

# Colonne opérée: Les bases...

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Cliniques universitaires  
**SAINT-LUC**  
UCL BRUXELLES

New or recurrent symptoms  
Septic context

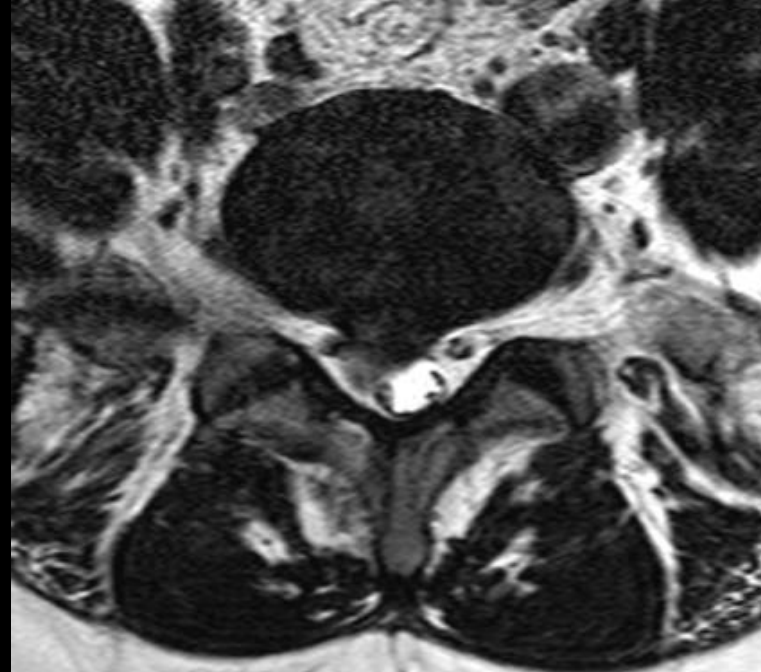
→ Imaging

→ MRI

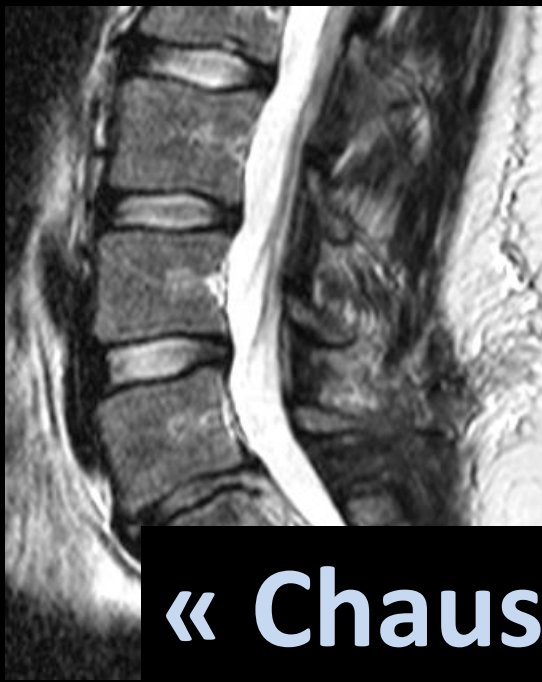
# Observations post-op normales

- bone and ligament defect
- metallic artefacts, bubbles
- epidural – soft tissue infiltration, scar
- root, soft tissue enhancement
- thecal sac widening
- « phantom » of the disk fragment

