TWIN TRIUMPH*: The Unique Saga of Bilateral Hand Replant.*

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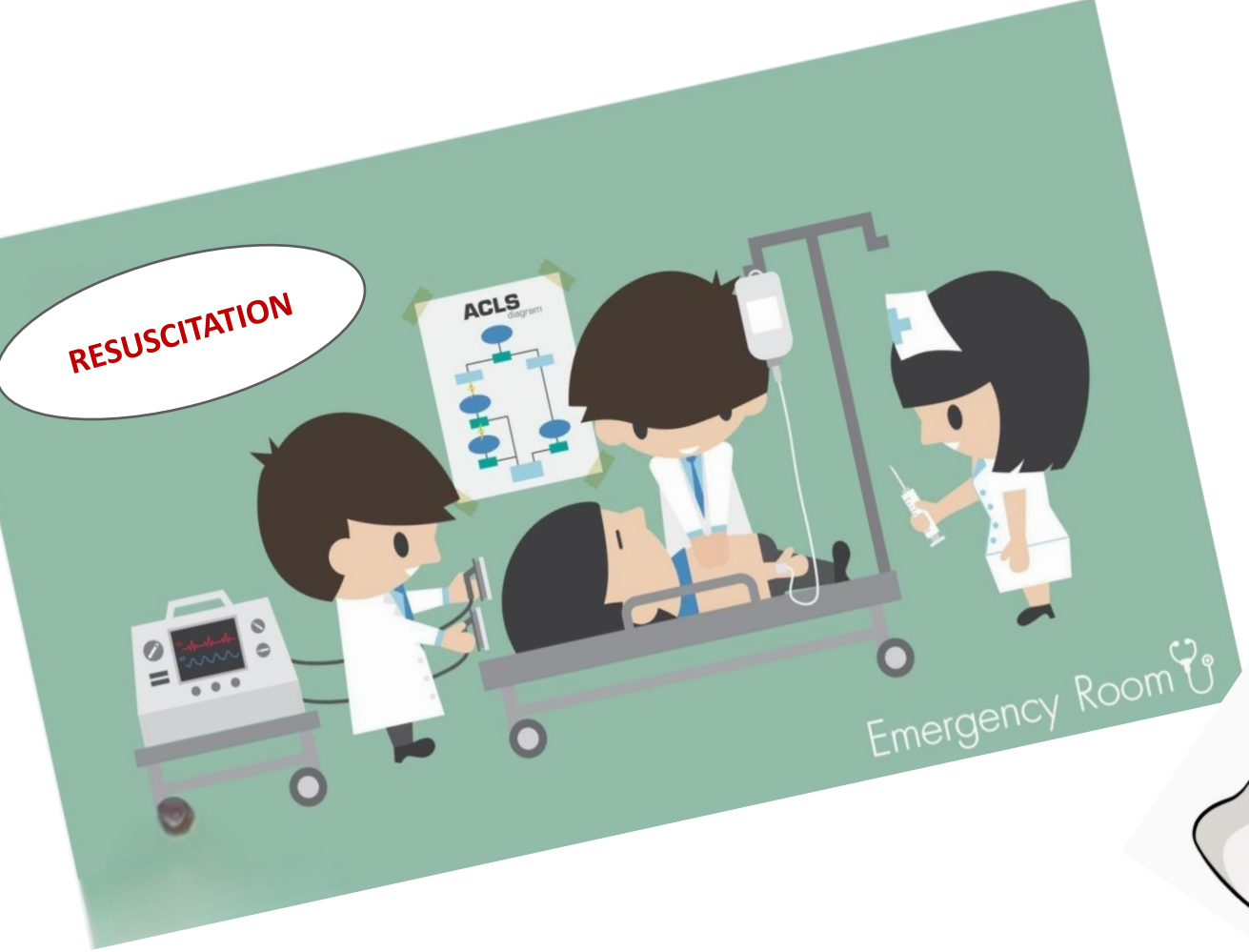
Why This Case ?

