



**ESSR** EUROPEAN SOCIETY OF  
MUSCULOSKELETAL  
RADIOLOGY

# **PAINFUL SNAPPING EXTENSOR POLLICIS LONGUS TENDON : SIX PATIENT CASES**

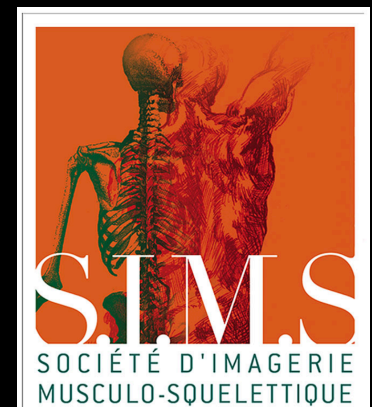
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16 JUNE 2018

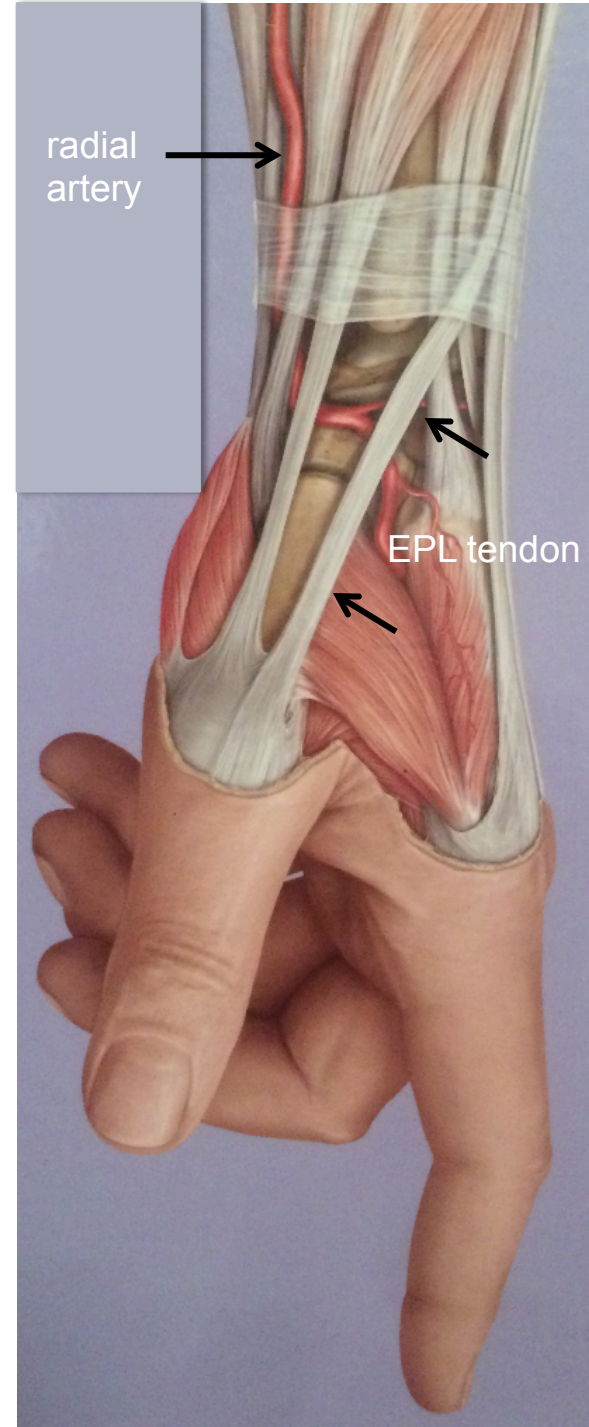
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# INTRODUCTION

- **Snapping of EPL tendon = not reported previously**
- **Radial artery thrombosis: rare < *ulnar artery thrombosis*.**
  - *Known causes :*
    - Local : trauma (radial artery catheterization, other trauma)
    - General : embolism, vasculitis, atherosclerosis



# OBJECTIVES

- Describe a new entity combining a painful snapping of EPL tendon and radial artery thrombosis at the wrist.
- Specify clinical and imaging characteristics.

# **MATERIALS AND METHODS**

- **Retrospective & multicenter study**
- **6 cases of painful snapping of EPL tendon**
  - 5 cases in Ile de France and 1 case in Noumea (New Caledonia).
- **December 2015 to February 2017**

# MATERIALS AND METHODS

## ➤ CLINICAL DATA

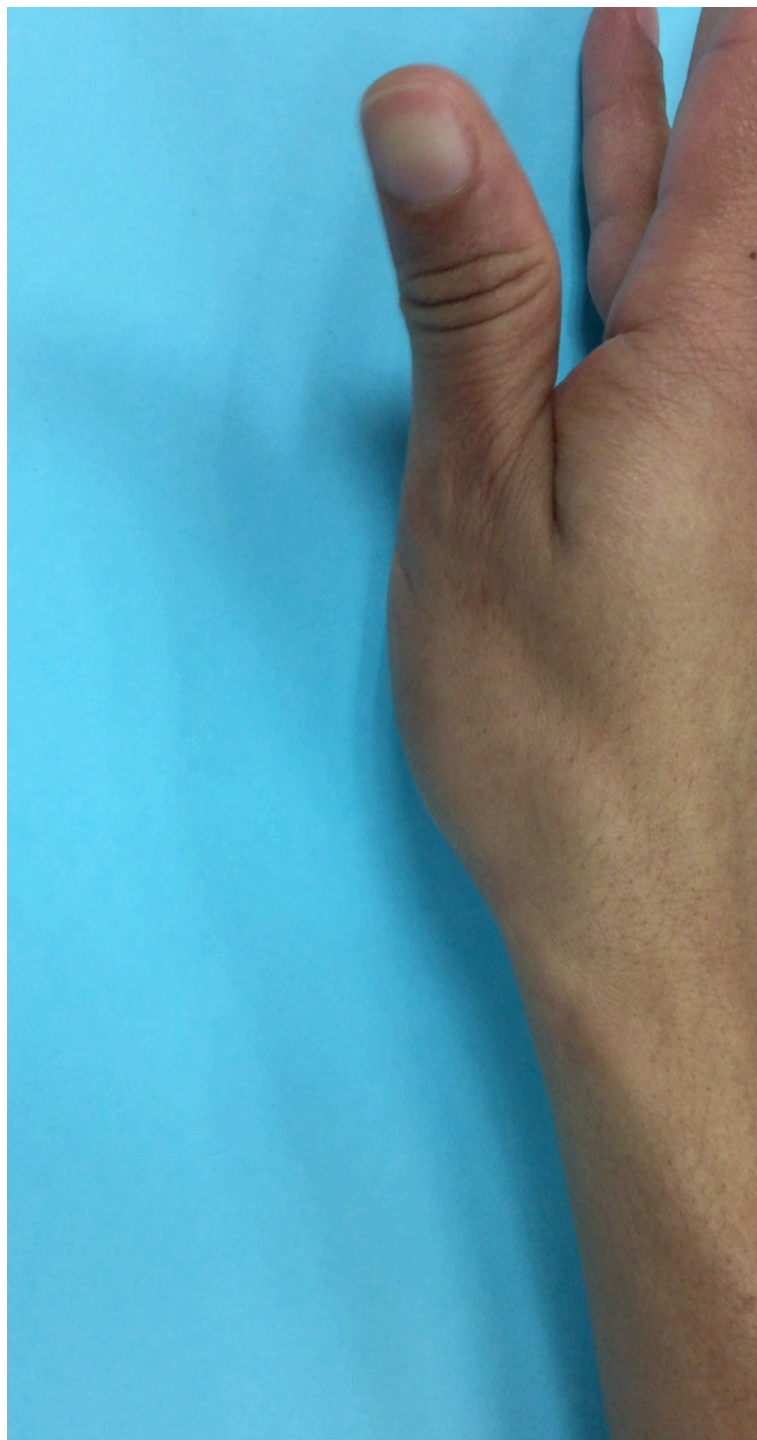
- Demographics (age, gender, occupation)
- Medical history
- Dominant hand; Side affected
- Symptoms associated with painful EPL snapping
- Period between onset and diagnosis
- Uni- or bilateral nature of the snapping
- Trigger factor
- Smoking