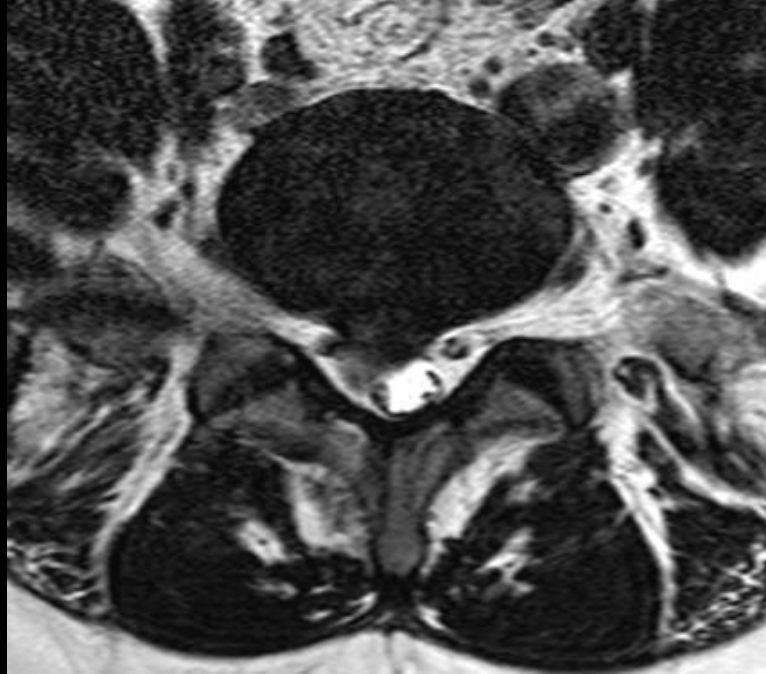
**Preop**



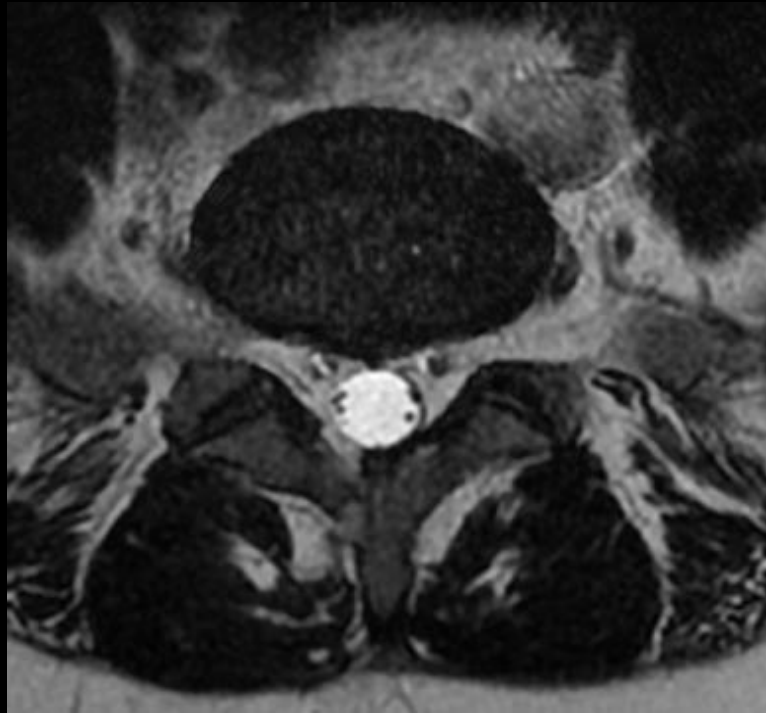
**+6 j**



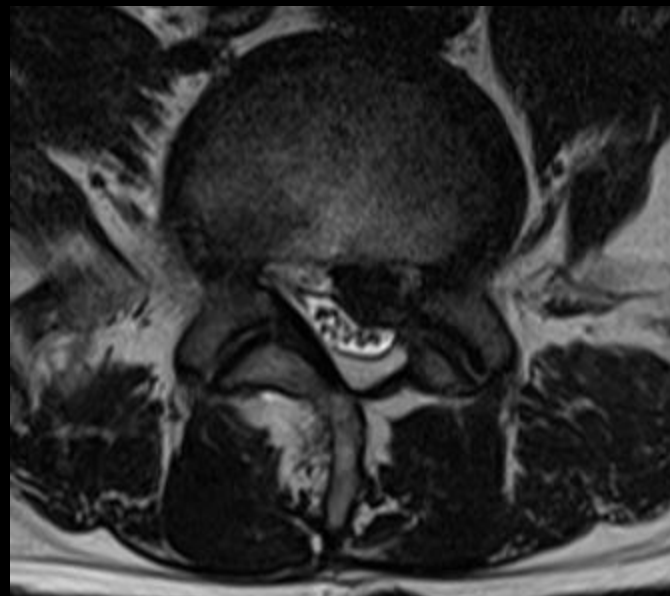
**« Chaussette vide »**



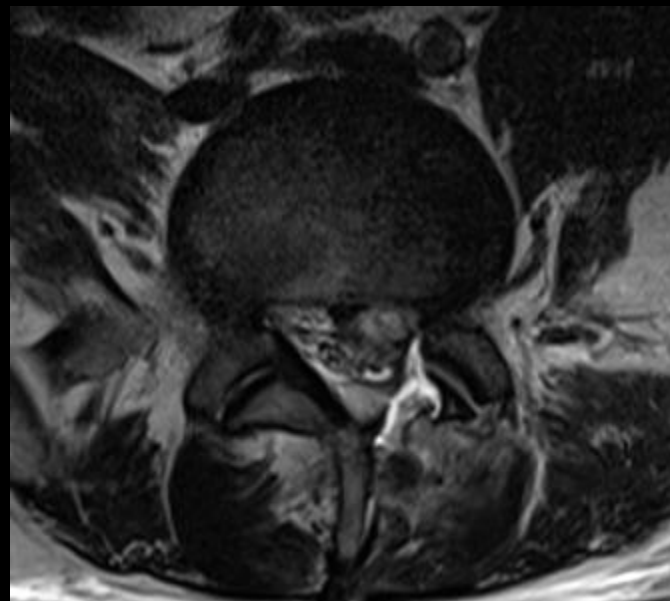
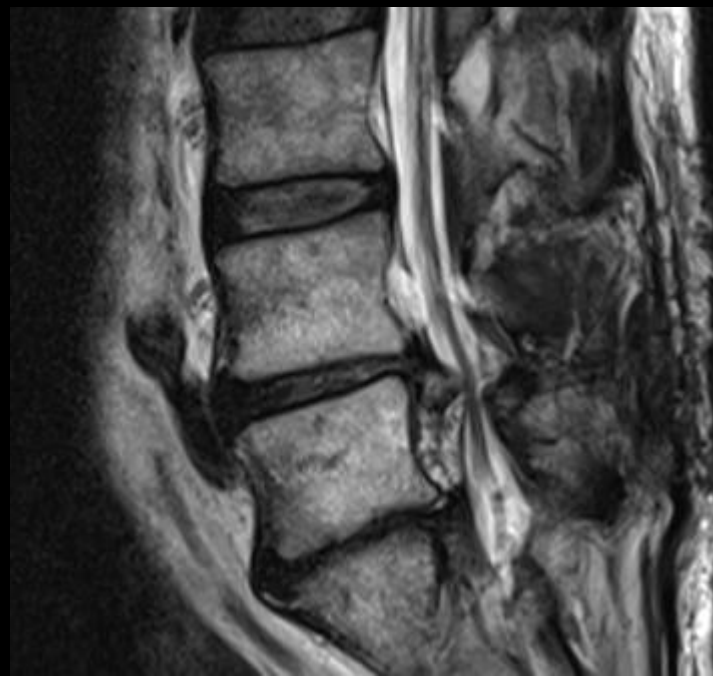
+6 m



Preop

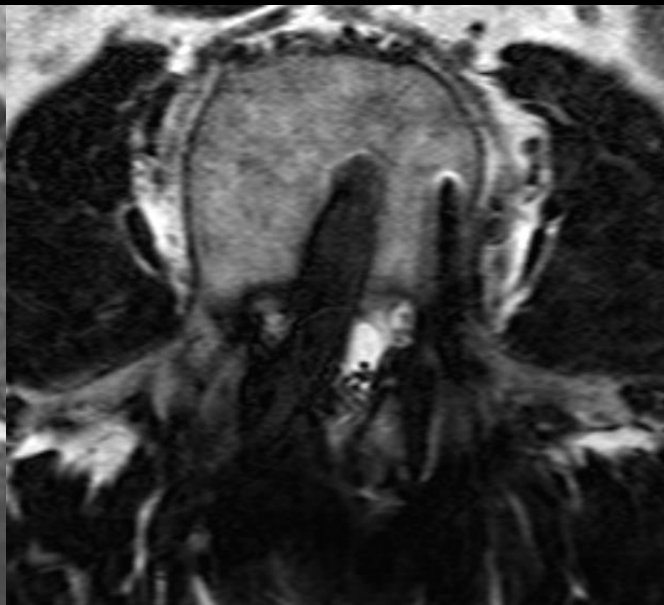
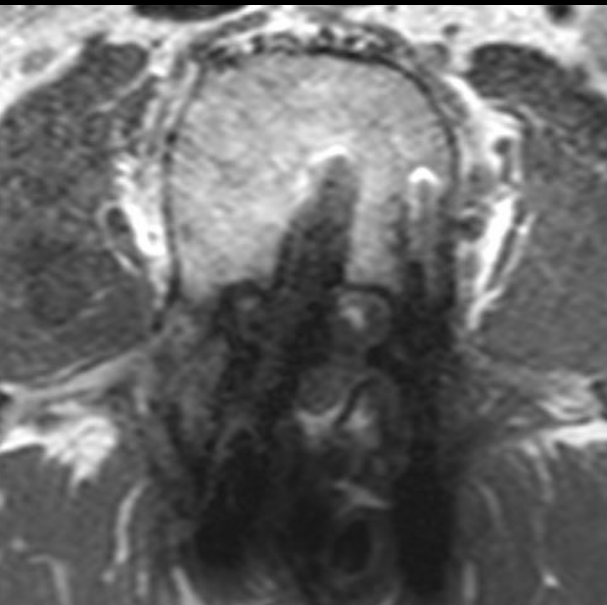


