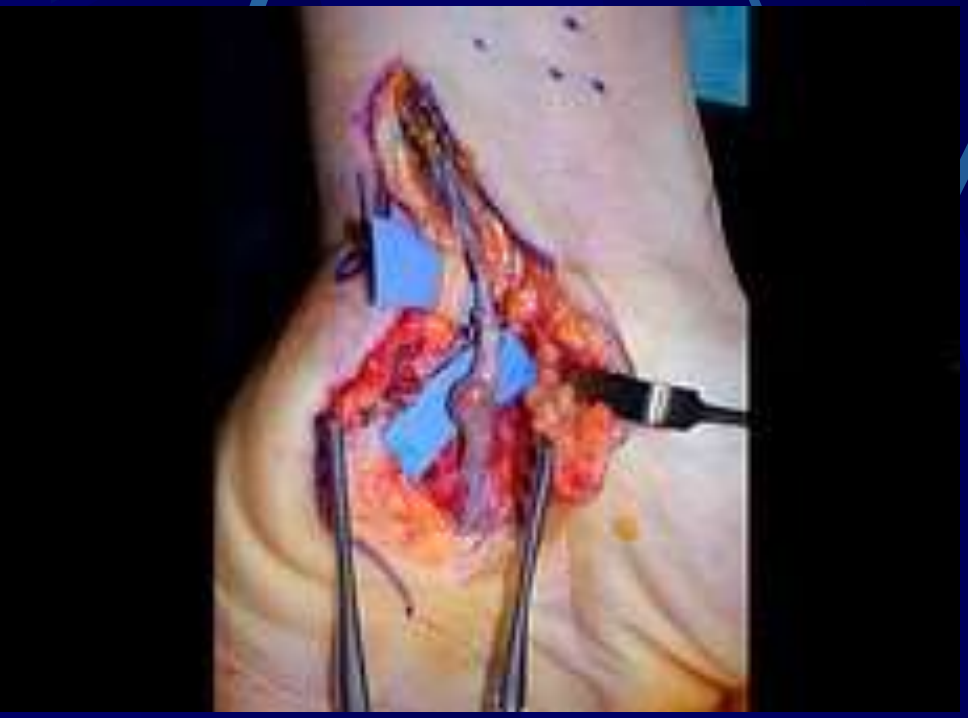
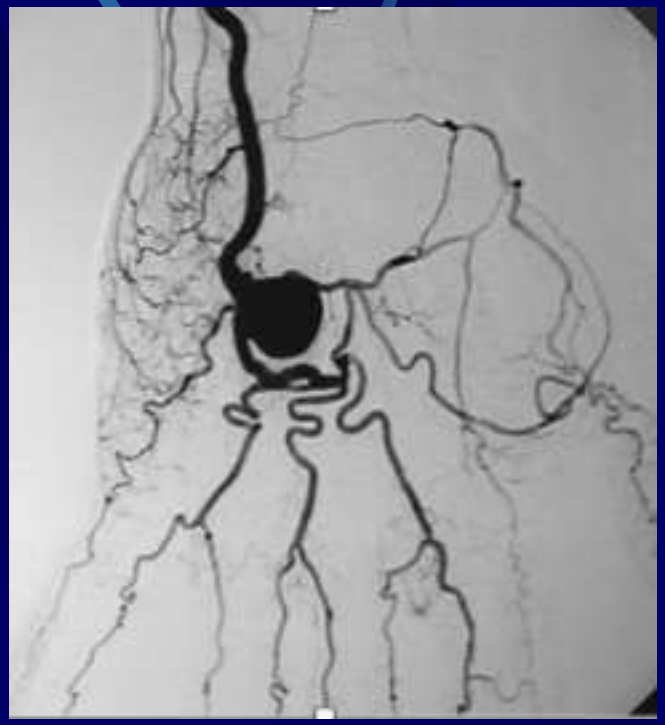
Hypothenar Hammer syndrome (HHS SMH)