## ➤ MEDICAL IMAGING EXAMINATIONS

- Medical imaging examinations performed for each patient
- Abnormalities identified

## ➤ ETIOLOGICAL ASSESSMENT

## ➤ TREATMENT RECEIVED



# CLINICAL RESULTS

	Age	Sex	Medical History	Profession	Smoking
Patient n°1	29	F	-	Nurse	Occasional Cannabis 1/day
Patient n°2	40	M	-	Cosmetics sales representative	Yes, 10 PY
Patient n°3	30	M	Churg-Strauss	Doctor	No
Patient n°4	51	F	-	Landscape designer	No
Patient n°5	36	M	-	Banker	No
Patient n°6	35	F	3 ectopic pregnancy	Nurse	Yes, 10 PY
	37 y [29-51]	67% F 33% M			

# CLINICAL RESULTS

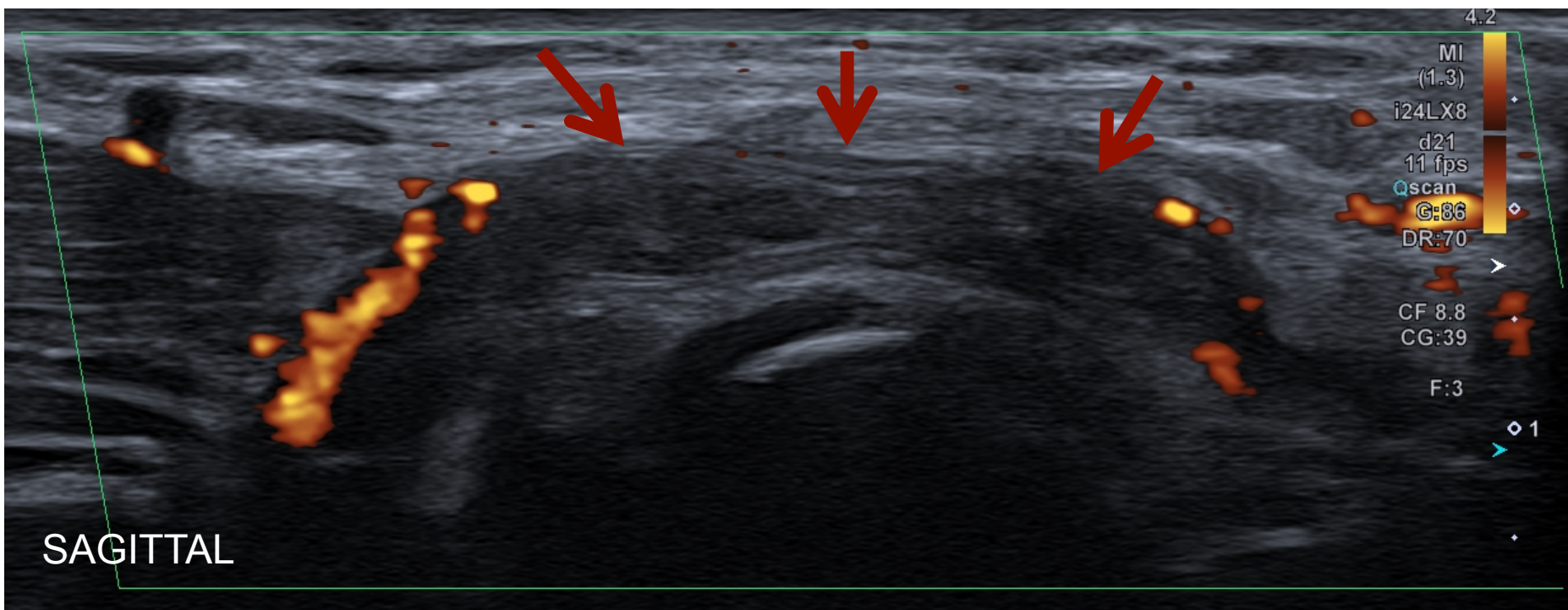
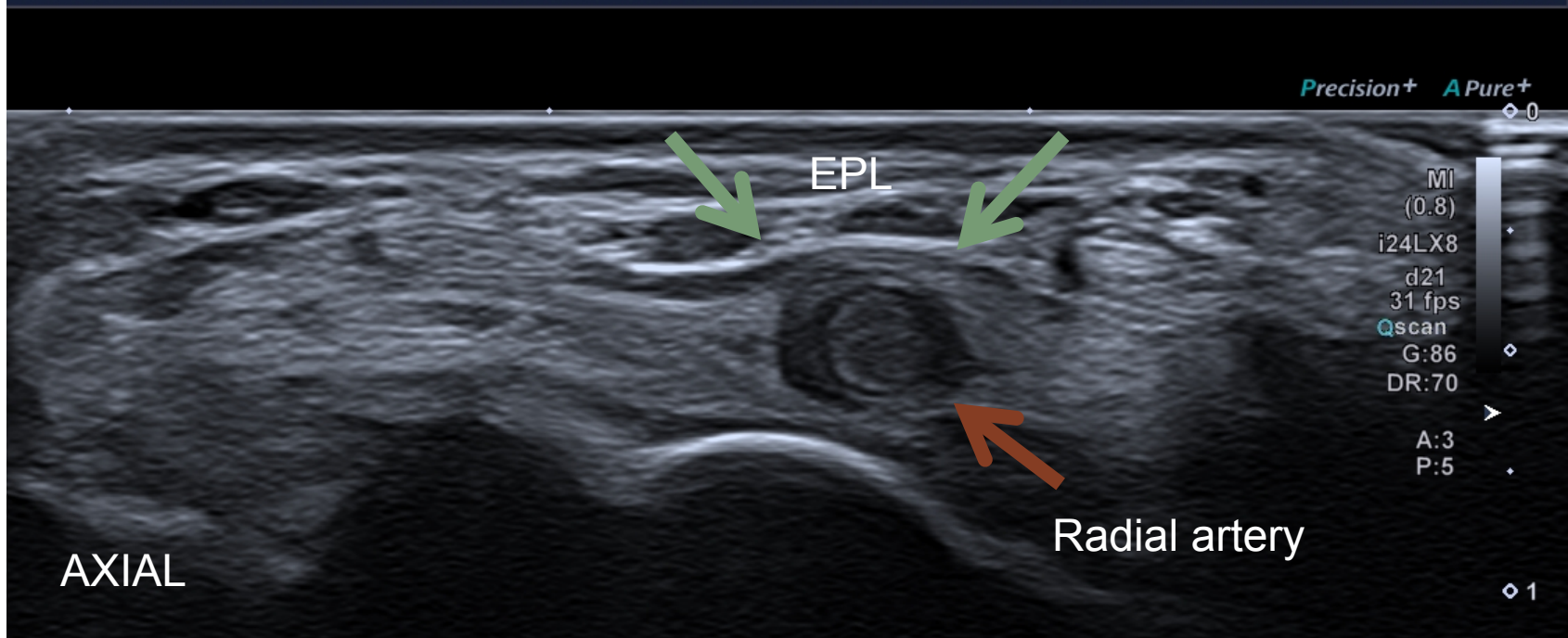
	Dominant hand affected	Trigger factor	Associated symptoms	Controlateral snapping
Patient n°1	YES (right)	0	Dysesthesia thumb/index	no
Patient n°2	YES (right)	0	-	no
Patient n°3	YES (right)	0	Raynaud' syndrome thumb/index	YES, painless + pre-existing homolateral snapping
Patient n°4	NO (left affected)	Unusual gardening activity	-	YES, painless
Patient n°5	YES (right)	0	-	no
Patient n°6	YES (right)	0	-	no
	83%			33%