+2 j

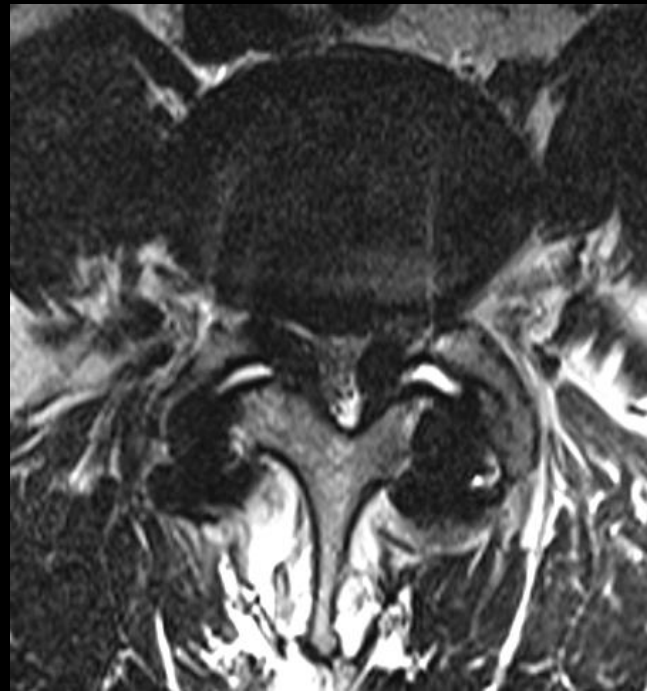
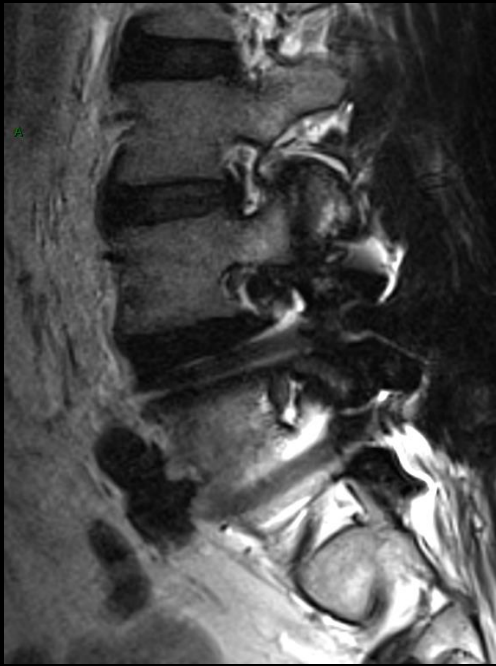


# Malposition of material

- Know what has been done
- Difficult at MRI
- CT !

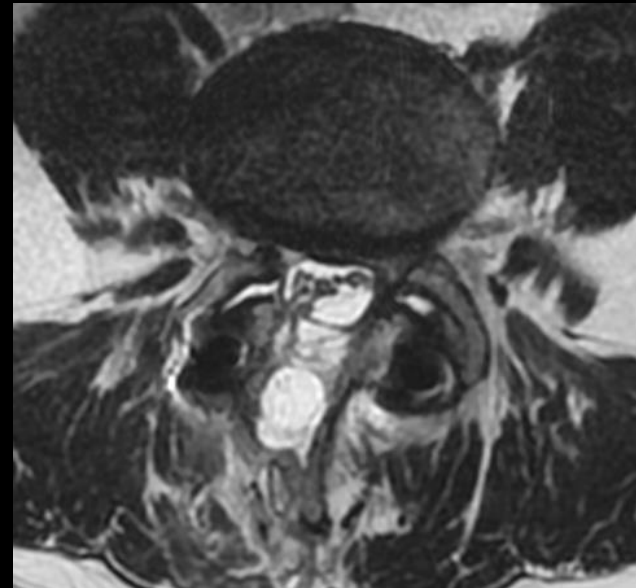
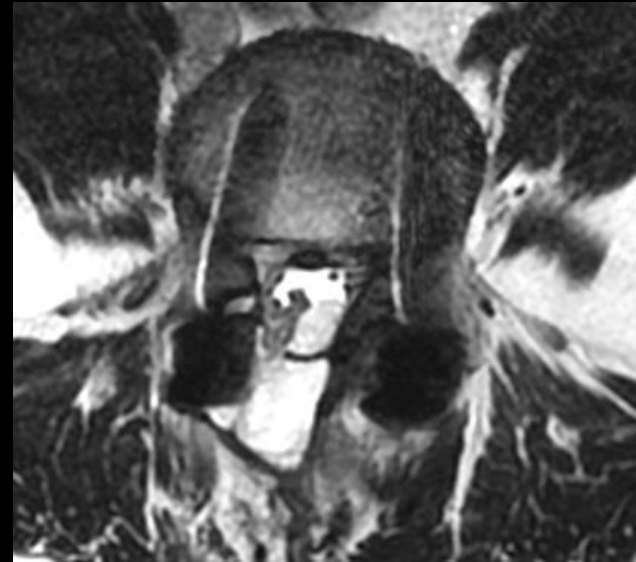


