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Reconstruction of complex soft-tissue defects around the knee joint with distally based split vastus lateralis musculocutaneous flap: A new technique



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Received 7 March 2013; accepted 16 September 2014

KEYWORDS

Vastus lateralis musculocutaneous flap;
Periarticular knee defects;
Distally based flap;
Superior lateral genicular artery perforators

Summary *Aims:* The aim of this study was to report our experience of using distally based split vastus lateralis musculocutaneous flaps for soft-tissue defects around the knee joint – a new technique.

Material and methods: Cadaver dissection studies were conducted in three cadavers to demonstrate perforators entering the lower third of the vastus lateralis muscle arising from the superior lateral genicular artery. Its application in eight clinical cases for the reconstruction of soft-tissue defects around the knee joint is reported.

Results: Seven out of eight flaps survived well without any flap loss. One flap with a skin island measuring 12 × 20 cm suffered a loss of 2 cm distally. This was later treated with skin grafting. Six out of eight donor sites were closed primarily. Six patients achieved full functional range of motion by 3 months. One patient had a 10° limitation of knee extension. One patient had foot drop due to primary injury and walks with a limping gait.

Conclusions: This flap is a new reconstructive option for knee defects. It can reach distally up to the tibial tuberosity and does not require an intraoperative change of position. The donor site can be closed primarily and is hidden inside the clothing. The function of the knee is not affected as the majority of the muscle is kept in continuity.