# IMAGING RESULTS

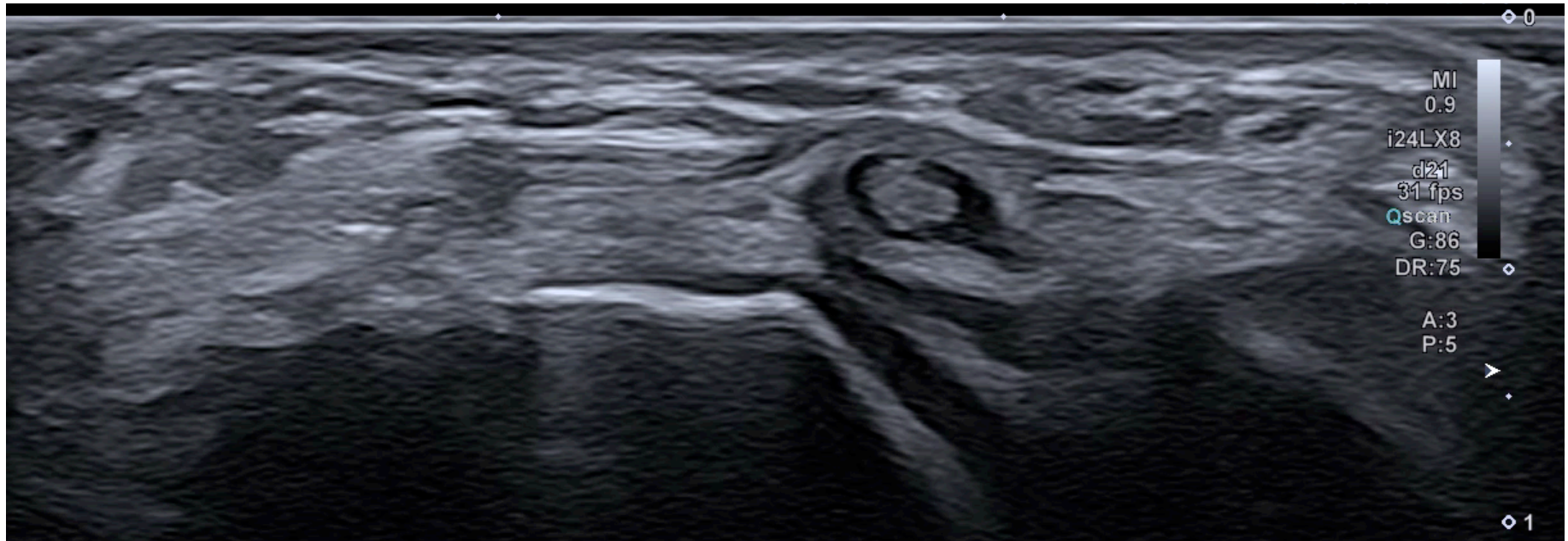
## ➤ **Echo-Doppler (N = 6)**

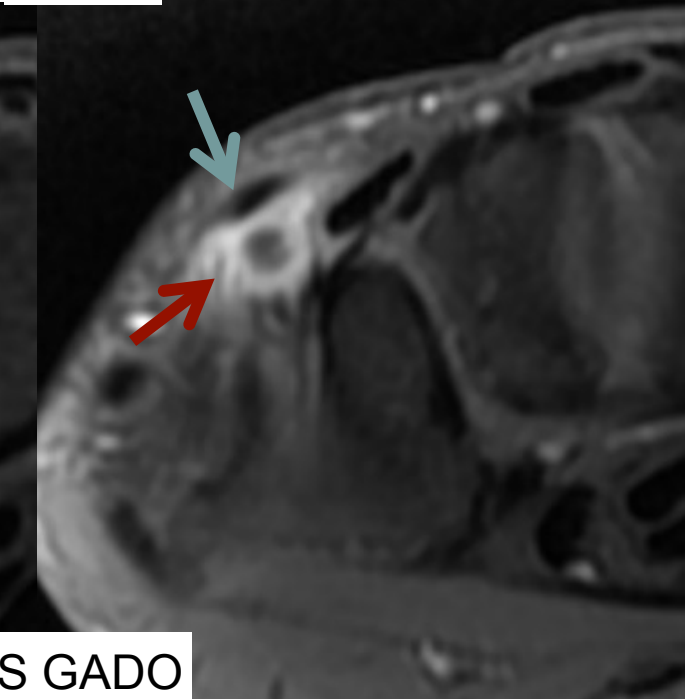
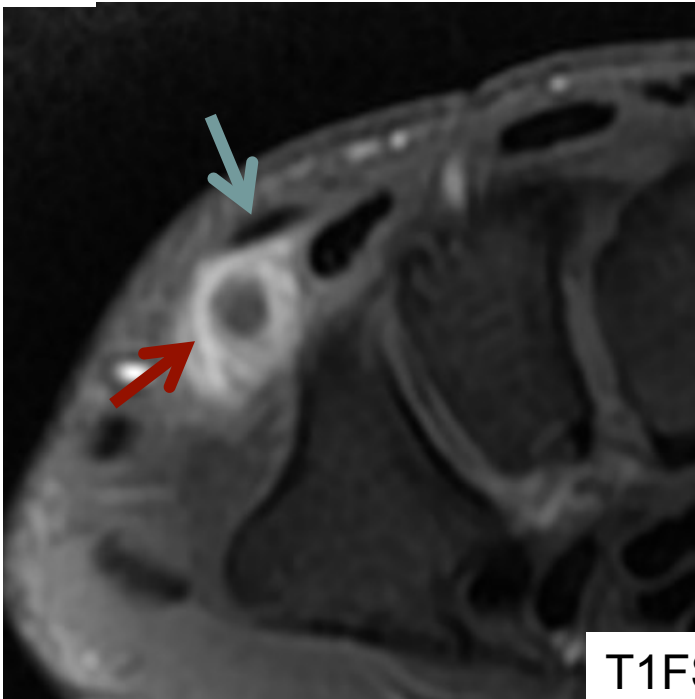
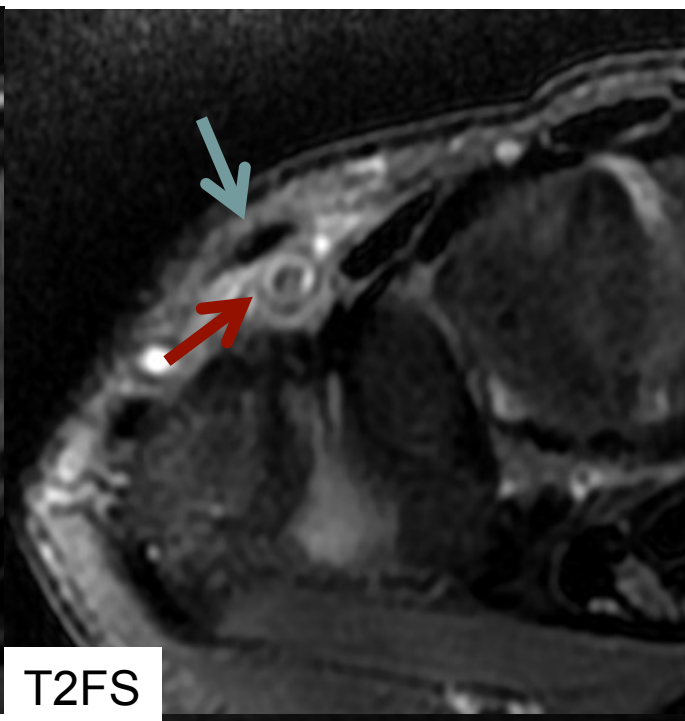
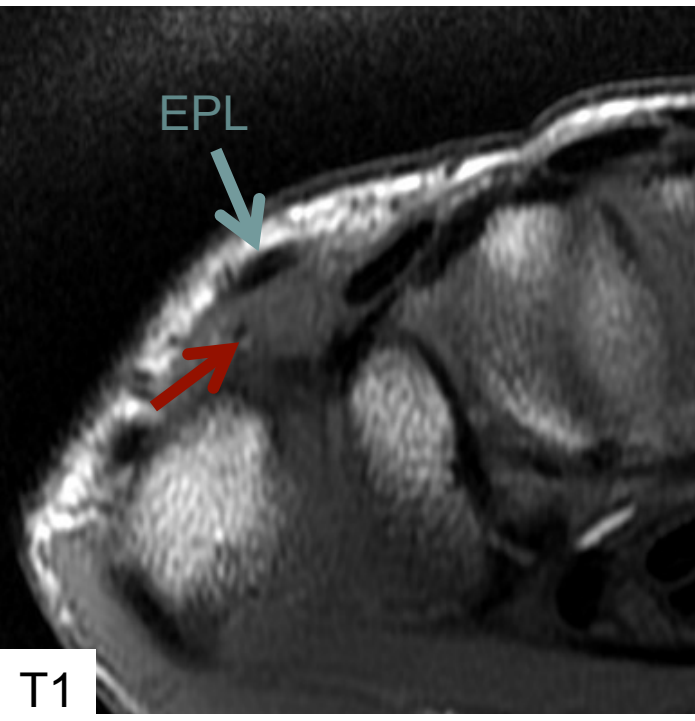
- **No abnormality of the EPL tendon : 100%**
- **Segmental thrombosis of the radial artery : 100%**
  - Complete : 100%
  - Beyond the superficial palmar arch
  - Length of thrombosed segment : **19 mm (17-22)**
  - Trapezometacarpal joint