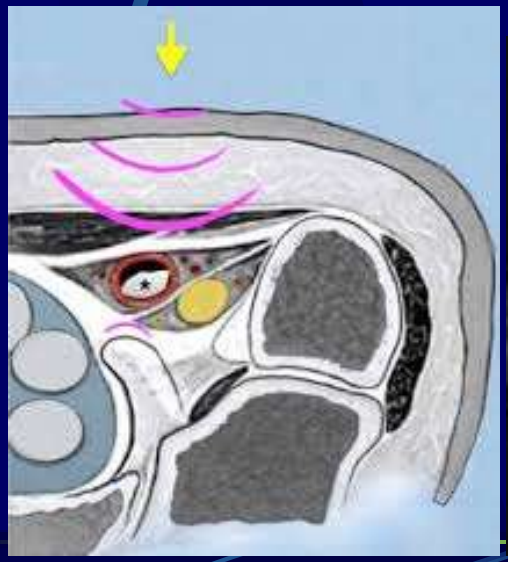


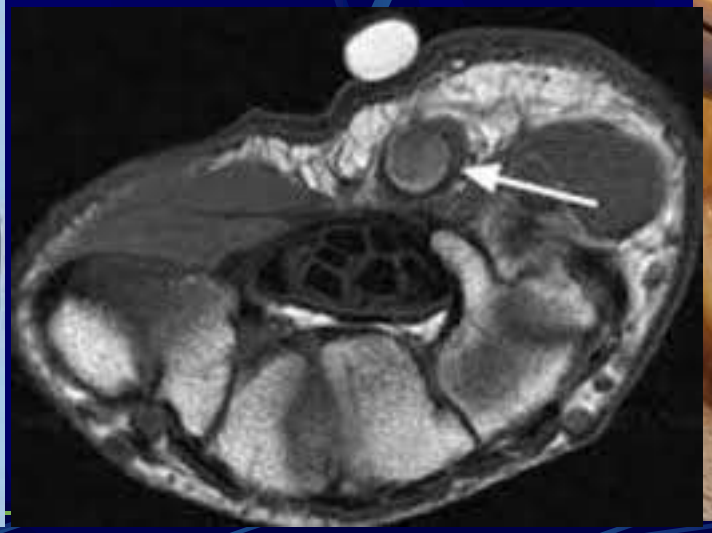
Hammer syndrom

Post-traumatic affection of distal ulnar artery

Does to confictual and recurent or acute trauma win hammatum and ulnar arterie

Due to certain sport or professional activity





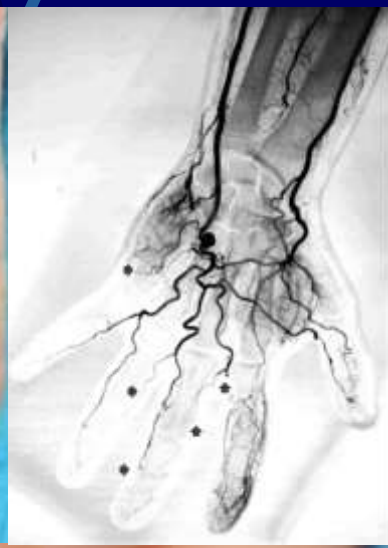
Guattani 1772 ; ***Von Rosen*** 1934

***Conn* 1970**

Signs and symptoms

Distal ischemia :

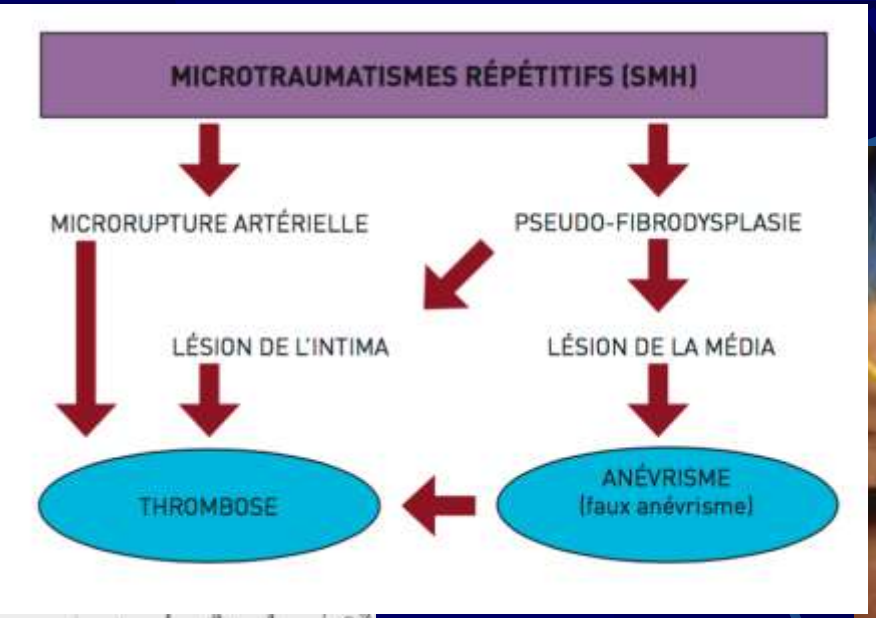
-finger sensibility for cold
-unilateral raynaud syndrom
-false panaris; périungual necrosis

