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ABSTRACT SUBMISSION TITLE: *C4 - Reverse Ulnar Digital Artery Hypothenar Perforator Flap: A Cadaveric Study with Two Clinical Cases*

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Abstract Text:

PURPOSE:

Local flaps are commonly used for digital reconstruction of soft tissue defects. There remains a paucity of options available for small finger volar and dorsal soft tissue defects distal to the proximal interphalangeal joint. The purpose of this study was to analyze perforators along the hypothenar eminence arising from the artery of the ulnar side of the small finger as it comes off the superficial palmar arch for consistency and potential to be used for perforator-based flap reconstruction of any volar and dorsal soft tissue defects of the small finger.

METHODS:

Four cadaveric upper extremities were injected with Microfil® silicone injection compound. Dissection was performed from the superficial palmar arch to the ulnar digital artery of the small finger and perforators were identified and analyzed for consistency and utility. Flap elevation was performed based on these perforators in a small finger reverse ulnar digital artery fashion. (Fig. 1a, b.)

RESULTS:

All cadaveric dissections showed a suitable perforator pattern over the hypothenar region with a minimum of 5 perforators available for which to base a flap to address both dorsal and volar defects of the small finger. Two clinical examples are presented confirming the viability and utility of this novel flap. (Fig 2a, b. 3a, b.)

CONCLUSIONS:

To our knowledge this is the first description, anatomic study, and clinical example of this novel flap. The small finger reverse ulnar digital artery hypothenar-based perforator flap is a viable option with a reliable perforator pattern, providing a functional solution for reconstruction of soft tissue loss of the small finger from the metacarpal phalangeal joint all the way down to the fingertip with glabrous skin.