

Indications, Selection, and Use of Distant Pedicled Flap for Upper Limb Reconstruction

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KEYWORDS

- Pedicled flap • Soft tissue cover upper limb • Groin flap • Abdominal flap
- Hand injury reconstruction

KEY POINTS

- Pedicled flaps are easy to raise, are reliable, and do not need microsurgical expertise.
- Many of the disadvantages of pedicled flaps can be offset by properly planning the flap.
- Narrowing the base of the flap around the axial vessels, keeping just adequate length to allow comfortable mobility and primary thinning of the critical end of the flap are important steps.
- Good radical debridement before inset of the flap facilitates primary reconstruction of tendons and bones.
- Secondary thinning can be aggressively performed in pedicled flaps.
- When vessels are not available for free flaps, or when free flaps fail, pedicled flaps can be a lifeboat.
- Pedicled flaps can also be used in preparation for a major microsurgical procedure, such as toe transfer or microsurgical bone reconstruction.

INTRODUCTION

The description of the pedicled groin flap by McGregor and Jackson¹ was a milestone in the journey of reconstruction of soft tissue defects of the hand. Understanding of the axial pattern of blood supply in that flap led to further identification of flaps based on various cutaneous vessels. Subsequent introduction of microsurgical free flaps enormously extended the reconstructive capability, to an extent that the option of a pedicled flap to cover soft tissue defects in the hand was often relegated to the background. Free flaps have the advantage of being a single-stage procedure, involve fewer hospital inpatient days, encourage the primary reconstruction of other injured structures, and patients do not have to go

through the discomfort and the period of “attachment” to the abdomen.²

Despite these advantages, pedicled flaps have survived as a valuable part of the reconstructive surgeon’s armamentarium. Furthermore, refinements in techniques can offset most of the presumed disadvantages associated with pedicled flaps.³ When well done, the outcome of pedicled flaps can be as good as and in certain aspects even better than what a free flap can achieve in the long term. In circumstances when free flaps cannot be done because of paucity of recipient vessels or infrastructural inadequacies or when they fail, pedicled flaps serve as lifeboats.⁴

In the reconstruction of complex defects, pedicled flaps can serve as a foundation for the subsequent microsurgical procedure. Groin flaps are

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