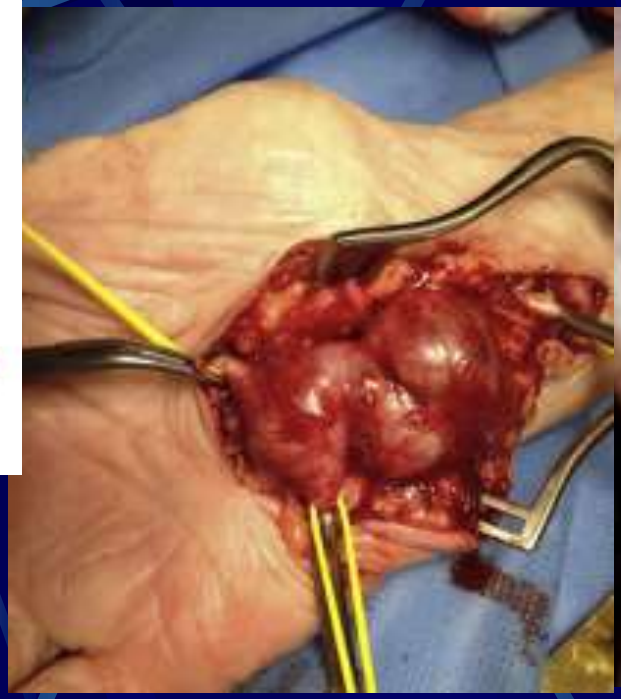


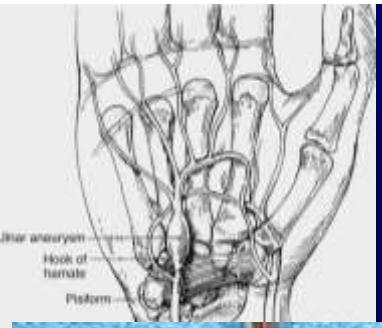
Direct signs:

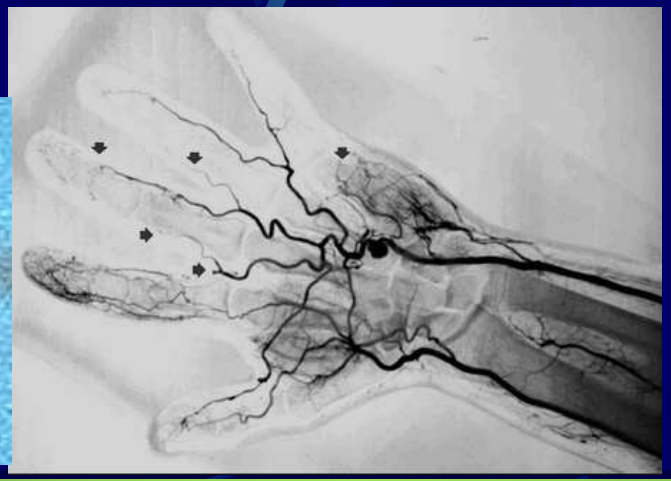
- ulnar nerve symptoms
-pain on pressure
-pulsatil mass in the volar region of hand

