

# Rubber band syndrome An under recognized condition in pediatric patients

- It is a rare but potentially devastating condition that occurs when tight ligatures are tied around the wrist for prolonged periods, leading to progressive tissue compression and necrosis.
- **Case** :1 yr old came with 3 months h/o circumferential swelling of left wrist with purulent discharge.
- 4 months back a thread was tied around child wrist ,removed 2 months back.
- However, mother could not recall tying of rubber band to the wrist .
- Despite repeated antibiotics ,swelling progressed to entire hand.

- **On examination** : linear circumferential constriction scar on the left wrist, with four discharging sinuses on the volar, dorsal, and radial aspects, with sprouting granulation tissue and crusting.
- Associated with swelling in dorsum of the hand and fingers.
- Finger movements intact , capillary refill normal.
- **Investigations** : lab investigations –normal



Figure 1a and 1b: Linear circumferential lesion with discharging sinuses on the lateral and volar aspect of the wrist with distal swelling.

- **USG** -circumferential foreign body located in the subcutaneous plane, superficial to the carpal tunnel and extensor tendons.
- **Doppler studies** demonstrated triphasic flow in both radial and ulnar arteries.
- **MRI** -hypointense band around the wrist joint with osteolysis of the radius and normal neurovascular bundles.
- **Surgical exploration** revealed rubber band over lying flexor tendons.
- Post surgery antibiotics analgesics and daily dressings wound healed with wrist joint function .

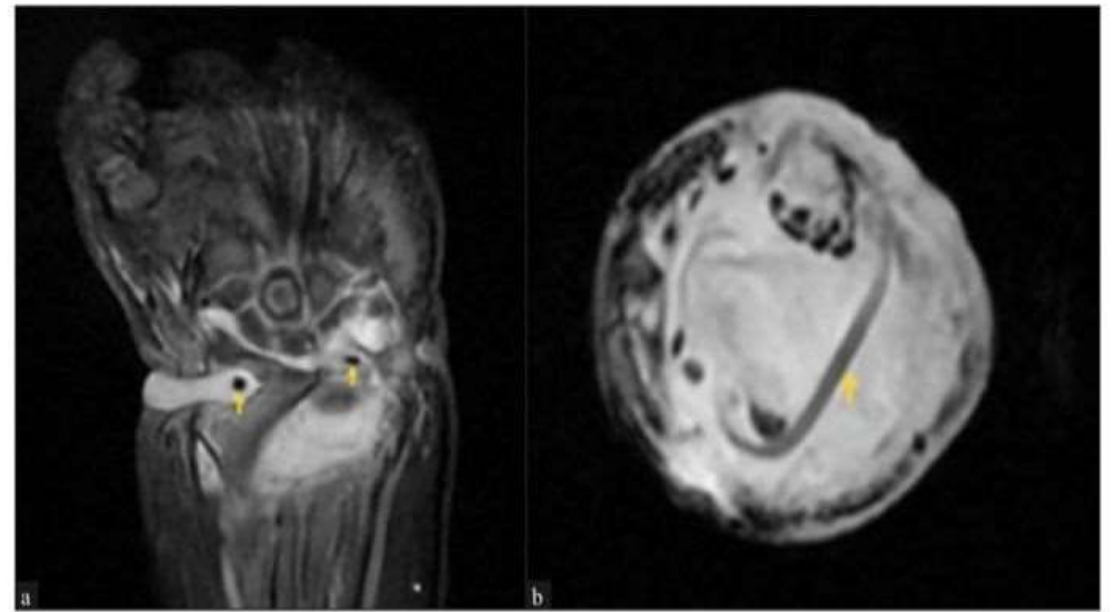


Figure 2: a; (coronal) and b (axial): Pre-operative short tau inversion recovery MRI shows (2a) a T2 hypointense band (yellow arrows) around wrist joint with pressure osteolysis of the radial shaft and (2b) Band encasing both flexor and extensor tendons, suggestive of rubber band syndrome (yellow arrows indicate the band)



Figure 3: (a) Intra-operative image of the deeply embedded rubber band, (b) Well-healed scar one month post surgery.

- It is often mistaken for other conditions like cutaneous tuberculosis , deep fungal infections, and tubercular osteomyelitis.
- This case highlights the need to include RBS in the DD of persistent wrist and hand lesions, especially in children unresponsive to conventional therapies.