

# Thumb Ulnar Artery Perforator Flap

## An alternative for thumb & 1st web space reconstruction

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### Introduction

- **Thumb's ulnar digital a. (TUDA)** yields **constant perforators** surrounding prox. phalanx (palmar→dorsal).
- **Thumb ulnar digital a. perforator (TUDAP) flap**; originally described for 1<sup>st</sup> web space contractures by the main author.
- **Perforator skeletonization unrequired** for flap displacement → 1<sup>st</sup> web space defects.

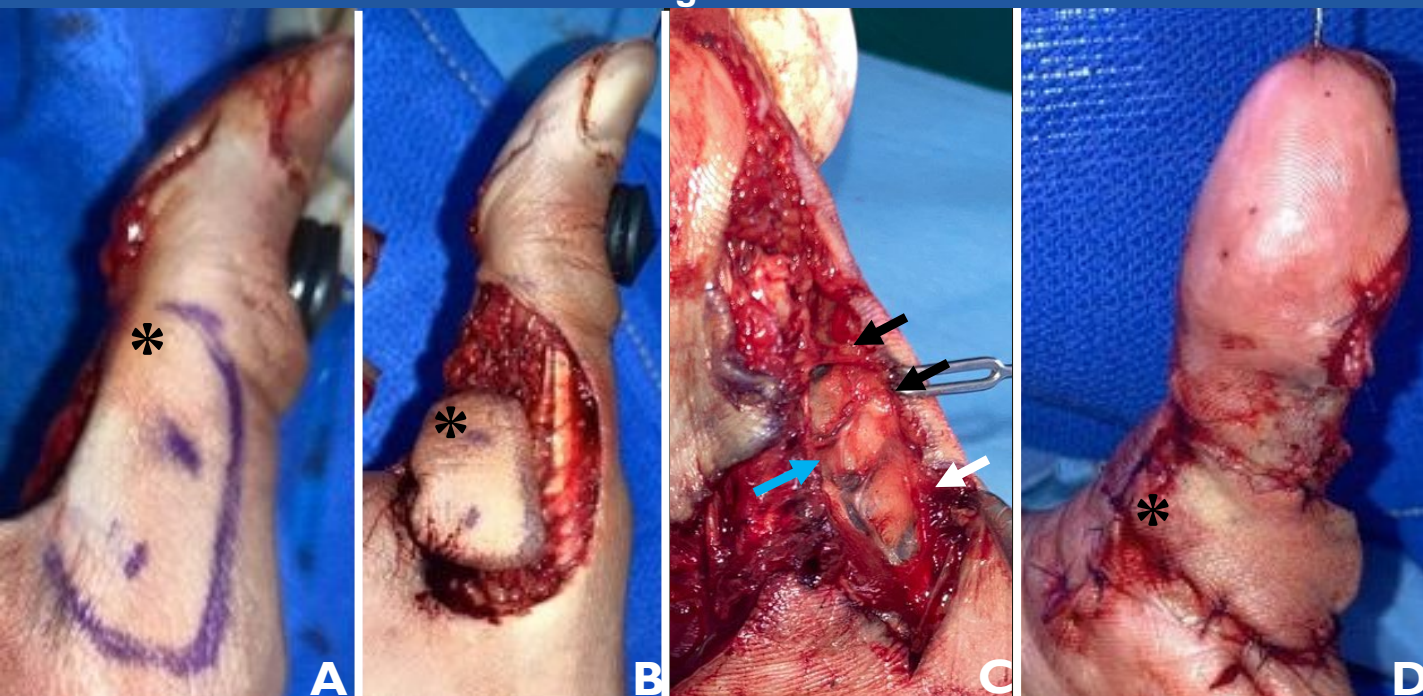
### Methods

- 21-y.o. ♂ w/ IP & MCP thumb flexion contracture d/t knife wound at TII flexor zone (7-Mo prior).
- Original TUDAP flap skin paddle design & palmar dissection performed **until perforator ID**.
- **Uttermost proximal TUDAP preservation w/ distal perforator release** → 90° pivot rotation.
- **TUDAP flap modification** allowed a large TII flexor defect coverage after scar contracture release.

### Results

- IP K-wire fixation, oblique pulley recons, FPL recons (PL graft & pull-out).
- Volar phalanx coverage w/**TUDAP pivot flap** & donor-site closure w/FTSG.
- **18-week follow-up** w/o infection, dehiscence, or necrosis.