Dissection, thrombosis or aneurysm





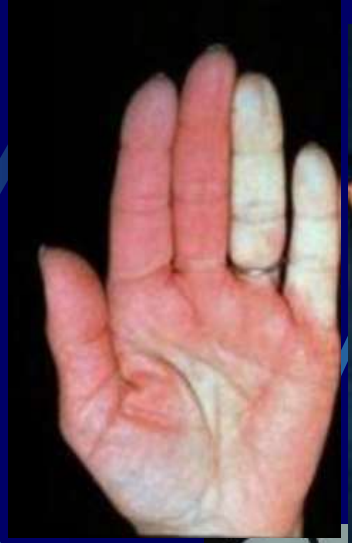


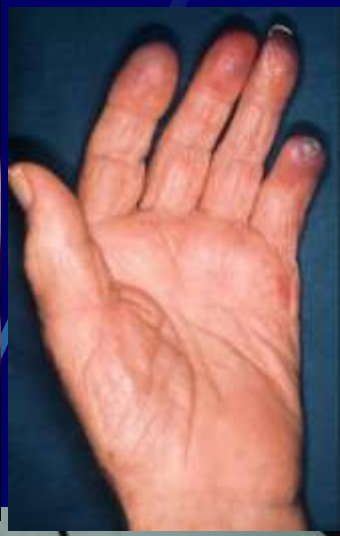


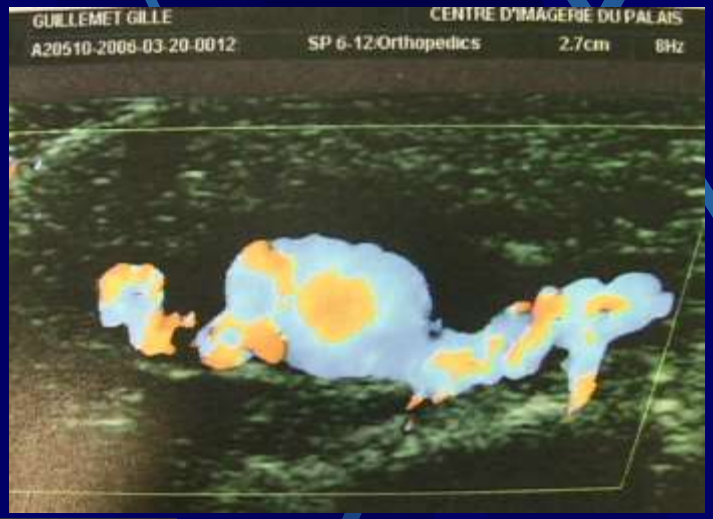
Repetetive embolic risk in distal digital arteries

Diagnostic

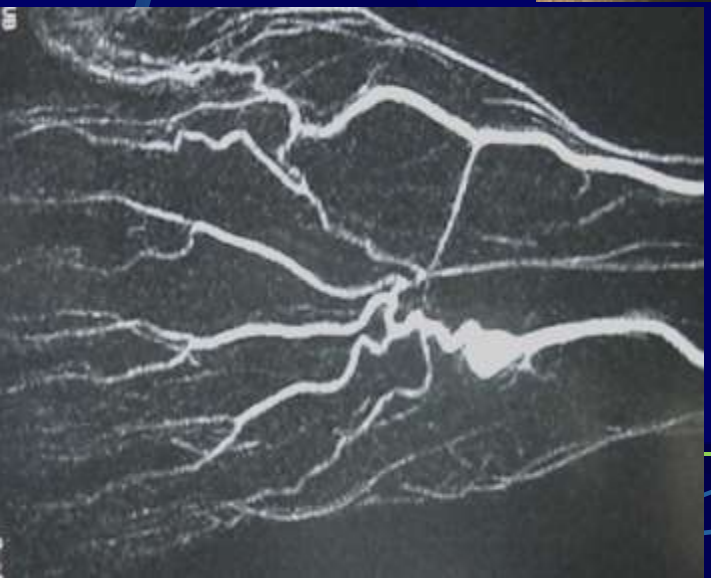
Clinic (HHS-SMH):
Allen manœuvre but
Lack of palmary arcads or incomplete
in 21% of cases







Bilateral duplex



IRM and angioscann

Selective
artériography

Dg différentiel:

Athérom smokers +++ Canabis

Other étiology: Embolic (heart, STTB)