# Preop



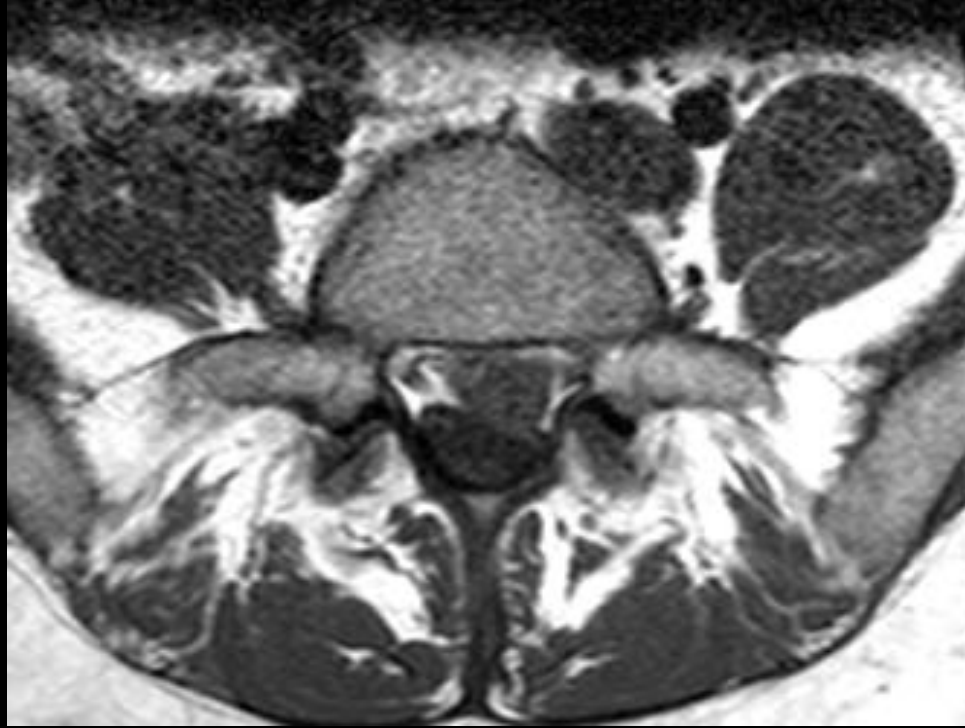


Postop

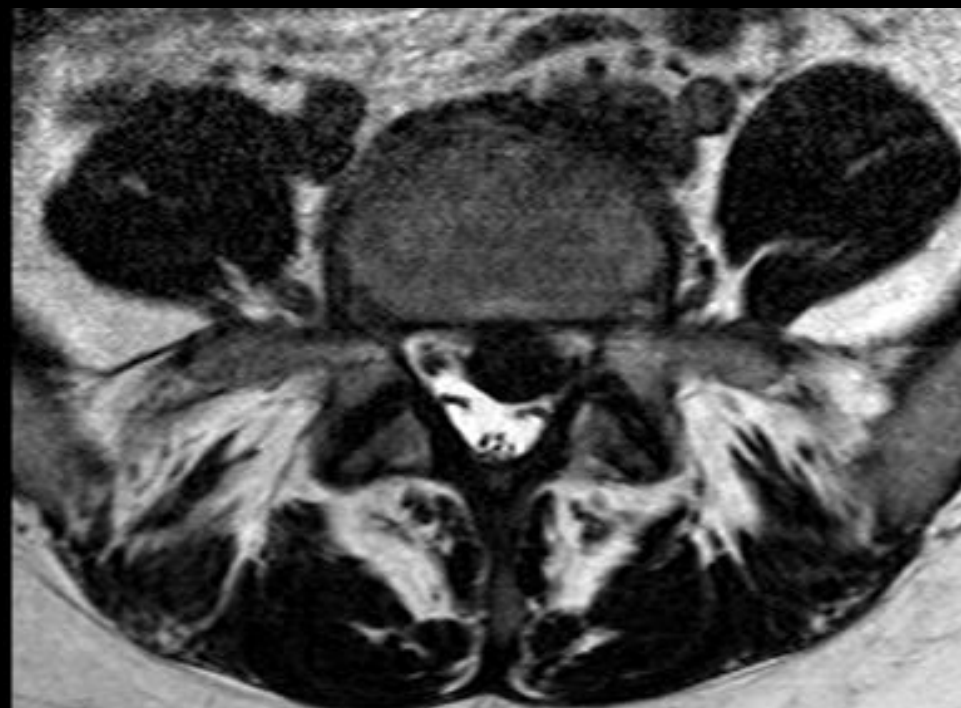


# CSF leak : pseudomeningocele

- dural leak
- CSF collection in soft tissues
- sometimes with root herniation