# IMAGING RESULTS

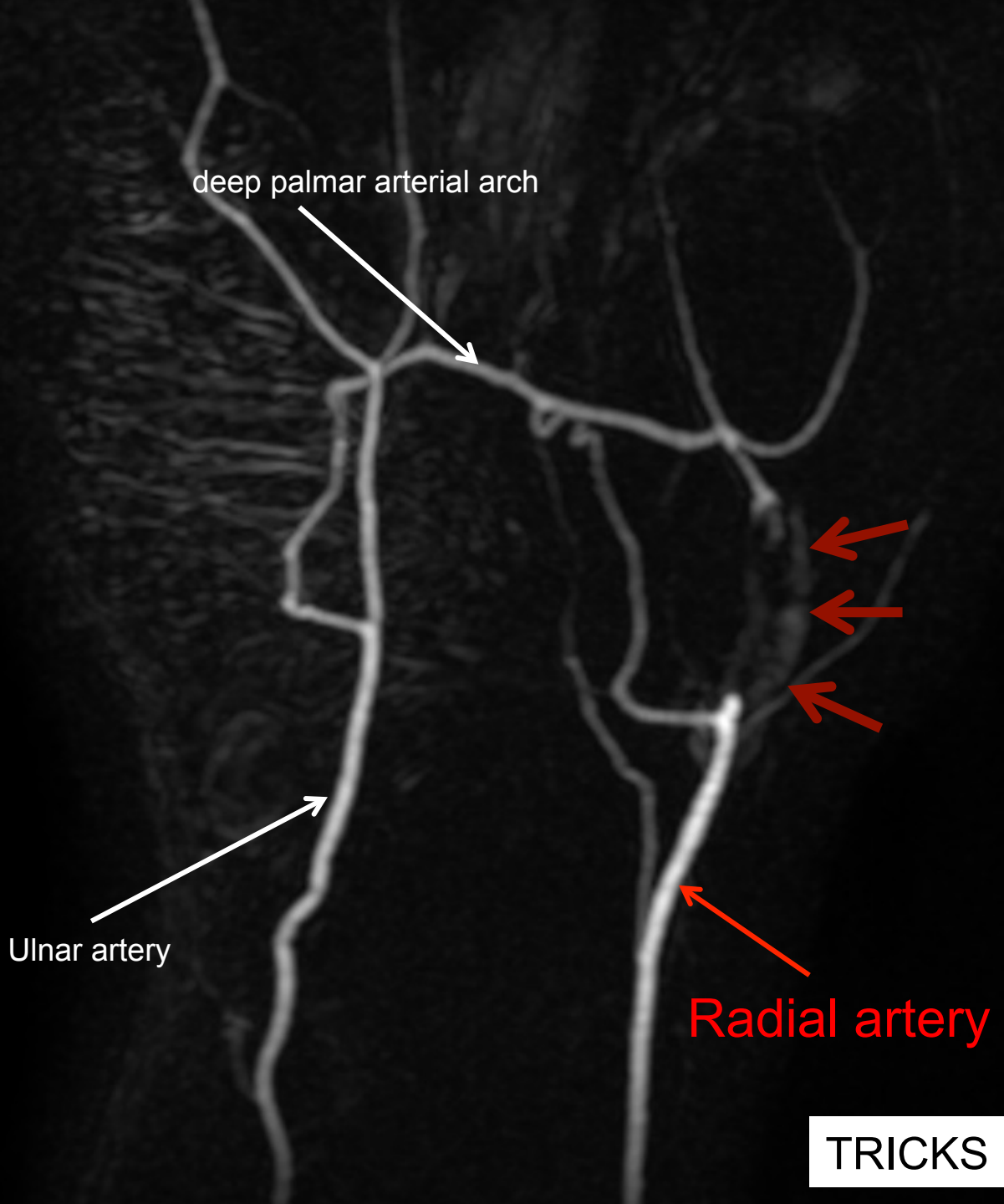
- **Echo-Doppler (N = 6)**
  - Visualisation of the snapping while in motion : 100%





➤ MRI injected (N = 6)

