

CALCANEAL RECONSTRUCTION WITH OSTEO-CUTANEOUS FIBULA FLAP IN A HEEL DEFECT

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INTRODUCTION:

Calcaneum is essential for gait function. Calcaneum bone loss affects the lower limb alignment and results in foot deformity. We report a case of a 16-year-old boy with an open calcaneal injury treated with reconstruction using a pedicled osteo-cutaneous fibula flap.

REPORT:

A 16-year-old boy sustained an open fracture of the right calcaneum with bone loss. He was initially treated at another institution with ankle-spanning external fixation and partial calcaneotomy. Examination revealed loss of normal contour of the right heel with the presence of equinus and pes cavus deformities, the first ray was in a plantarflexed position. Neurovascular status was normal. (Figure 1)

The radiographic images showed the absence of calcaneal tuberosity, generalized osteopenia, and obliteration of subtalar joints. (Figure 2)



Figure 1 :Right Foot



Figure 2: Right ankle x-ray

The first procedure involved a percutaneous subtalar fusion with two cannulated screws inserted from the calcaneum remnant. A fibula

flap and a cuff of soleus muscle were raised with a skin paddle based on the distal peroneal vessels. A vascularized proximal fibula bone was fashioned into a double barrel bone graft. The bone grafts were secured onto the calcaneum remnant using two cannulated screws. Non-vascularized fibula grafts were secured lateral to their counterparts using 2 headless compression screws. End-to-side vascular anastomosis between the proximal peroneal artery and posterior tibia artery was done.

At 4 months postoperatively, the fibula flap has healed. The radiograph image showed callus formation surrounding the bone grafts. (Figure 3). The patient was able to perform partial weight-bearing and a plantigrade foot and a degree of dorsiflexion was achieved.



Figure 3: Right ankle x-ray

CONCLUSION:

An osteo-cutaneous fibula flap is a reliable reconstructive option that demonstrates a good functional result.

REFERENCES:

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