

Pedicled perforator flaps for vulvar reconstruction – a versatile, less invasive and simple way with favorable results

Jung-Ju Huang, Chih-Wei Wu, Chung-kan Tsao, Huang-Kai Kao, Nie-Jen Chang, Ming-Huei Cheng

Background

Vulvar reconstruction after cancer surgery remains a great challenge for reconstructive surgeons. Vulvar area is an easy-contaminated region by secretions. Soft tissue reconstruction is a superior choice over skin graft for better wound healing, tolerable tissue for further radiotherapy and better cosmetic results.¹

Materials and Methods

A retrospective review identified 23 flaps in 13 patients with vulvar reconstruction using island pedicled perforator flaps. The average patients' age was 58.5 ± 17.6 (Range: 22-85). The average of BMI was 24 ± 3.7 (range: 18.8-28.5). All of them received vulvectomy for cancer or pre-cancer lesions. Three patients had unilateral vulvar reconstruction while the others 10 patients had bilateral vulvar reconstruction. The perforator flaps included were profunda artery perforator flaps (n=12), gracilis perforator flaps (n=7), external pudendal artery perforator flap (n=2), medial thigh perforator flap (n=2), and internal pudendal artery perforator flap (n=4). 9 of the flaps were designed as V-Y fashion to facilitate donor site wound closure in larger defect reconstruction and the rest 14 flaps were designed as fusiform shape.

Results

All the flaps survived with a 100% successful rate. Three patients experienced small wound disruption that requires wound debridement and wound closure after the reconstruction. All the donor sites were closed primarily. One patient developed temporary peroneal nerve palsy. None of them presented with medical complications.

With follow-up, none of the patients presented with donor site morbidities.

All the patients were satisfied with the cosmetic and functional results except that one patient received flap debulky procedure three months after surgery. The thickness of the flap caused discomfort during her walking.

Discussion and Conclusion

Comparing to traditional myocutaneous flaps, perforator flaps provides thinner fasciocutaneous flaps for vulvar reconstruction with favorable reconstruction results and few donor site morbidities.²⁻⁴ The medial or inner thigh is a region rich of perforators. These perforators allow a versatile flap design depending on the location and extension of the vulvar defect after vulvectomy. Furthermore, most of the donor site can be closed primarily without complications.

References

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