture reconstruction with shortening of the fibula, one case for hallux arthrodesis after avascular necrosis of the head of the first metatarsal, and one case for lateral column lengthening in a patient with flexible flatfoot. Four patients were male and four were female. The average age of patients at the time of surgery was 44 years.

**Results:** After minimum of 13 months and average of 20 months follow-up, patients showed improvement of the AOFAS score from an average of 42 points preoperatively to an average of 83 points after the procedure. Union of both sides of the graft was observed in all patients except one (arthrodesis of the hallux). Despite the radiological failure, this patient remains without pain and satisfied with the her result. All patients were satisfied with the results and would underwent the procedure again under the same circumstances.

**Conclusion:** The bone block from the posterior superior calcaneal tuberosity presents the advantages of using highly cancellous autograft with great density; can be removed under sedation and ankle block; dispensing the preparation of the surgical field in another anatomical region and often dispenses additional incision. These preliminary results put this technique as a viable alternative for cases of foot and ankle reconstruction that require a bone block graft.



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