Dysplasy

Raynaud, Inflammatory,
Thrombophilia, Paranéoplasic, Drug induced,

An unilateral Raynaud syndrom to a young and sport men is highly suggestive of the diagnosis

Surgical Technics (1)

Paliatives:

Simple résection /ligature

Amputation

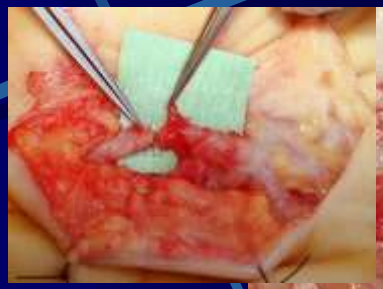
Indirectes:

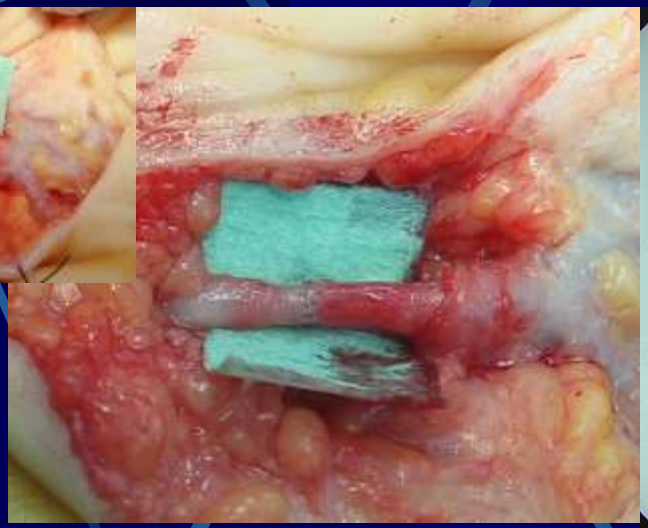
Sympathectomy

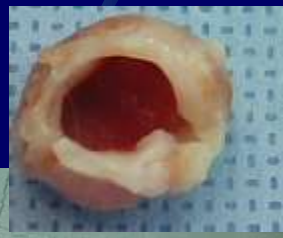
Superior dorsal

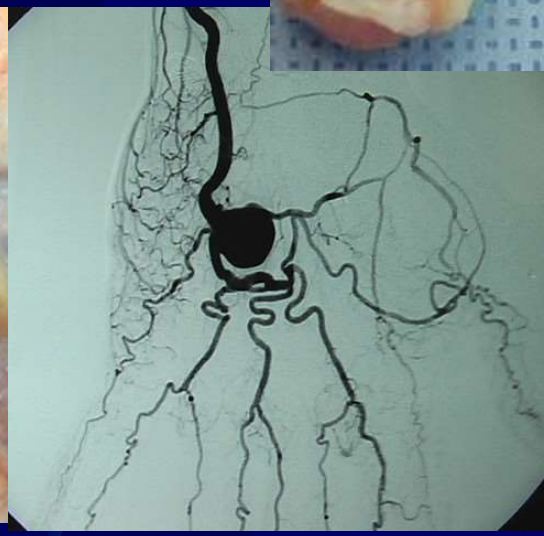
Péri digital

Surgical Technics (2)