T1



T2

10 2



T1



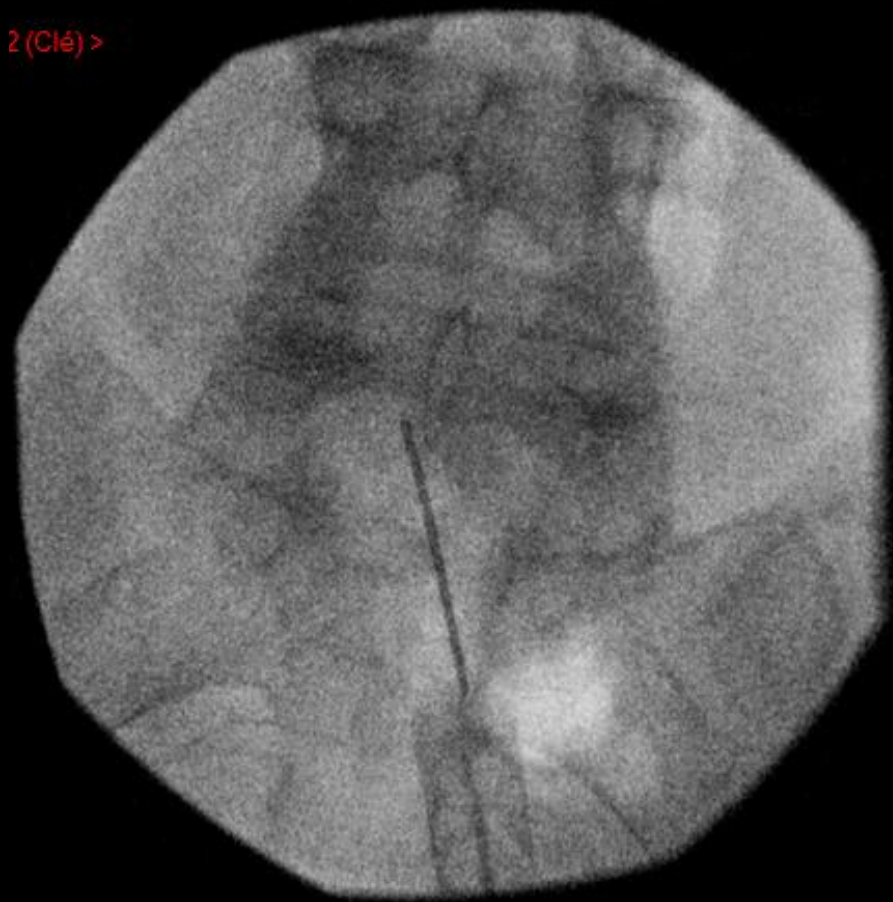
T2



< 2 - 1 (Clé) >

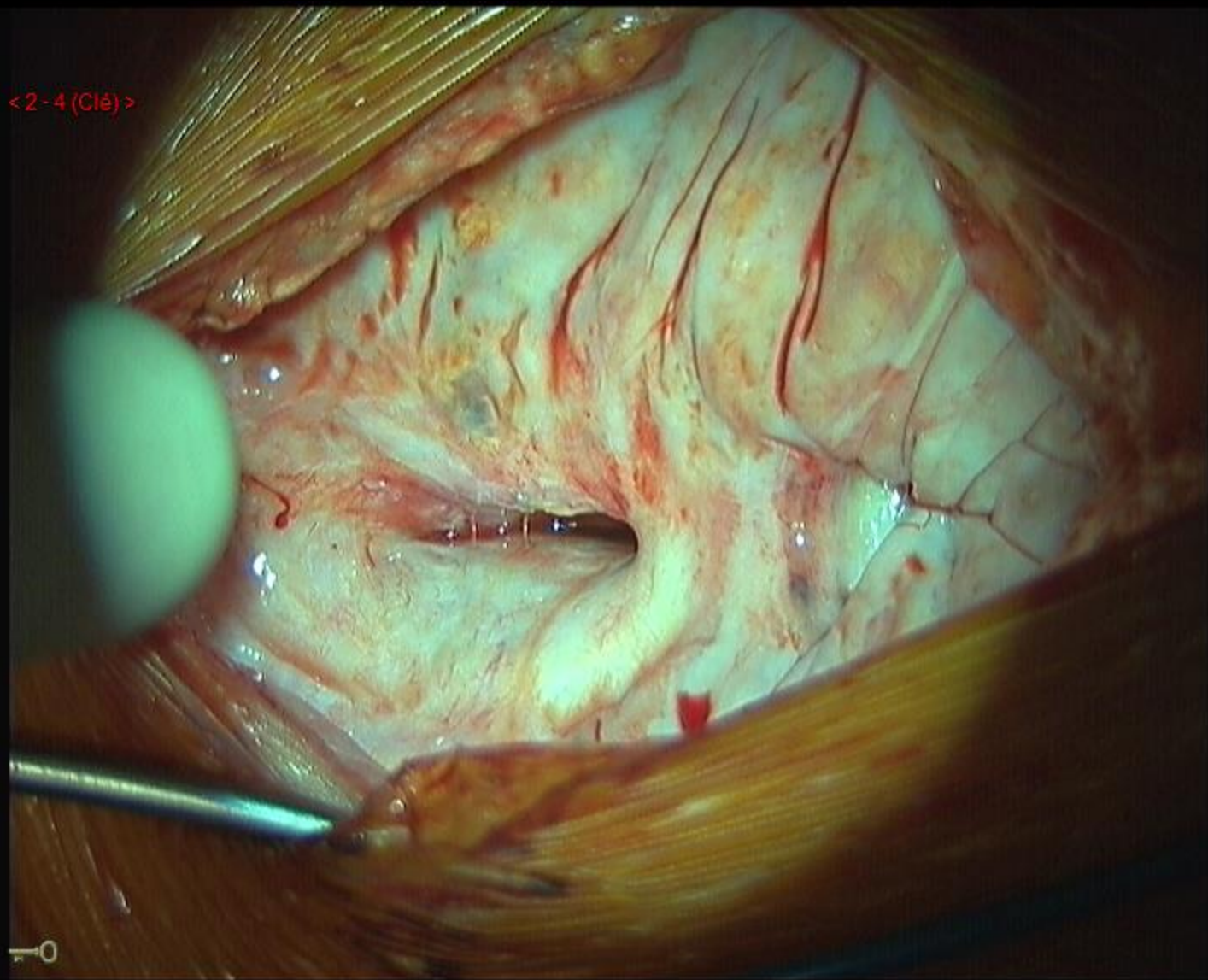


2 (Clé) >

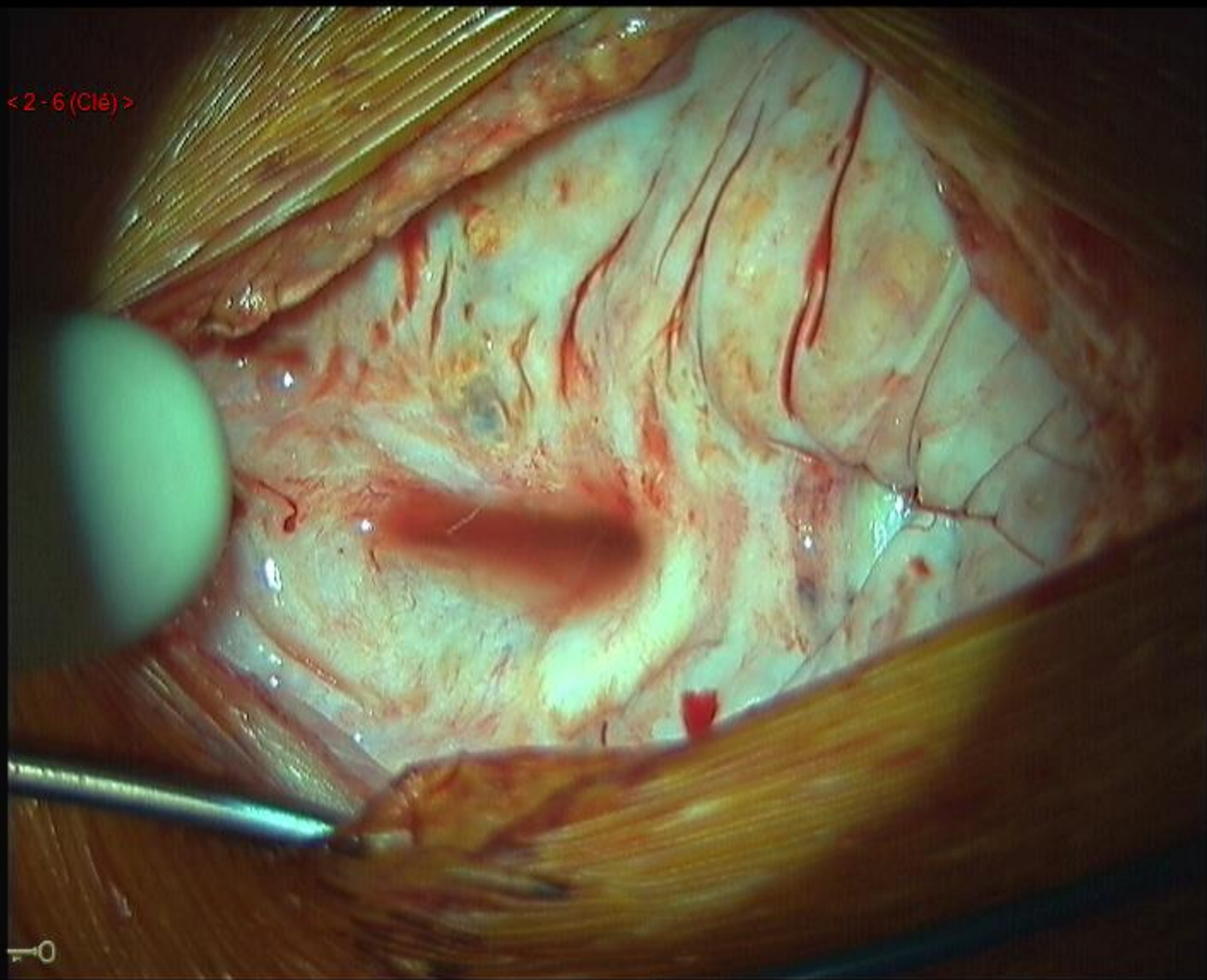


