

33. FREE FOREARM PERFORATOR MINI FLAPS IN FINGERS RECONSTRUCTION

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Introduction. The reconstruction of fingers' soft tissue defects remains challenging. The optimal reconstructive treatment should be simple, reliable, cost effective, and provide pliable, sensitive, and cosmetically similar tissue allowing adequate function. A free flap of appropriate size may provide an ideal surgical solution.

Aim of study. The aim of the study was to compare the outcomes of fingers' reconstruction using free arterialized venous flap (AVF), superficial palmar branch of the radial artery (SUPBRA) flap, dorsal radial perforator flap (DRAP), and dorsal ulnar artery perforator (DUAP) flap harvested from the same donor area.

Methods and materials. During 6 months 4 types of free flaps from the same extremity for the coverage of fingers' defects were performed, with small/moderate soft tissue lack (1 AVFs, 3 SUPBRA flaps, 1 DRAPs, and 1 DUAP flaps). Standardised assessment of outcomes was performed, including duration of operation, objective sensory recovery, cold intolerance, time of returning to work, active total range of motion (ROM) of the injured fingers, and the cosmetic appearance of the donor/recipient sites.

Results. All flaps survived completely, and the follow-up duration was 12 months. The average length of the surgery for the AVFs was distinctly shorter in comparison to other types. The SUPBRA were employed to reconstruct skin defects and extensor tendon defects using a vascularized palmaris longus graft in 1 finger. Optimal sensory recovery was better with AVFs and SUPBRA flaps as compared with DUAPs and DRAP flaps. No significant differences were noted in ROM or cold intolerance between the 4 types of flaps. Optimal cosmetic satisfaction was noted for the recipient sites of AVFs and the donor sites of SUPBRA flaps.

Conclusion. All four types of free flaps from the ipsilateral extremity are a practical choice in finger reconstruction for small/moderate-sized defects. The SUBPRAs play an important role in such operations due to the wider indications, and better sensory recovery and cosmetic appearance associated with this method.