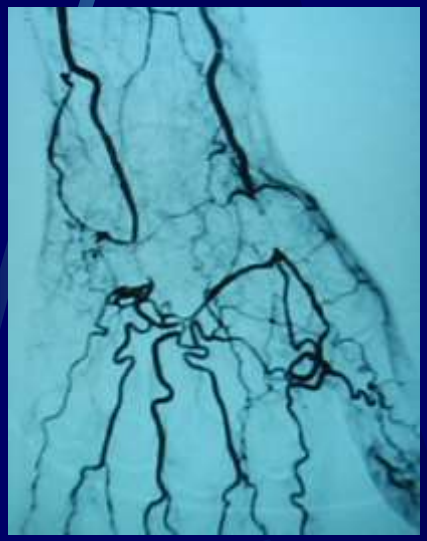


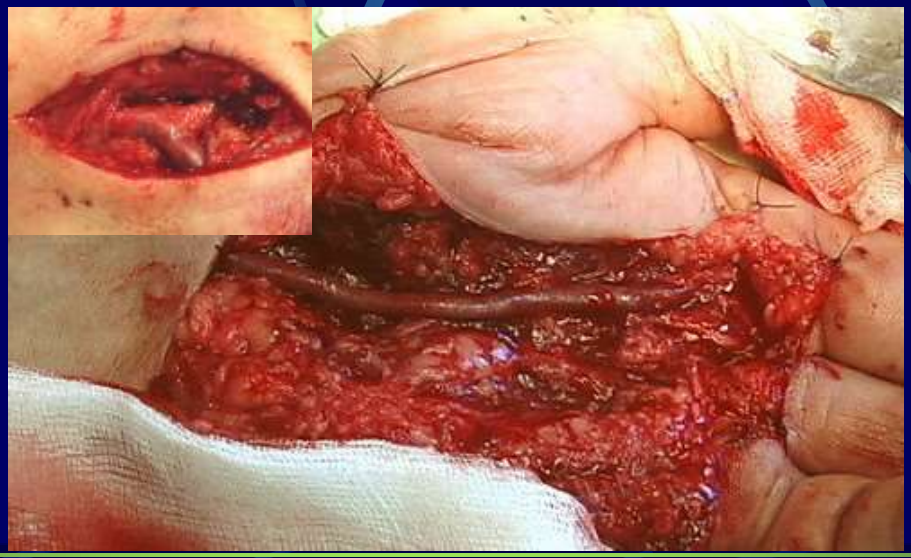


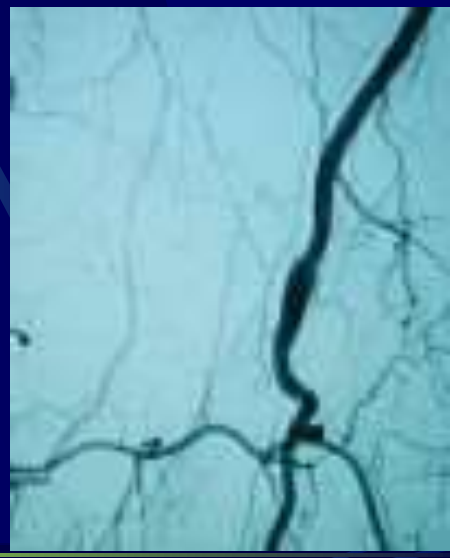


Direct resection suture

micro-pontage

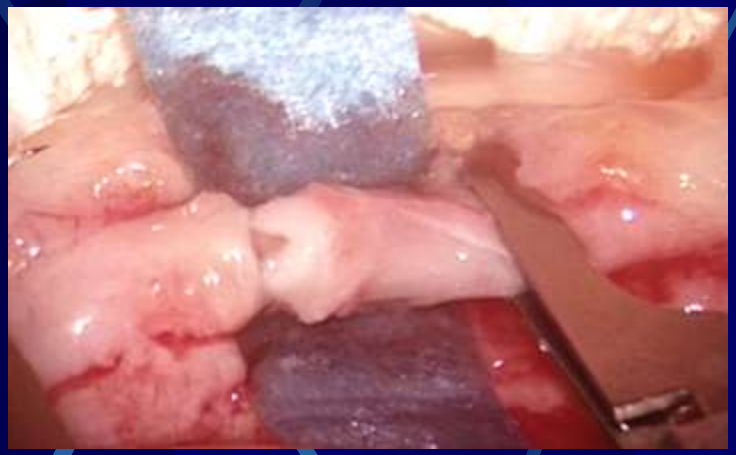






Distal desobstruction – fibrinolysis

Indications of surgical treatment

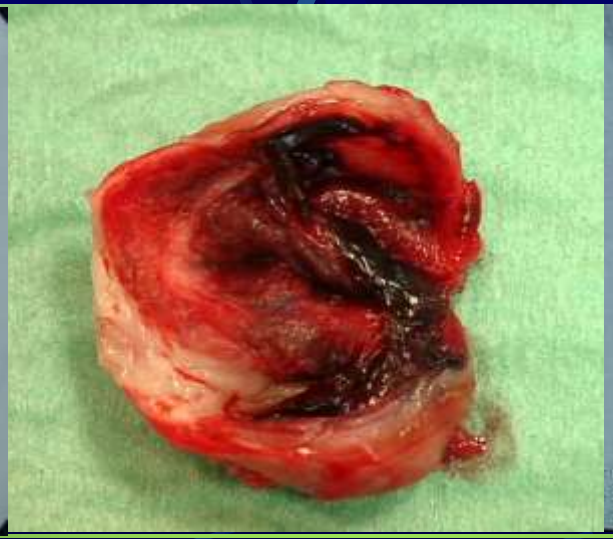


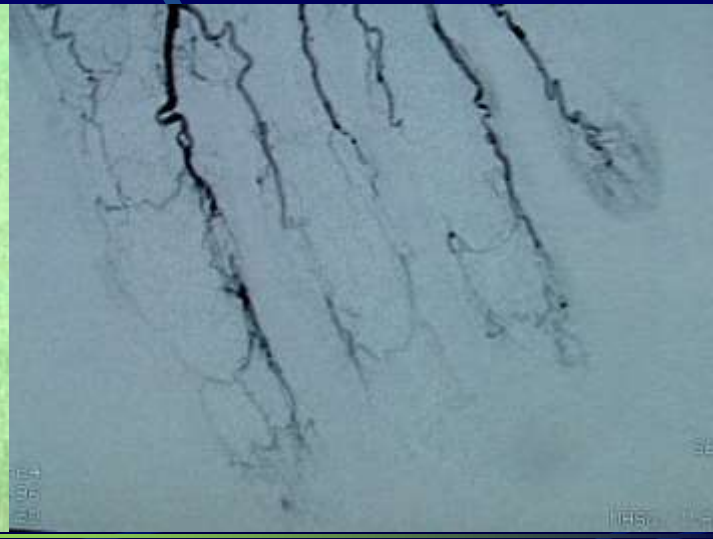
Symptomatic forms

- Ischémic
- Painful

Distal embolic risk +++

- Anevrysm or dysplasic lesions without thrombosis
- Affecting common digital arteries and/or propres