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< 2 - 4 (Clé) >

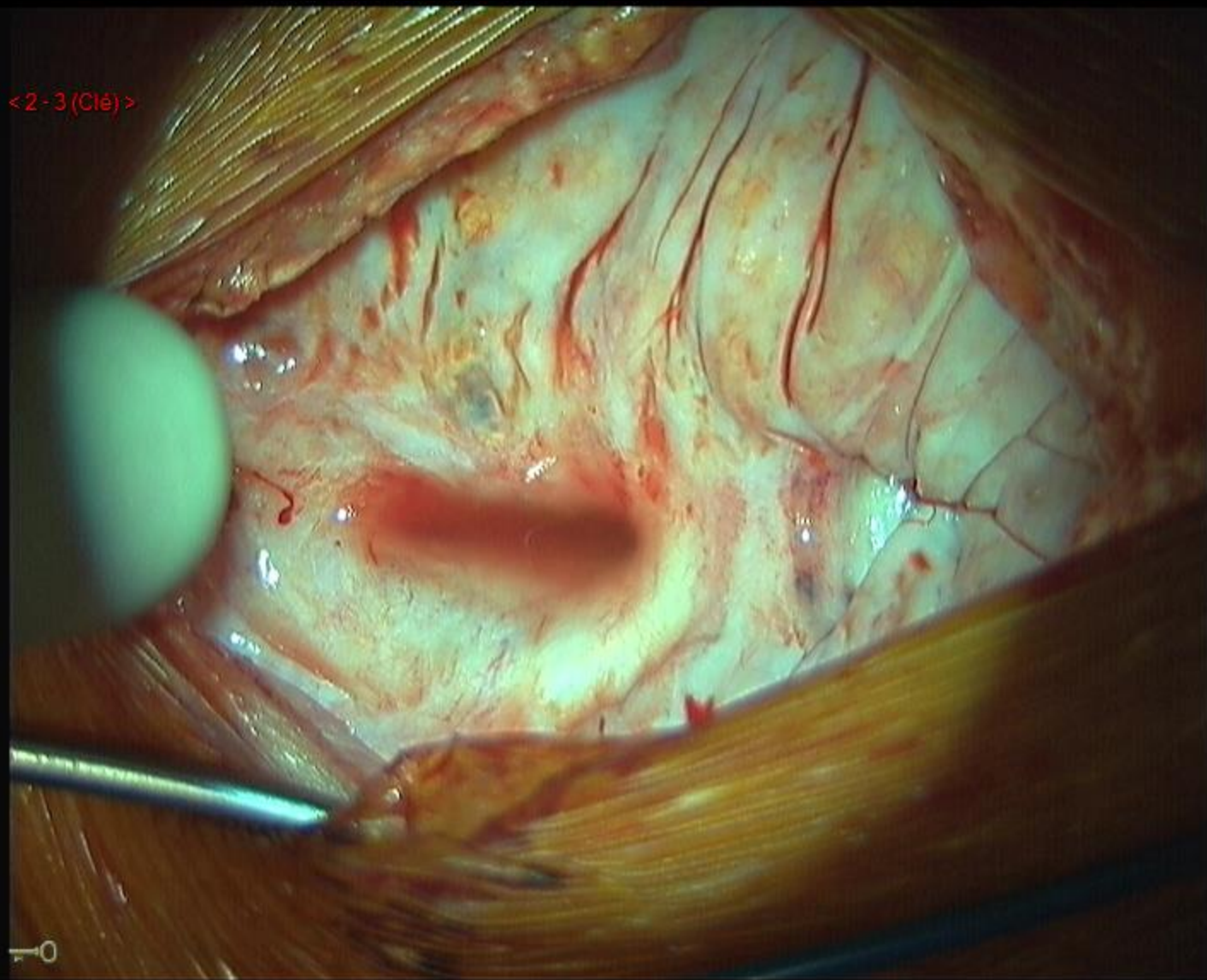


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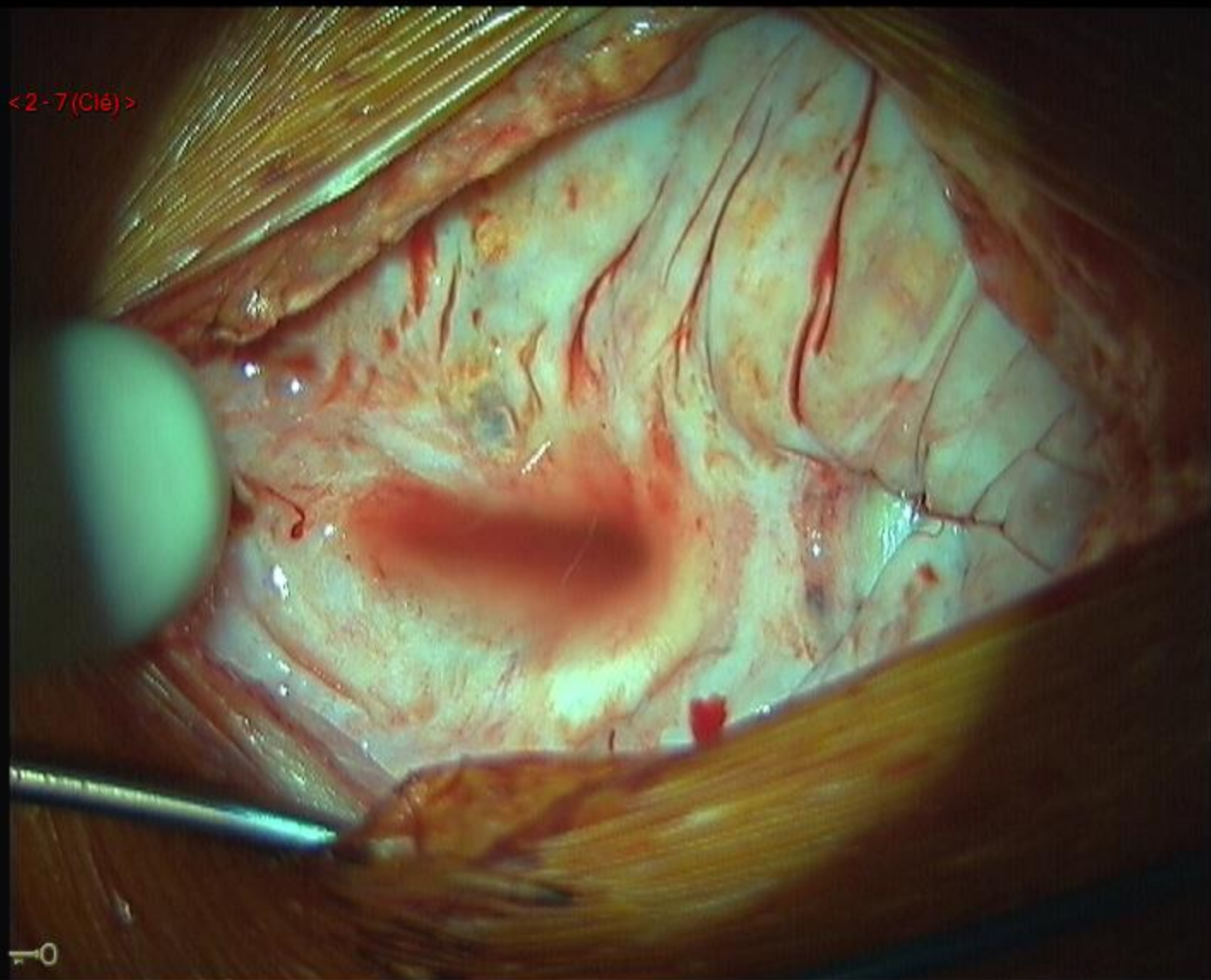