**N = 4**



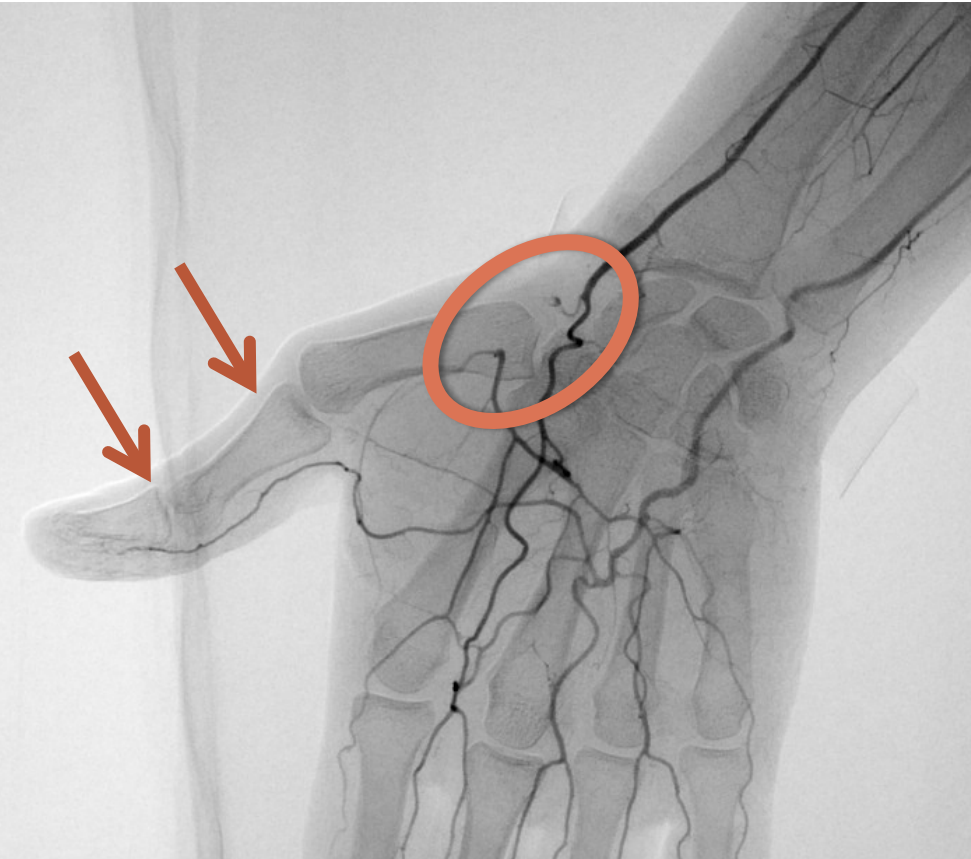
# IMAGING RESULTS

➤ Scanner (N = 3)

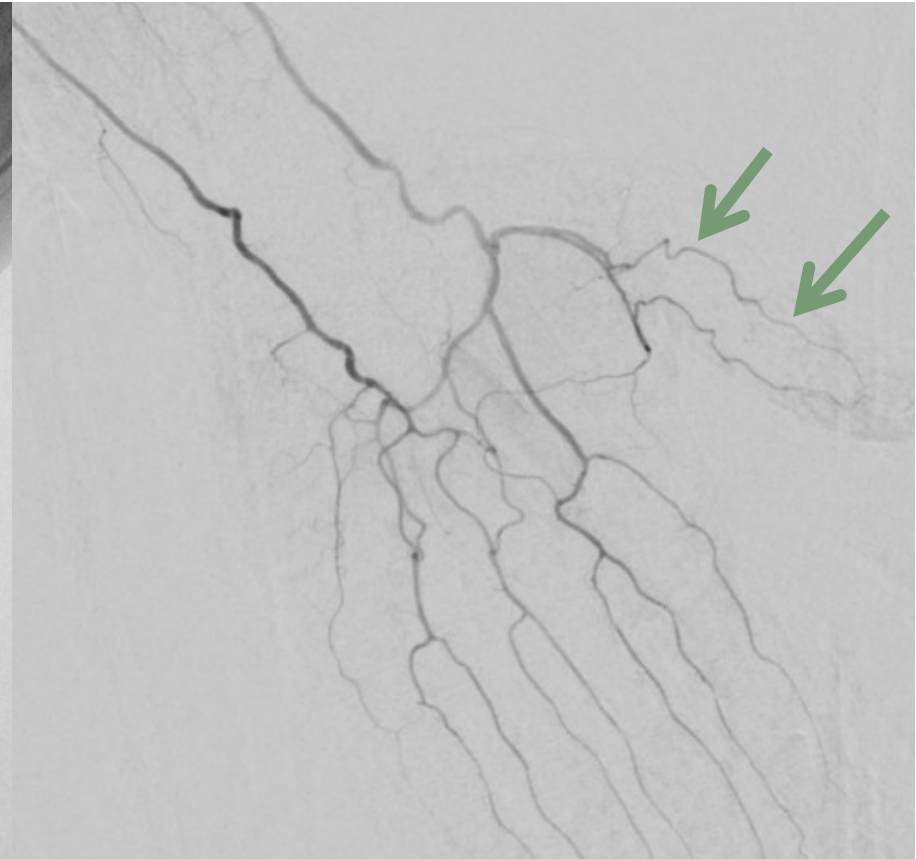


# IMAGING RESULTS

## ➤ Arteriography (N = 2)

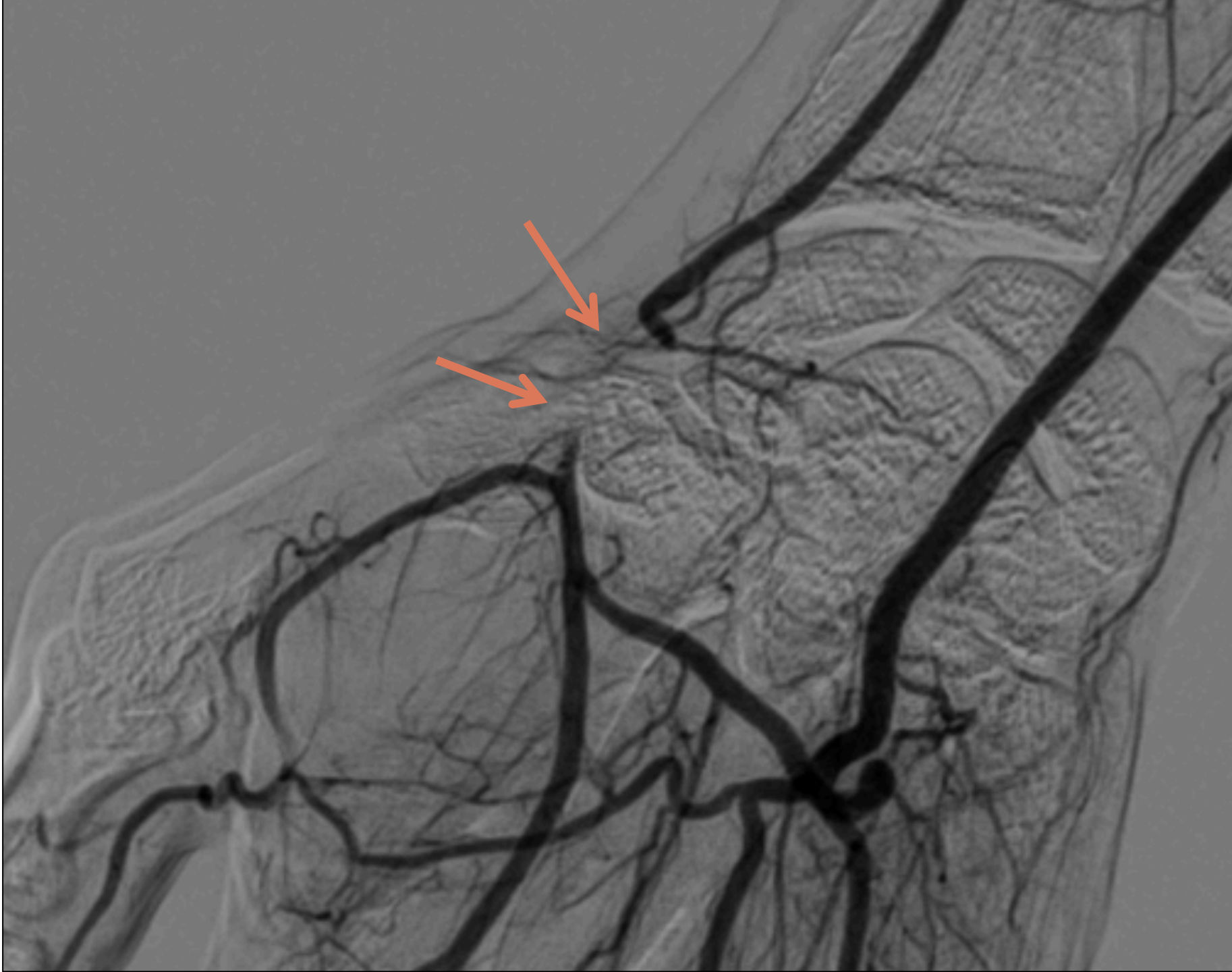


Affected wrist



Non affected wrist

- No evidence of vasculitis
- Lack of radial digital artery perfusion in the thumb (N = 2)