Results of micro-surgical treatment

21 cases between 1995 and 2006 Median follow up 15 years

Ulnar :15 (SMH) Radial :4 Bilateral:1 Palmar aneuvrysm : 1

Controlateral asymptomatic dysplasia : 2 Distal emboly : 13 Smokers : 11

Clinical manifestations :

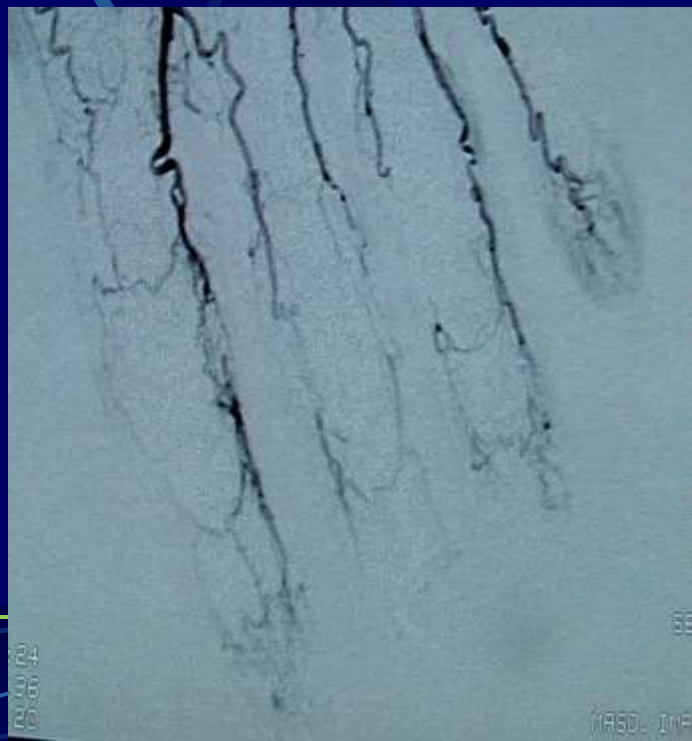
unilatéral acro-syndrom:16

affecting three (8) two (3) or one finger (5)

volar pain (1) or lateral wrist (6)

distal false panaris (4)

distal necrosis (1) leading to amputation of the index



Results of micro-surgical treatment

Technic:

