Eccentric Instead of Central Position of a Thoracodorsal Artery Perforator: Is It Reliable?

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INTRODUCTION: A long vascular pedicle is necessary for successful reconstruction of traumatic or diabetic feet. To obtain a longer vascular pedicle in perforator flaps, surgeons often use eccentrically rather than centrally located perforators.[1-4] The aim of this study was to compare the safety and reliability of thoracodorsal artery perforator flaps harvested with centrally or eccentrically located perforators, used in lower extremity reconstruction.

MATERIALS AND METHODS: Cases of lower extremity reconstruction were reviewed retrospectively, and 100 cases with flaps longer than 10 cm were included in this study. The cases were divided into two groups according to perforator location (central (figure 1) vs. eccentric (figure 2)). Data including patient age, gender, flap dimensions, past medical history, anastomosis pattern (end-to-side vs. end-to-end), total pedicle length, real pedicle length, and flap-related complications were reviewed.

RESULTS: Central perforators were used in 60 cases (group 1), and peripheral perforators in 40 cases (group 2). On average, the flaps were smaller in group 1 than in group 2 (159.6 cm^2 vs. 189.95 cm^2). Total pedicle length was almost the same (12.12 cm vs. 12.88 cm), but the mean real pedicle length was greater in group 2. Four cases of partial loss of flap occurred in group 1. In group 2, there were 3 cases of partial loss and one case of total flap loss, but there was no significant difference between the groups.

CONCLUSION: Using eccentrically located perforators near the flap margin is a simple method of extending the real pedicle length, but there have been concerns regarding flap perfusion and distal vascularity. Our findings suggest that, in thoracodorsal artery perforator flaps, both eccentric and central perforator are safe options.

REFERENCES:

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FIGURE LEGEND:

Fig 1. Flaps with centrally located perforators.

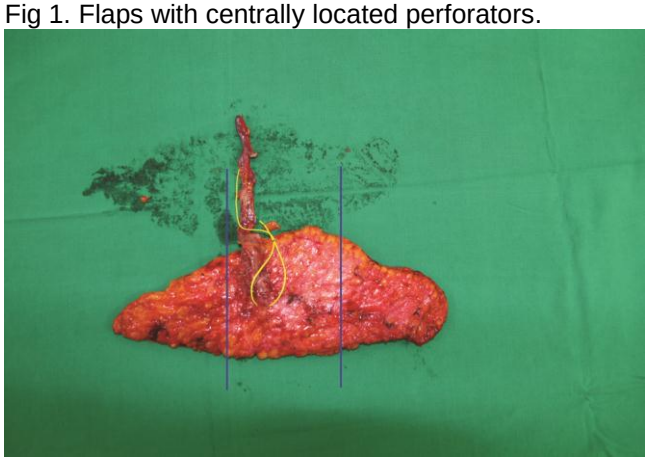

Fig 2. Flaps with peripherally located perforators.