

## **The 'Exteriorized' Pedicle for Free Flap Reconstruction of Plantar Defects**

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**INTRODUCTION:** Occasionally skin defects of the plantar aspect of the foot require reconstruction with a free flap where other techniques such as the medial plantar artery flap are not available or suitable. Anastomosis to the posterior tibial vessels is more straightforward than to its more distal branches within the foot. This novel technique allows flap inset remote to the recipient site without the hazard of transmitting the pedicle through a subcutaneous tunnel, or the bulk of a more extended flap inset.

**PATIENTS AND METHODS:** Four patients with plantar defects not amenable to local flap reconstruction underwent this technique (wide excision melanoma, unstable scar following trauma, deep sepsis following trauma, chronic osteomyelitis following surgery for macrodactyly).

An anterolateral thigh (ALT) flap was used to reconstruct the defect in all patients. Anastomosis to the posterior tibial artery within the tarsal tunnel was undertaken. An incision through skin into subcutaneous fat between the defect and the recipient site was made to accommodate the pedicle and then covered with split skin graft (SSG). Three weeks later the SSG +/- the pedicle was excised and the skin closed directly.

**RESULTS:** There were no flap related complications. All wounds healed primarily. All patients have resumed their original occupation and wear normal footwear. The flaps have not required revision for pressure injury or thinning.

**DISCUSSION:** Exteriorized pedicles have previously been described for upper limb reconstruction. Modifying this technique for foot reconstruction avoids more extensive dissection within the sole of the foot to expose recipient vessels, minimizes flap bulk and avoids the hazard of transmitting the pedicle through a subcutaneous tunnel.