- 32/M
- Right Hand Dominant
- Assault by Sharp weapon
- 4 hours past injury

Left Hand

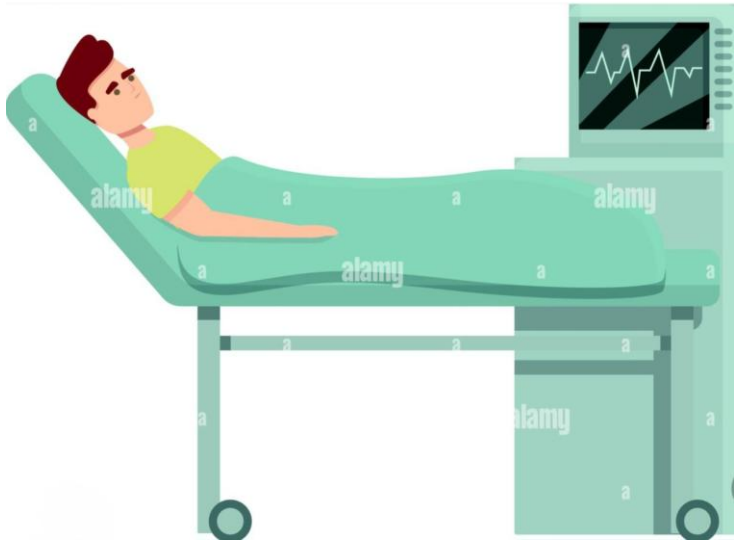
Right Hand



PRIORITY

Save Life *and* Vascularity of Both Hands.

Why Unique ?

