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Fingertip (Tamai Zone I) Replantation under Local Anesthesia

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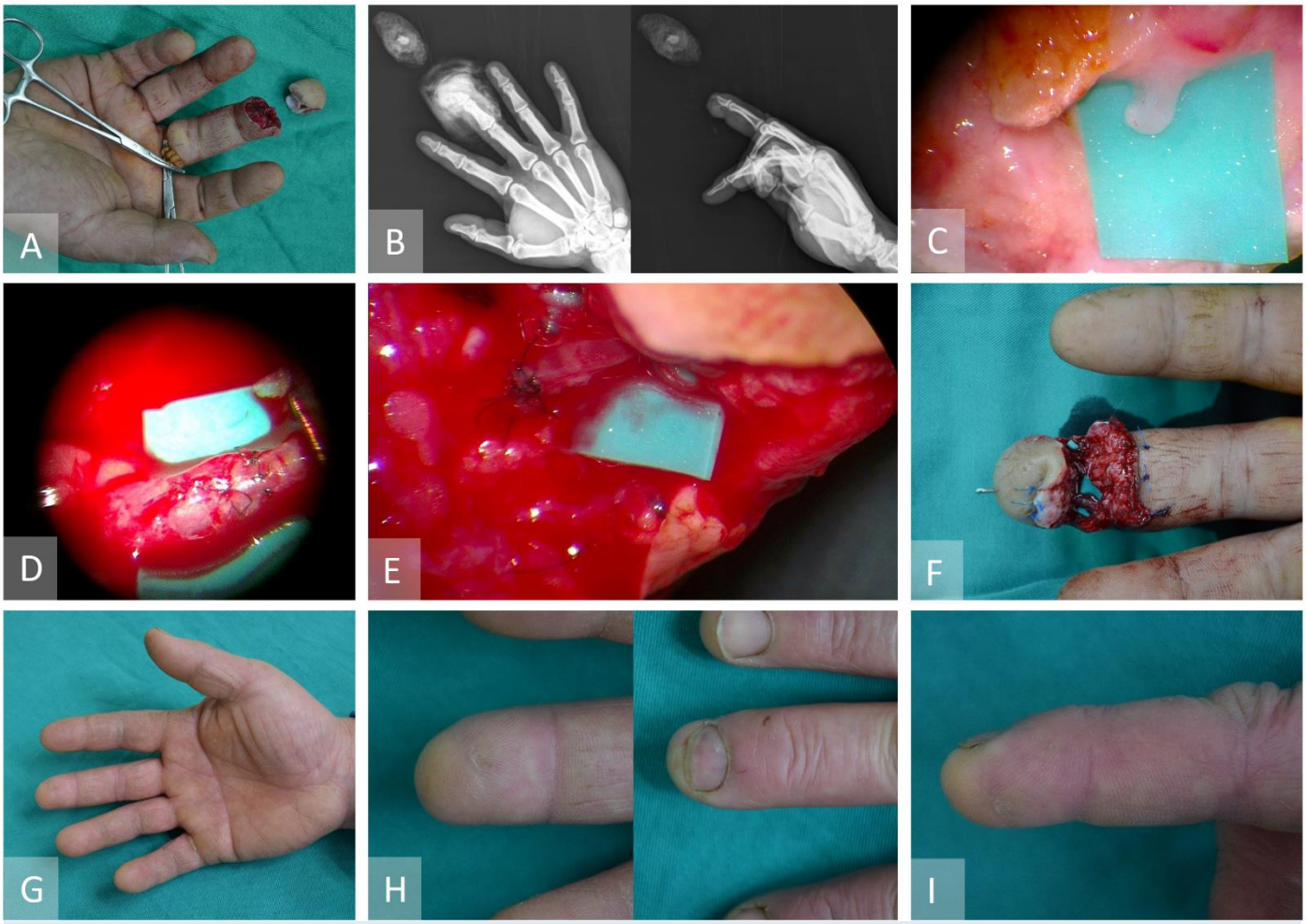

A 40-year-old male, who was a heavy smoker, suffered a crush injury of hand at workplace and was presented with Tamai zone I crush amputation to the distal phalanx of his dominant right middle finger (Panel A-B). Initial examination showed a good arterial stump at the amputated part. Hence, the replantation under local anesthesia with digital ring block was performed (Panel C). During intraoperative phase, one artery and one volar vein were identified. End-to-end microvascular anastomoses were achieved; however, no nerve was coapted (Panel D-F). The post-operative course was uneventful. After 15 months of follow-up, he regained protective sensation and pain-free contact surface. The patient was satisfied with both aesthetic and functional outcome (Panel G-I). Replantation under local anesthesia is possible, but rarely performed. It is only advisable if a short surgery is anticipated. Prolonged immobilization stimulates discomfort to the patient and causes patient initiated voluntary movements. Venous anastomosis is the most challenging part of fingertip replantation, where vein-to-vein anastomosis should be considered as the first-line option for its restoration. If the sizable vein cannot be identified, arterial-venous shunting and two-staged subdermal pocket procedure shall be the alternative surgical options. Arterial anastomosis-only replantation technique is an option when the vein is unavailable, but delay congestion should be anticipated. By following arterial anastomosis-only replantation technique, venous cutaneous fistula should be utilized via wound edge for its venous drainage. Massive blood loss is its main drawback and the conse-quence may be variable.

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