Figure 1

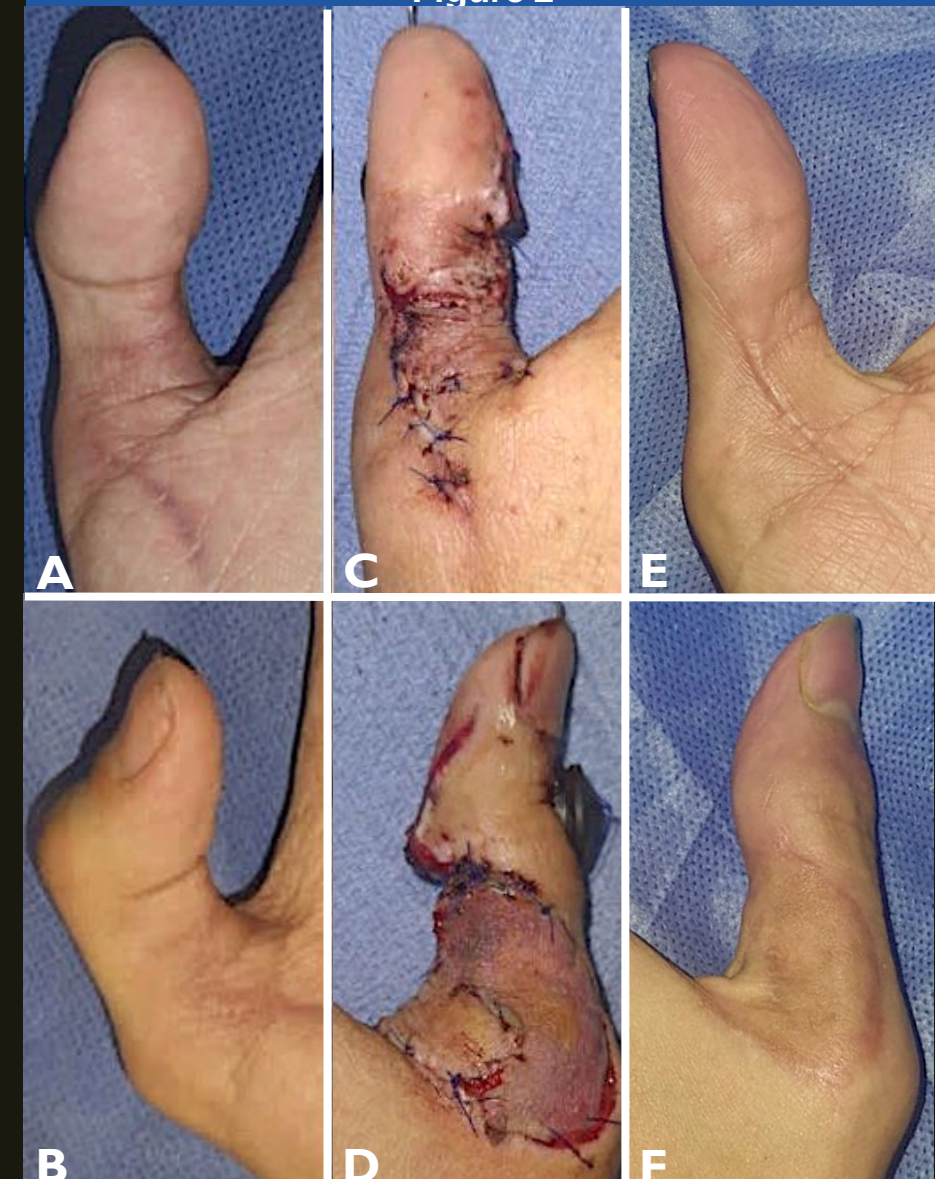


(A) Flap design. (B) Skin paddle dissection. (C) **Blue arrow: TUDA.** / **Black arrows: Released TUDAP's** / **White arrow: Preserved TUDAP.** (D) Immediate post-op. \*: Flap's 90° pivot rotation.

### Conclusions

- **TUDA constant perforators** ensure flap's viability.
- **TUDAP flap's skin paddle freq. intact** in hand burns → reliable choice for 1<sup>st</sup> web recons..
- **TUDAP flap pivot rotation** allows coverage of its prox. phalanx defects w/ minimal donor-site morbidity.

Figure 2



(A-B) Pre-op contracture, (C-D) 3<sup>th</sup>-wk f/u, (E-F): 18<sup>th</sup>-wk f/u. Adequate **TUDAP flap survival & FTSG integration**