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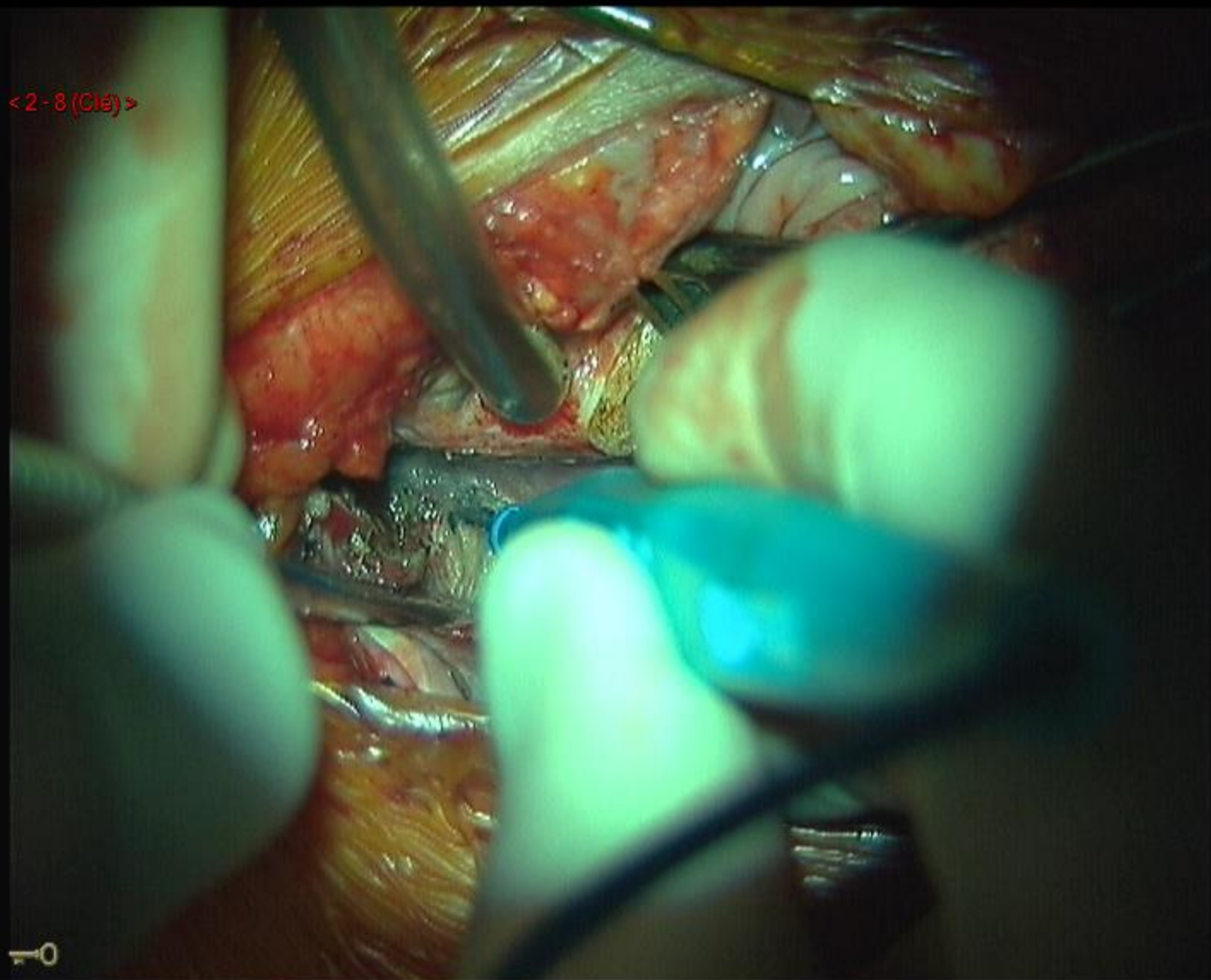


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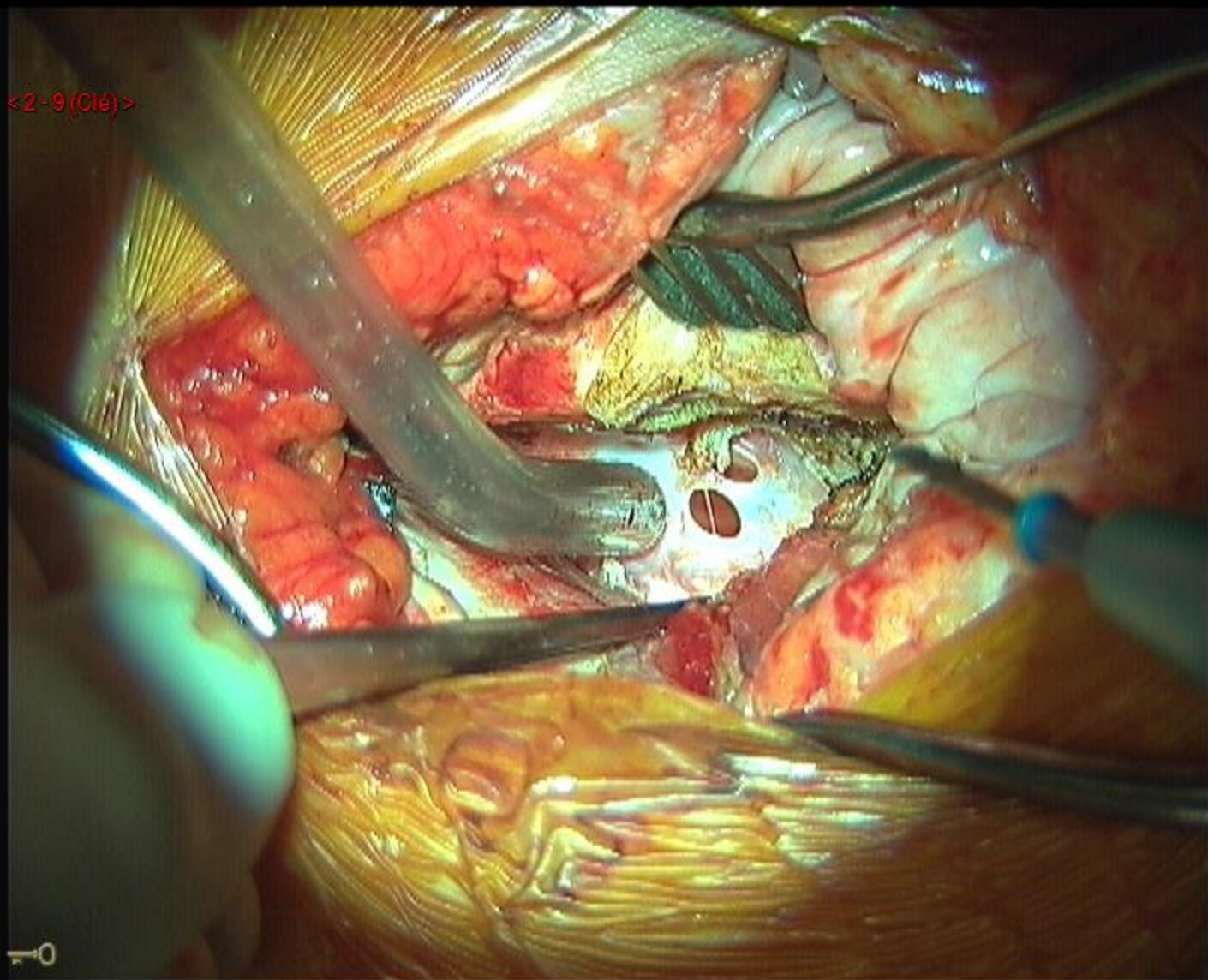