# ETIOLOGICAL ASSESSMENT RESULTS

- **Cardiovascular and immunological evaluation**
  - **Positive (N = 1)** : foramen ovale and interauricular septum aneurysm (treated)
    - *Hypothesis of embolus **not retained** because no associated thrombus*
  - **Negative (N = 5)**

# TREATMENT RESULTS

## ➤ **Surgery (N = 2)**

- 1 at onset
- 1 after failure of medical treatment

## ➤ **Medical treatment (N = 5)**

- No improvement (N = 1)
- Pain reduction (N = 4)
- Disappearance of thrombosis (N = 3)
- Persistence of the snapping (N = 3)

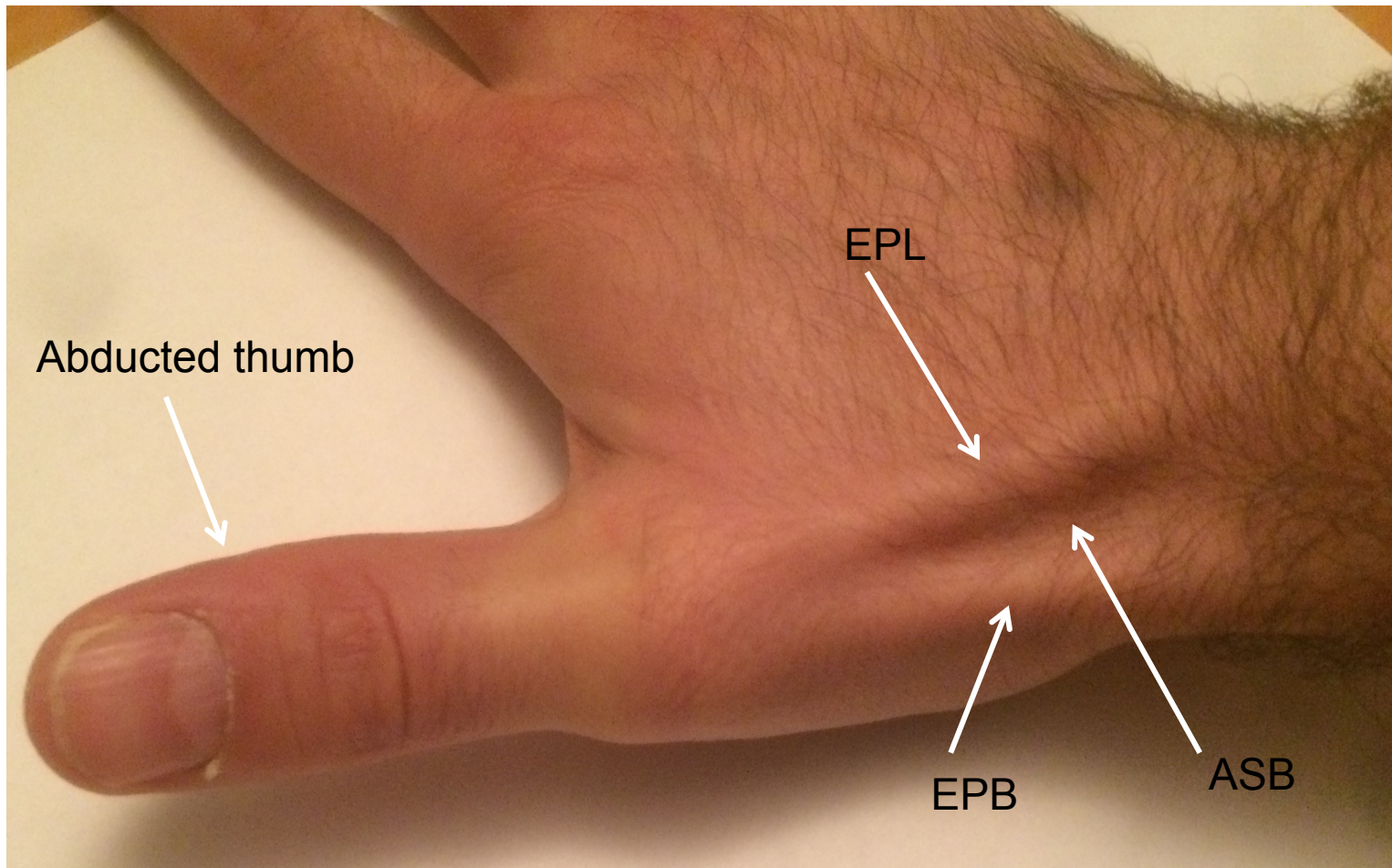
# TREATMENT RESULTS

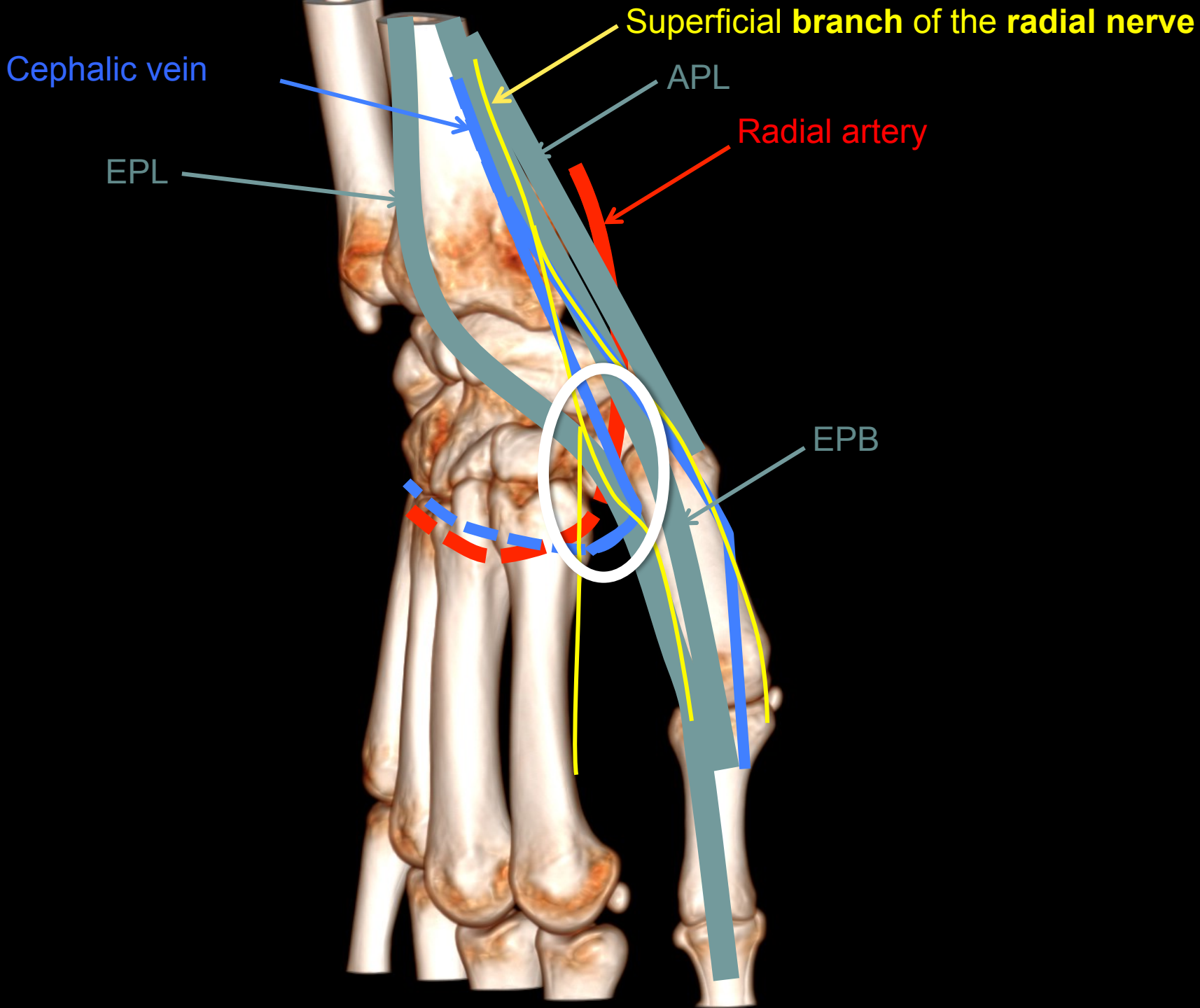
Post-operative histological analysis :

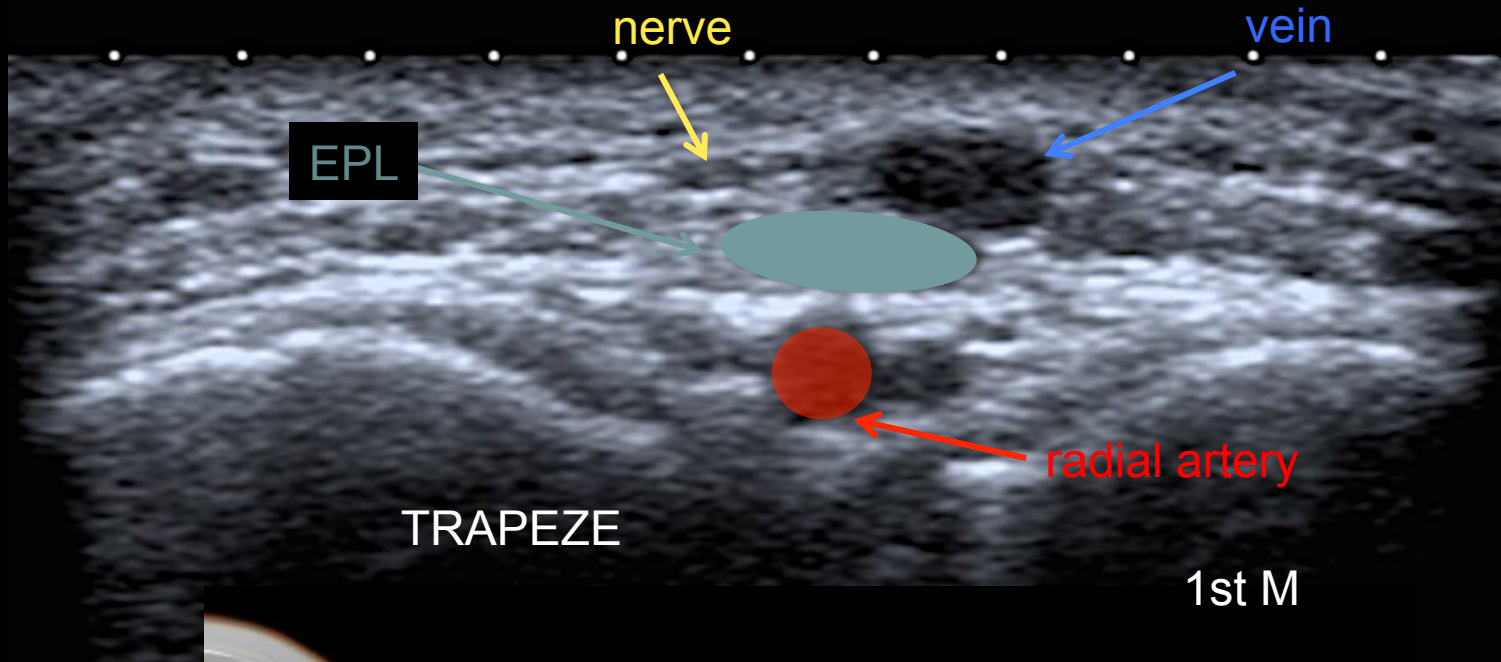
- Confirmed the thrombosis of the radial artery
- no abnormality in the layers of its wall
- no sign of vasculitis