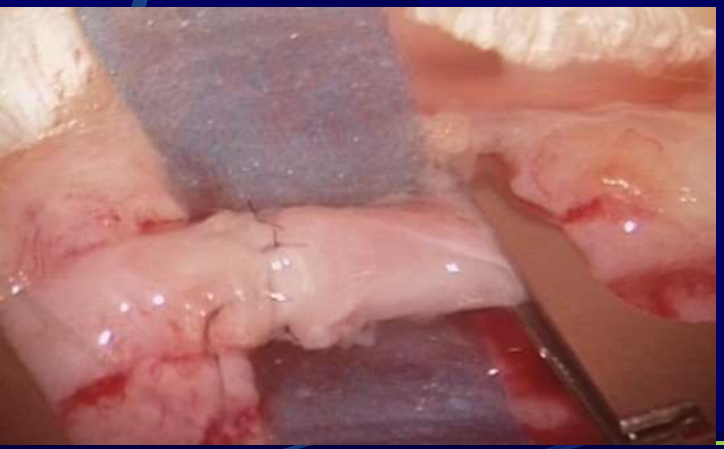
Resection direct suture (6)

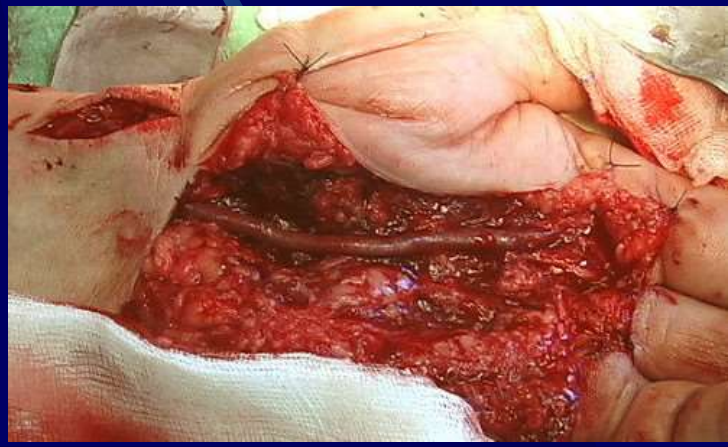
Venous graft (14)

Peridigital arterial sympathectomy (6)

Desobstruction – distal fibrinolysis (3)

Amputation (1)





Results of micro-surgical treatment

Immediate results :

early failure (2) reoperation (2)
clinical aggravation (0) Statu quo (2)
cured (19)

long term results:

10 reviews (1 to 20 years) Permeability: 9
Aneuvrysm evolution: 2 1 redux à 7 years
Symptoms (cold sensibility): 5 (50%)

Professionnal outcome

unchanged: 2
reclassement/aménagement de poste: 4
Invalidity, pension : 3

Sport : Stop

Results of micro-surgical treatment

Rare: about 500 cases ((no large series)

Mayo clinic 2005: 101 cas

41 sympathectomies: 7 aggravations, 29 inchangés

60 chirurgies directes:

4 simples ligatures: 3 statu quo

56 revascularisations

-44 améliorés/guéris (78%)

-12 inchangés ou aggravés dont 86% de tabagiques

Dethmers 2005: 31 cas

- 27 revascularisations: 13 perméables,

7 évolutions anévrysmales, 7 occlusions

pas d'effet bénéfique de la sympathectomie associée

Conclusions

HHS is the most common étiology for distal ischemia of upper extremity

Male unilatéral and asymétric acrosyndrom

Risk of ischémia or distal gangrene

Primary or secondery dysplasia is often observed; bilateral follow up is useful

Microsurgical traitment as a great outcom if digital arteries are still open

Dorsal sympathectomy and/or medical traitment are limited with variable outcome

Take home message

Le sport c'est dangereux: STOP
Surtout chez le tabagique travailleur manuel

Raynaud unilatéral chez un homme sportif

Faux panaris ou l'atteinte pulpaire du bord ulnaire d'une seule main
Mais on regarde les deux

Gold standard: la revascularisation avant le « désert vasculaire distal »