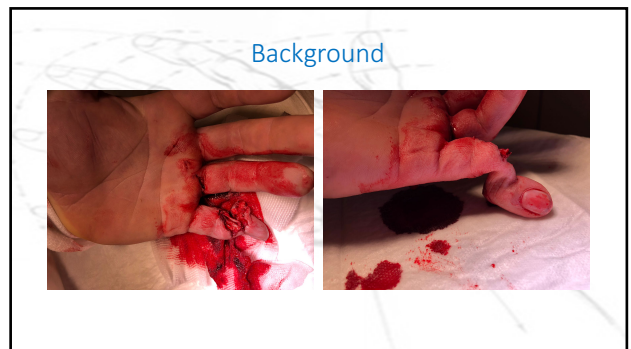
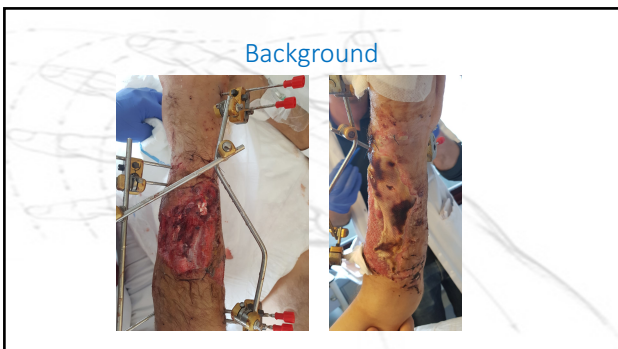
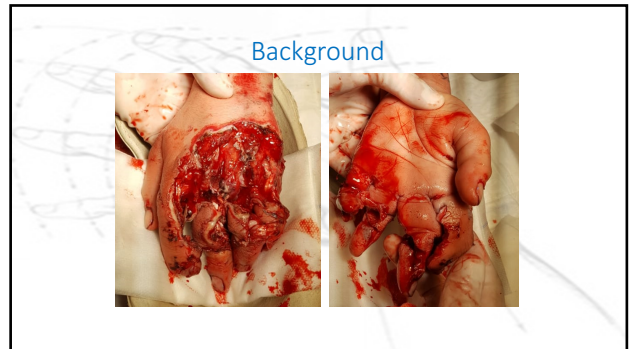




Complication(s)

After tendon repair

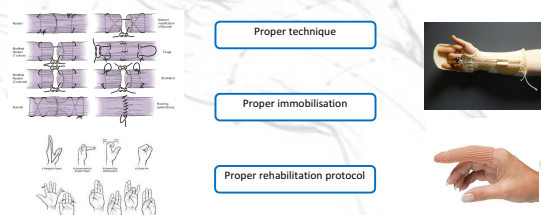
Dr Mathieu David
Pr Barbier Olivier
Pr Libouton Xavier



Background

Although we try to prevent them...

- Proper technique
- Proper immobilisation
- Proper rehabilitation protocol



Background

We can't get rid of them...

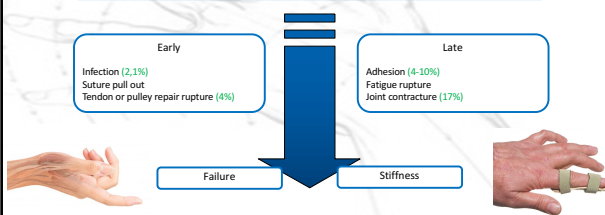
Early

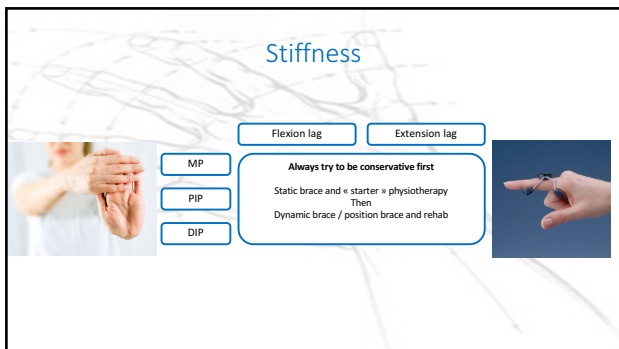
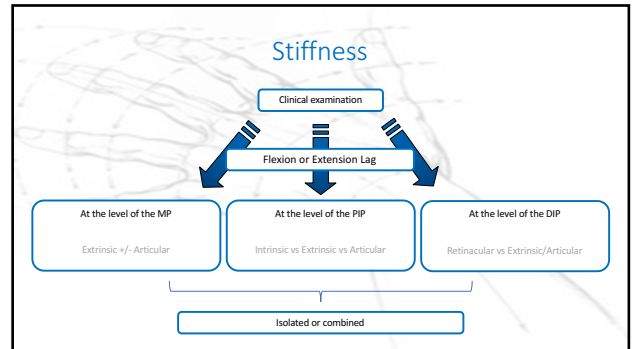
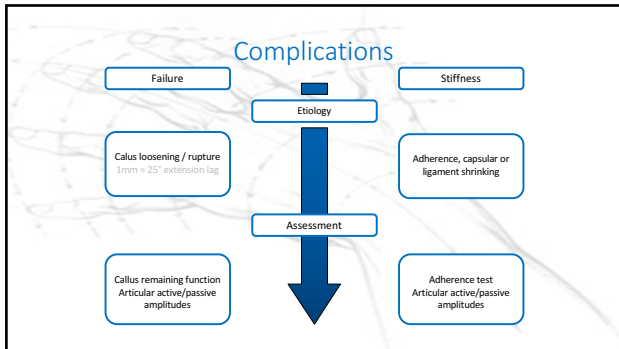
- Infection (2,1%)
- Suture pull out
- Tendon or pulley repair rupture (4%)

