Objective: The authors applied the pedicle medial plantar artery flap in other areas than plantar one and the purpose of this study was to analyze its use in non weight-bearing areas of lower limb

Methods: From 1995 to 2017 we have operated 21 patients with soft tissue defects of posterior heel, medial lower tibia, ankle, Achilles tendon surgery dehiscence and one proximal tibia. Age varies from 21 to 85. Sixteen patients were men. Most patients were operated due to trauma, except for two patient by pressure sores, two patients due sarcoma and two due osteomyelitis. We assessed viability of the flap, complications in donor area and patient satisfaction.

Results: All the flaps healed uneventfully. There was no flap necrosis (total or partial). In 5 patients, partial width skin graft over the donor area didn't take completely. They were treated only by dressing changes with complete wound healing. There was no need for secondary surgery except for two patients: one that extruded active bioglass and needed debridement and another one that had problems after debulking (only one in this series). All patients are satisfied. The unaesthetic grafted donor site was hidden under the foot. Only one of them asked for a flap debulking

Discussion: Distal third of leg and foot coverage was in the 1980’s a strong indication for microsurgical reconstruction with free flaps. After perforator arteries concept better understanding, many new and reappraised flaps were developed and applied to this particular area on avoiding microvascular flaps application: pediclers and high reverse sural flaps are examples. As these series progresses in many centers, their assessment showed that failure rates are significant.

In our case series, anatomy was constant, flap was reliable with no failure and there was reasonable donor site morbidity on medium term follow-up.

The authors consider MPA as option on small to moderate defects of posterior heel, medial ankle and medial distal tibia. It worked well as a unique flap, as a rescue of other partial flap failures and in association to other pedicled local flaps when microvascular surgery was not best option due to clinical or local considerations.

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