

Perforator Based Fasciocutaneous Flap Reconstruction of Extremity Skin Cancer: A First Choice

Purpose: We have evolved to the use of perforator based fasciocutaneous flaps with closable donor sites as a first choice option in the reconstruction of oncologic defects of the extremities. Here we review our experience and technical nuances.

Methods: A retrospective chart review was completed at New York University Medical Center of the senior author's extremity skin cancer reconstructions over a 5 year period. Charts were reviewed for patient demographics, co-morbidities, etiology of wound, defect size, wound site, method of reconstruction, complications, need for re-operation, need for adjuvant therapy, follow-up period, and technique-specific factors.

Results: A total of 24 charts were reviewed. Patient's age ranged from 23-104, with a mean of 56. Eight propeller flaps and one posterior interosseous artery flap were performed. Only one patient who had a propeller flap had a complication, small area of wound breakdown, likely attributable to the patient's history of peripheral vascular disease. Otherwise all propeller flaps achieved a high level of function and cosmesis. All patients treated with adjuvant radiotherapy initiated their courses without delay and went to completion without interruptions or wound complications. Follow-up times ranged between 18 weeks and 18 months. No donor site skin grafts were required, all wounds were decreased in size by 30-50% by subfascial spanning sutures which allowed for tension free flap inset and primarily closable donor sites.

Conclusions: By replacing lost tissue with like nearby vascularized tissue, perforator based fasciocutaneous flaps provide an optimal and durable method of reconstruction of extremity skin cancer wounds.