Late

- Adhesion (4-10%)
- Fatigue rupture
- Joint contracture (17%)

Failure Stiffness





Stiffness

| MP | Flexion lag | Extension lag | Treatment Options |
|----------------------|-------------|---------------|-----------------------|
| Skin | + | + | Skin plasty |
| Extensor adherence | +++ | / | tenolysis |
| Dorsal capsul | ++ | / | arthrolysis |
| Collateral ligament | ++ | + | Lig release |
| Palmar plate | + | ++ | Palmar plate release |
| Flexor tendon sheath | / | +++ | A1 section, tenolysis |

Stiffness

PIP

| Flexion lag | MP position | PIP Flexion | Treatment Options |
|-------------------------------------|-------------------|-----------------------|-------------------|
| Kilgore Test (extrinsic) | Extension | Possible impossible | tenolysis |
| Finocchio Test (intrinsic) | Extension | Impossible Possible | Littler tenotomy |
| Lat lig Retraction Test (articular) | Extension Flexion | Impossible Impossible | Lat lig release |

Extension lag

| Treatment Options |
|---|
| Ethiology is commonly unclear : mixed tendon sheath adhesions and articular stiffness (checks reins + palmar plate) |
| Check reins release |
| Anterior teno-arthrolysis |

Stiffness

DIP

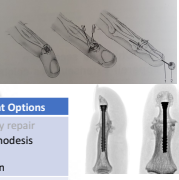
| Flexion lag | PIP position | DIP Flexion | Treatment Options |
|---|-------------------|-----------------------|-------------------------|
| Haines Test (retinacular) | Extension Flexion | Possible impossible | Retinacular lig section |
| Lat band adherence Test (extrinsic/articular) | Extension Flexion | Impossible Impossible | Lat Band plasty |

Extension lag

| Treatment Options |
|---|
| Ethiology is commonly unclear : mixed tendon sheath adhesions and articular stiffness (checks reins + palmar plate) |
| Anterior teno-arthrolysis |

Failure


The big entities



| Extensor tendon | Indication depends on | Treatment Options |
|-------------------------|---|--|
| Resilient mallet finger | Tendon defect Reductibility | Secondary repair Tenodesis Graft DIP Fusion |
| Swan Neck Deformity | PIP hyperextension DIP deformation | Fowler's technique SORL |
| Bouttonnière deformity | Reductibility PIP flexibility DIP flexibility | CS repair/release LB repair/release Arthrolysis Dolphin tenotomy PIP fusion/arthroplasty |

Failure

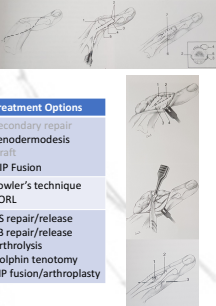
The big entities



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Failure

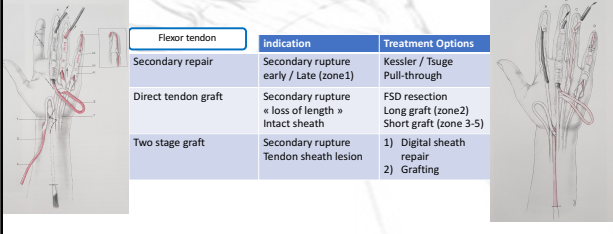
The big entities



| Extensor tendon | Indication depends on | Treatment Options |
|-------------------------|---|--|
| Resilient mallet finger | Tendon defect Reductibility | Secondary repair Tenodesis Graft DIP Fusion |
| Swan Neck Deformity | PIP hyperextension DIP deformation | Fowler's technique SORL |
| Bouttonnière deformity | Reductibility PIP flexibility DIP flexibility | CS repair/release LB repair/release Arthrolysis Dolphin tenotomy PIP fusion/arthroplasty |

Failure

The big entities



| Flexor tendon | Indication | Treatment Options |
|---------------------|--|---|
| Secondary repair | Secondary rupture early / Late (zone1) | Kessler / Tsuge Pull-through |
| Direct tendon graft | Secondary rupture « loss of length » Intact sheath | FSD resection Long graft (zone2) Short graft (zone 3-5) |
| Two stage graft | Secondary rupture Tendon sheath lesion | 1) Digital sheath repair 2) Grafting |

Take Home Message

- 1/ Don't blame yourself
- 2/ Assess Properly
- 3/ Conservative first when it is stiff
- 4/ Fonction must prevail

Thank you!