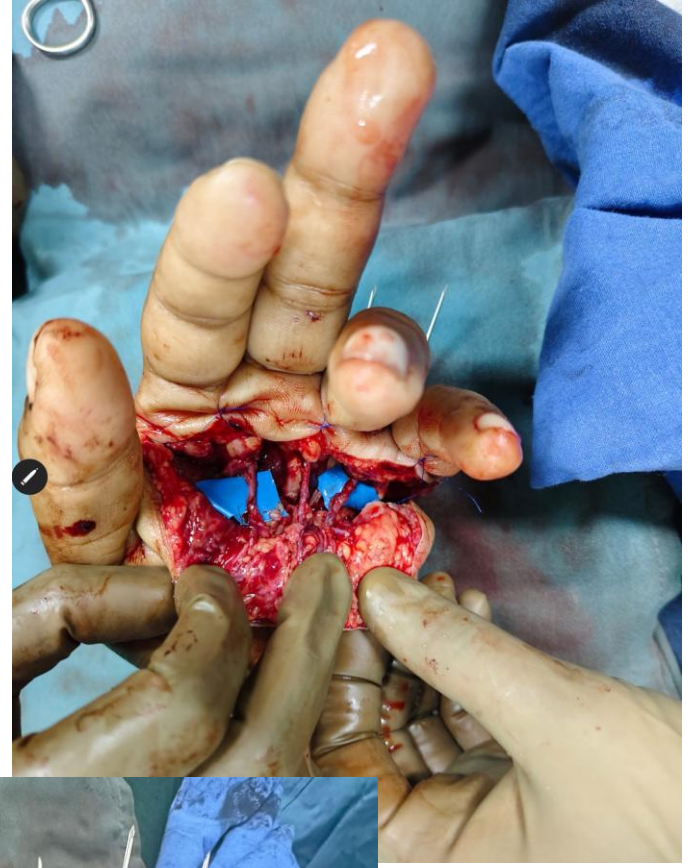


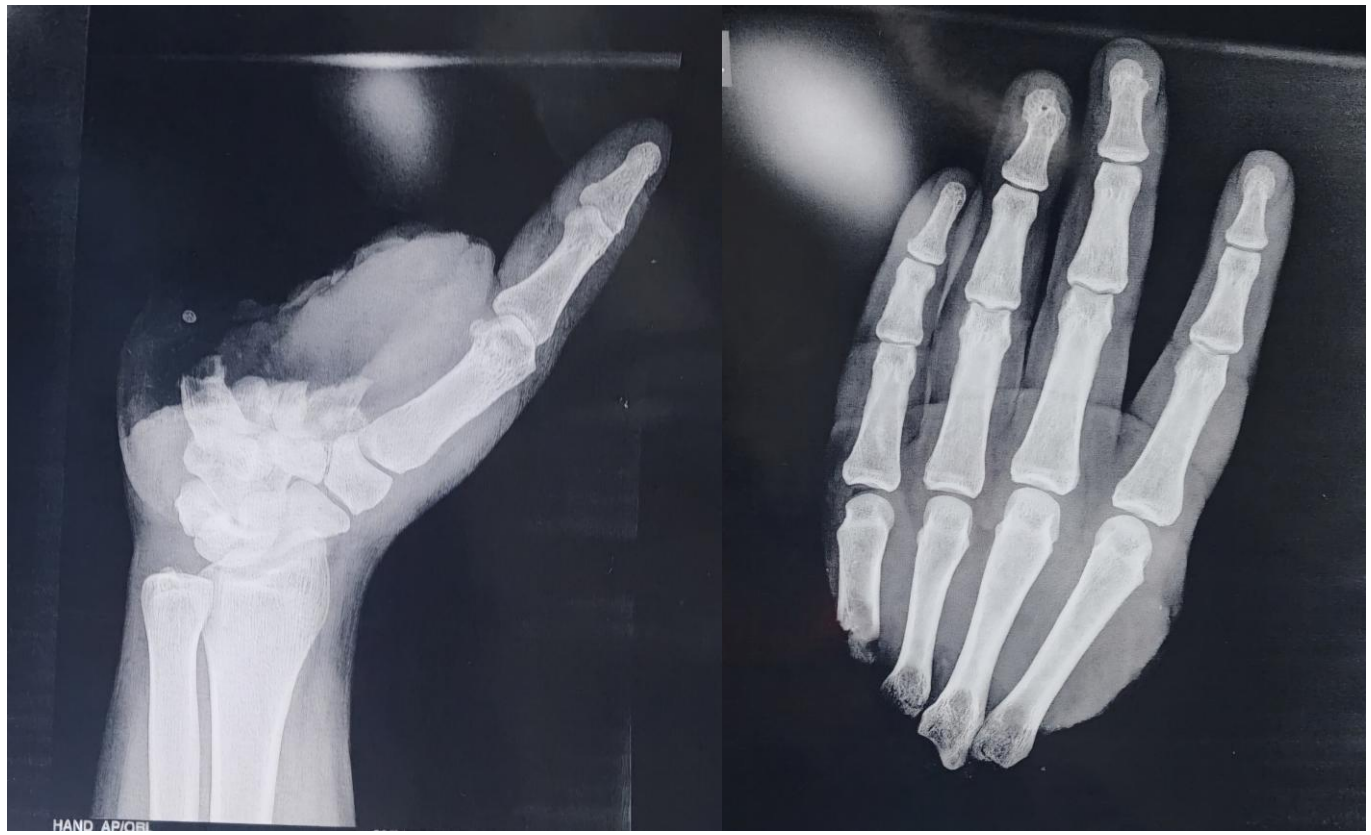
The First Surgery: Right Hand

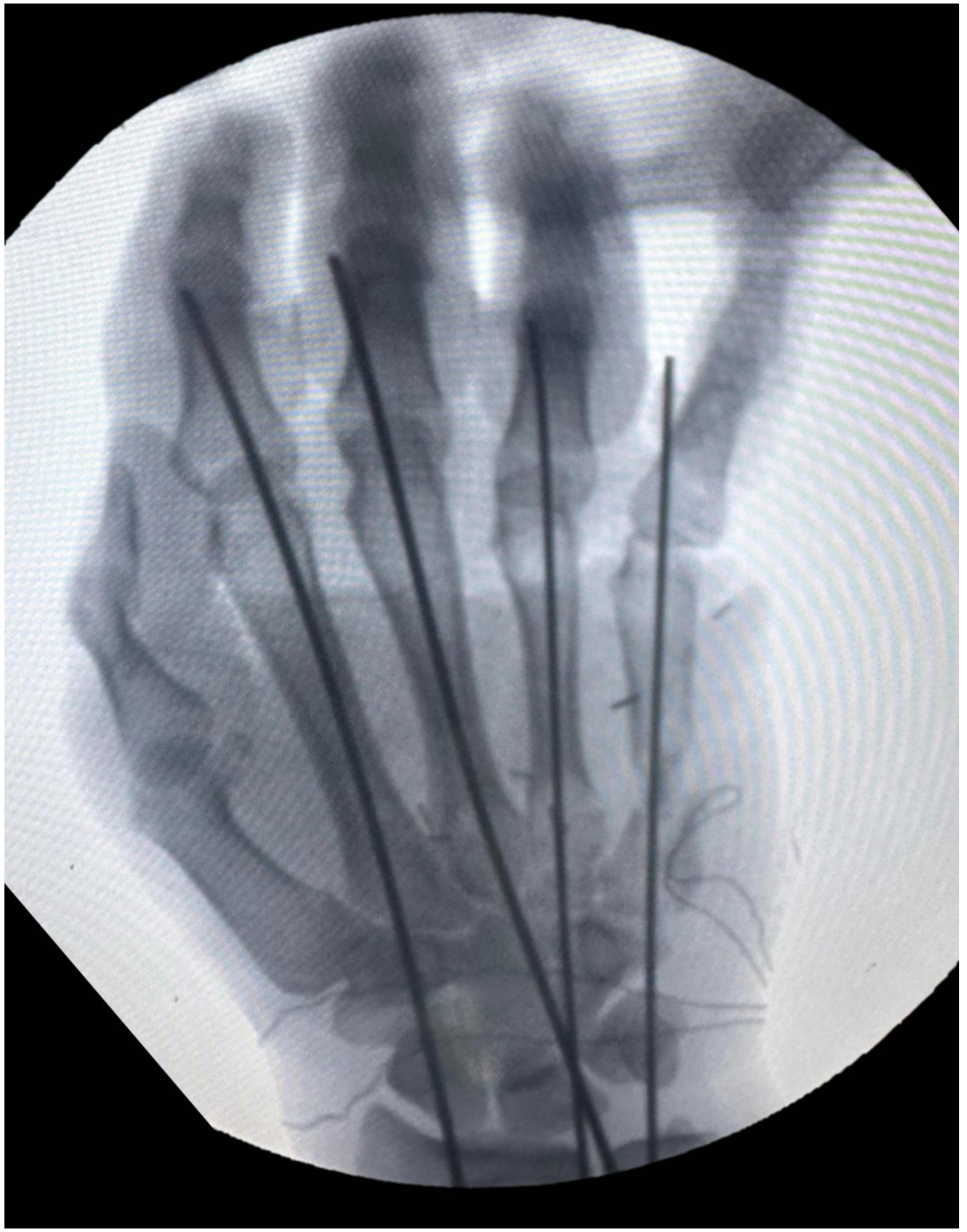
- Zone 3 exploration
- 5th metacarpal fixation
- Anastomosis of common digital arteries
- Nerve coaptation of common digital nerves
- Flexor tendon repair (FDS/FDP) through forearm exploration

