

**Discussion****Indications, Outcomes, and Complications of Pedicled Propeller Perforator Flaps For Upper Body Defects**

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In this article, "Indications, outcomes, and complications of pedicled propeller perforator flaps for upper body defects: A systematic review," Lazzeri et al. extensively reviewed the current literature to determine the reliability of this technique. The authors summarized the result for each of three different regions: the head and neck, upper limbs, and trunk and perineum. Among them, the trunk and perineum regions showed the highest complication rate. I think the larger flap size and higher proportion of patients having serious comorbid conditions in this group have contributed to the increased chance of surgical complications. The authors emphasized the reliability of this technique, stating that the pedicled perforator flap for upper body defects can provide safety comparable to the conventional free flap. Although, in my experience, a very low rate of complications in pedicled perforator flap surgery throughout the body can be observed, direct comparison of the complication rate between the pedicled perforator flap with the free flap oversimplifies the findings. Pedicled perforator flaps tend to be chosen for reconstruction of smaller defects without composite tissue loss and their usage is relatively limited to certain perforator locations.

Recently, a similar systematic literature review was performed by Gir et al. [1] for pedicled perforator flaps in the lower extremities and identified a total complication rate of 25.8%, which is almost twice that of the upper body reported in this study. The higher incidence of vasculopathy affecting the source vessel of the perforator pedicle in the lower leg of the aged patient group

could contribute to this discrepancy. In the risk factor analysis on the lower extremities of Gir et al. [1], age, cause of defect, and size of flap are not related to the complication rate, but location of defect is. The distal third of the lower leg had increased the rate of complications. In this study on the upper body, although the authors listed risk factors with each case suffering complications, a statistical analysis of relevant variables was not included. Thus it is impossible for readers to reach a firm conclusion on the safety of the pedicled perforator flap in the upper body region. The small sample size for each specific flap in this review could have made it difficult to elucidate the risk factors statistically. Furthermore, despite the fact that surgical technical factors such as competency of fine perforator dissection are among the most powerful variables, it is difficult to standardize them for analysis. A true meta-analysis based on a higher volume of cases which will be gathered in the future would provide a more solid conclusion on the proper indications and risk factors for each type of pedicled perforator flap.

I commend that the authors conduct an extensive review of the literature of pedicled perforator flaps in the upper body, and this contribution would be a starting point toward obtaining evidence on this topic.

**REFERENCE**

1. Gir P, Cheng A, Oni G, et al. Pedicled-perforator (propeller) flaps in lower extremity defects: a systematic review. *J Reconstr Microsurg* 2012;28:595-601.

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No potential conflict of interest relevant to this article was reported.

Received: 6 Jan 2013 • Revised: 7 Jan 2013 • Accepted: 8 Jan 2013  
pISSN: 2234-6163 • eISSN: 2234-6171  
<http://dx.doi.org/10.5999/aps.2013.40.1.51> • Arch Plast Surg 2013;40:51