# DISCUSSION

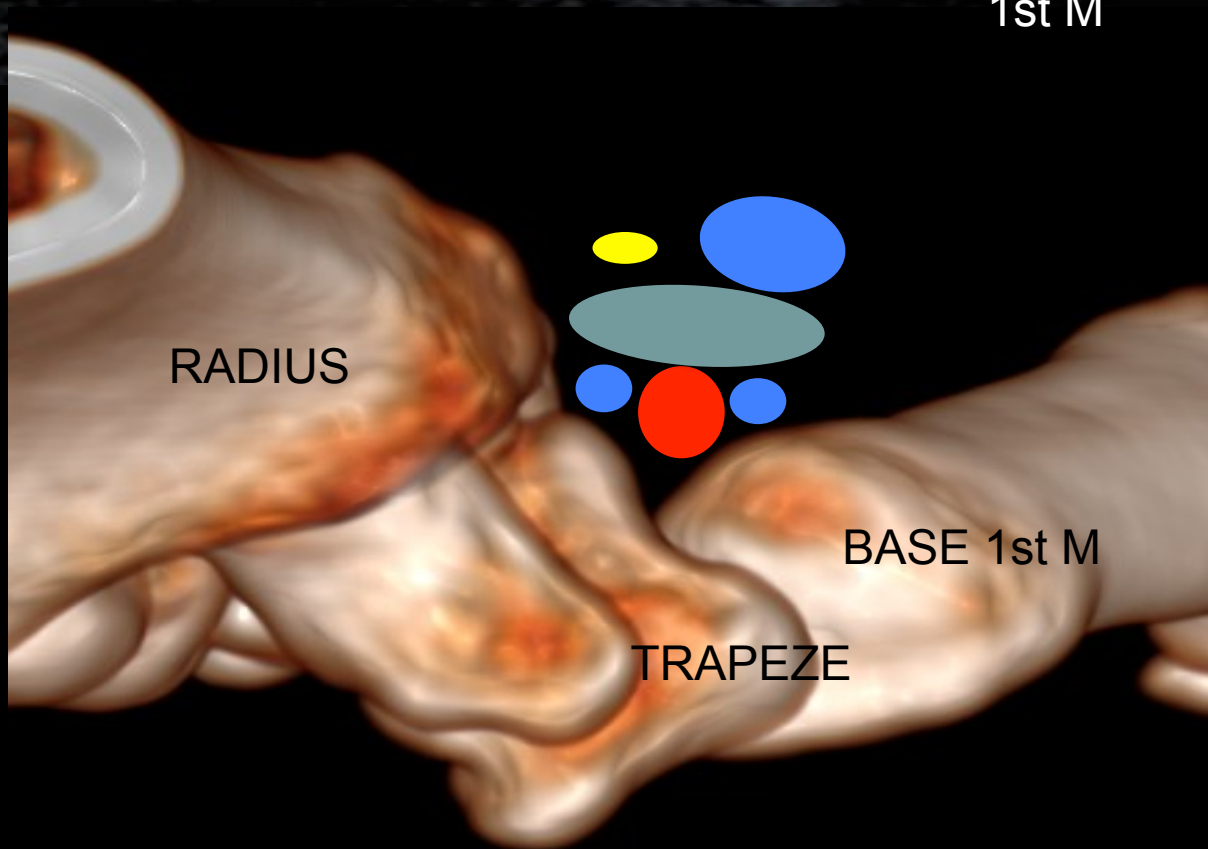
## ➤ *The Anatomical Snuff Box*





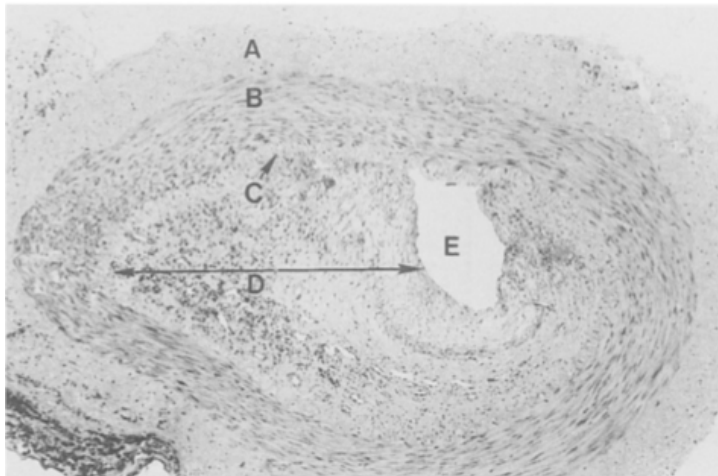
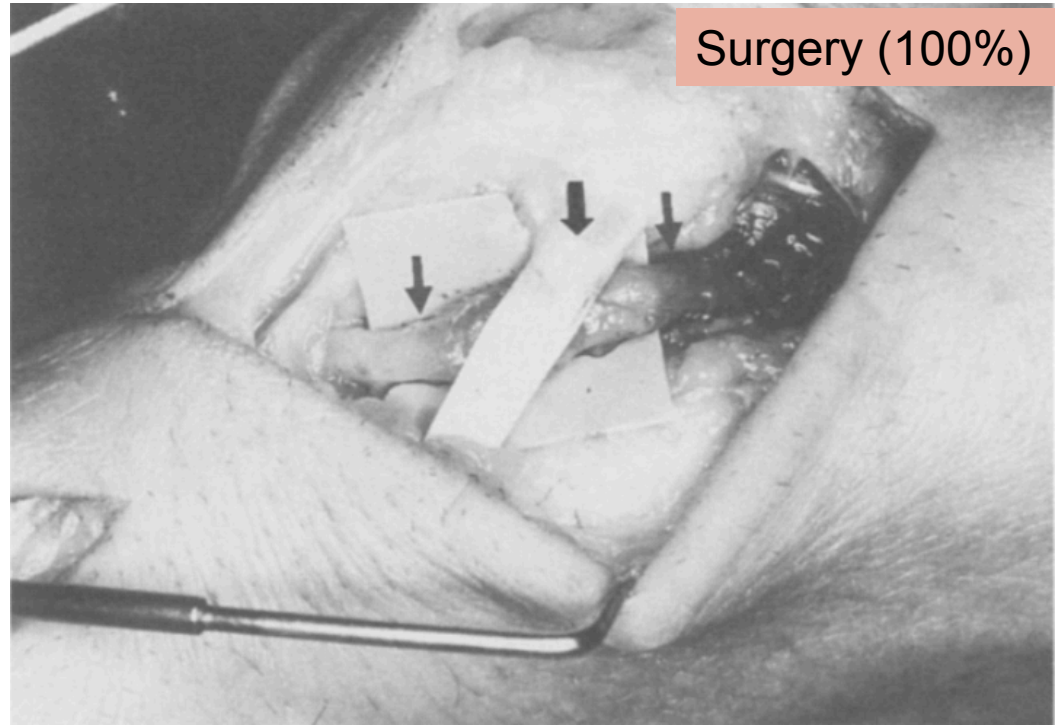


CROSSING



# REVIEW OF THE LITERATURE

- **1 study by McNamara**
- **9 patients (average age 42)**
- **Spontaneous thrombosis of radial artery at the wrist in the anatomical snuff box area.**
- **Clinical data :**
  - All cases : ischemic signs of 1st ± 2<sup>nd</sup> finger (pain, paleness, intolerance to cold).
- **Imaging :**
  - **Echo-doppler** → radial artery abnormalities + permeable ulnar artery.
  - **Arteriography** : occlusion of radial artery.
    - Complete : 6 patients (2-3 cm of occlusion upstream of the deep palmar arch).
    - Partial : 3 patients.



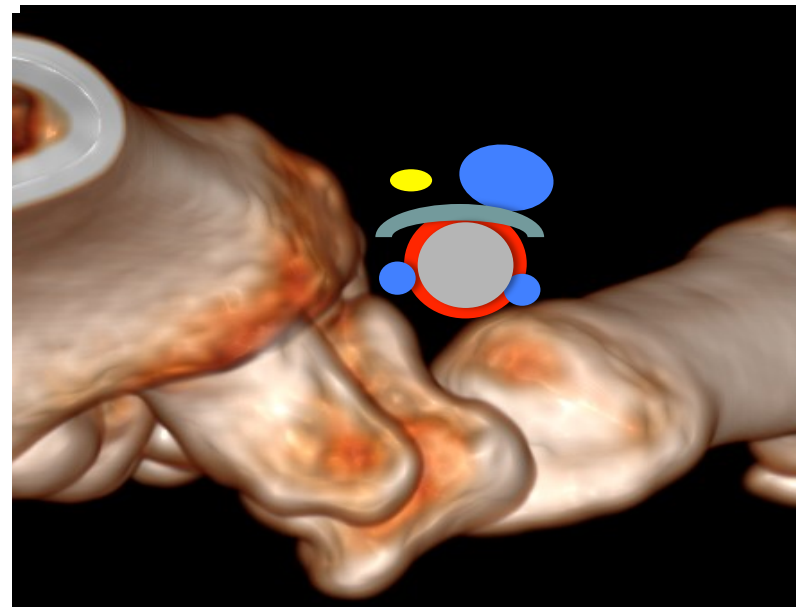
- Histological analysis :
  - No sign of vasculitis or elastic fiber pathology.
  - Suggestive of **external trauma or irritation of the artery.**



# REVIEW OF THE LITERATURE

NO DESCRIPTION  
OF  
SNAPPING EPL TENDON

# CONCLUSION



- **EPL tendon and radial artery cross in the anatomical snuffbox**
- **Painful snapping of the EPL tendon**
  - **Sign of a radial artery thrombosis**