Left Hand

- Skeletal stabilization
- Arterial anastomosis (common digital arteries)
- Venous anastomosis with vein grafts
- Tendons & nerves deferred deliberately to avoid jeopardizing circulation and stability




HAND AP/OBL



Immediate Post-op Left Hand

POSTOPERATIVE

- ICU Admission
- Elective Ventilation
- Dual Inotropes
- Monitoring for perfusion
- Weaned after stabilization

The Big ?

When should we go back for tendon and nerve repair?

- **Literature**: No clear guidelines.
- Too **early** → risk to vascular repair.
- Too **late** → fibrosis, neuroma, contracture, need for grafts.

Could everything we struggled to save be lost again.

The decision point became the turning moment of this saga.

Our Decision:

Post Operative Day 14

Why POD 14?

- **Nerve ends** fresh → prevented neuroma formation.

- **Tendons** still mobile → before fibrosis & scarring set in.
  (avoiding future need of tendon grafts)

- **Vascular anastomoses** still visible, not obscured by granulation.
  (safe dissection)

Calculated
Evidence inspired
***Novel* Decision.**

Second Operation, POD 14 (Left Hand)

- Exploration via **previous incision** + carpal tunnel extension + forearm extension
- Identification of **FDS & FDP tendons** → repaired
- Digital **nerves** identified and coapted.
- **Vascular repairs** carefully preserved.

However, 1 vascular anastomosis was slightly injured and was repaired

Outcome : ***Successful***

Present Status

- Both hands well **perfused**.
- All digits: **movement** present and improving
- No ischemic **complications**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The Global Picture (Statistics)

- **Rarity:** Bilateral major upper-limb amputations are extremely rare, estimated at **<5%** of all major limb amputations (1)
- **Bilateral Hand Amputation:** Only **~70–80 cases** of bilateral hand/forearm replantation have been documented worldwide to date.(2)
- **Survival Rate:** Reported survival rates of replanted hands are **65–80%** in specialized microsurgical centers (3).
- **Functional Outcomes:** Majority of long-term survivors regain protective sensation and partial motor function; **return to work is reported in 30–40%** of cases (4).

References:

1. Sabapathy SR, Venkatramani H. Replantation in upper extremity amputations. Indian J Plast Surg. 2003.
2. Gu YD, et al. Bilateral hand replantation: review of world literature and report of a case. J Hand Surg Br. 1994.
3.Battiston B, et al. Major limb replantation: review of 72 cases. J Reconstr Microsurg. 2002.
4. Chung KC, Alderman AK. Replantation of the upper extremity: current concepts. J Hand Surg Am. 2002.

Why This Saga Matters ?

- Demonstrates **staged replantation** in unstable patient.
- Suggests POD 14 as a safe, **pragmatic window** for tendon/nerve repair.
- Expands **literature** on bilateral hand salvage.

Twin Triumph:

Life Saved

Function preserved

Literature Expanded.

Take Home Message

- Bilateral replant → not just **possible**, but can be **functional**

- Staged repair can be **life-saving** and **limb-saving.**

- Sometimes the right decision is not in books, but in the ***operating theatre***.

Twin Triumph:
From Nothing to Everything.

“Hands that were gone, to move and feel again.”

THANK YOU