< 2 - 8 (Clé) >

10

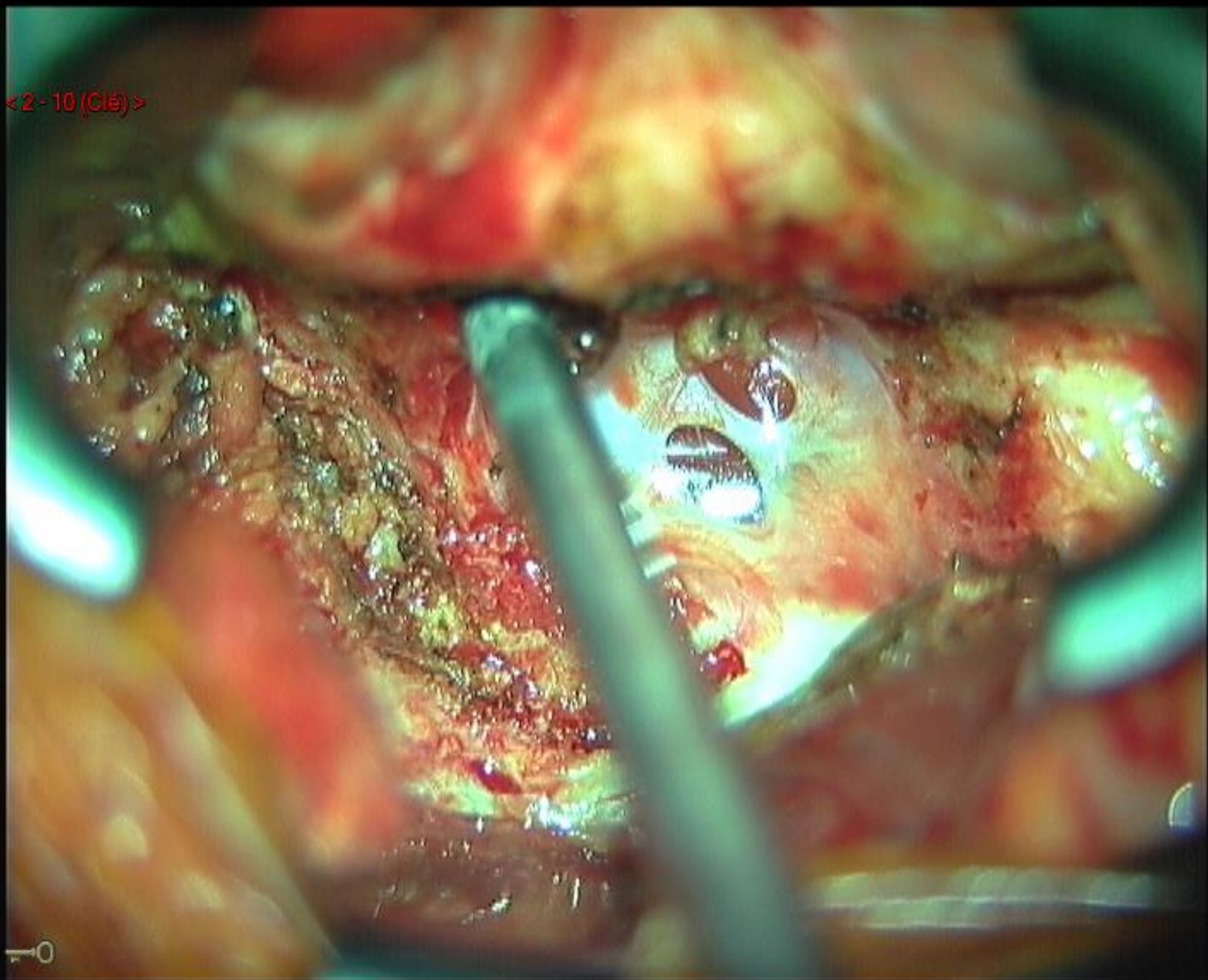


<2-9 (Clé)>



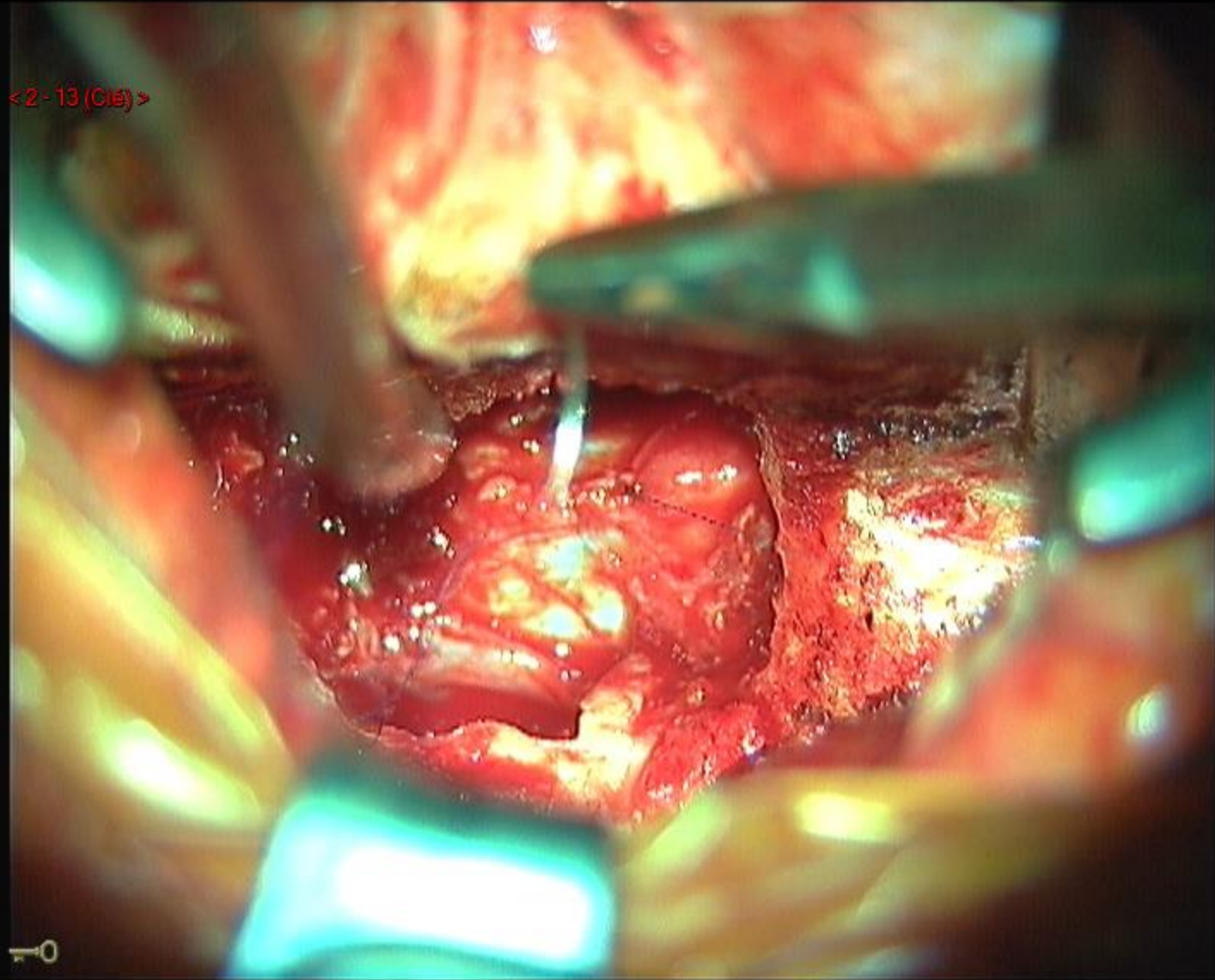
♀

< 2 - 10 (Clé) >



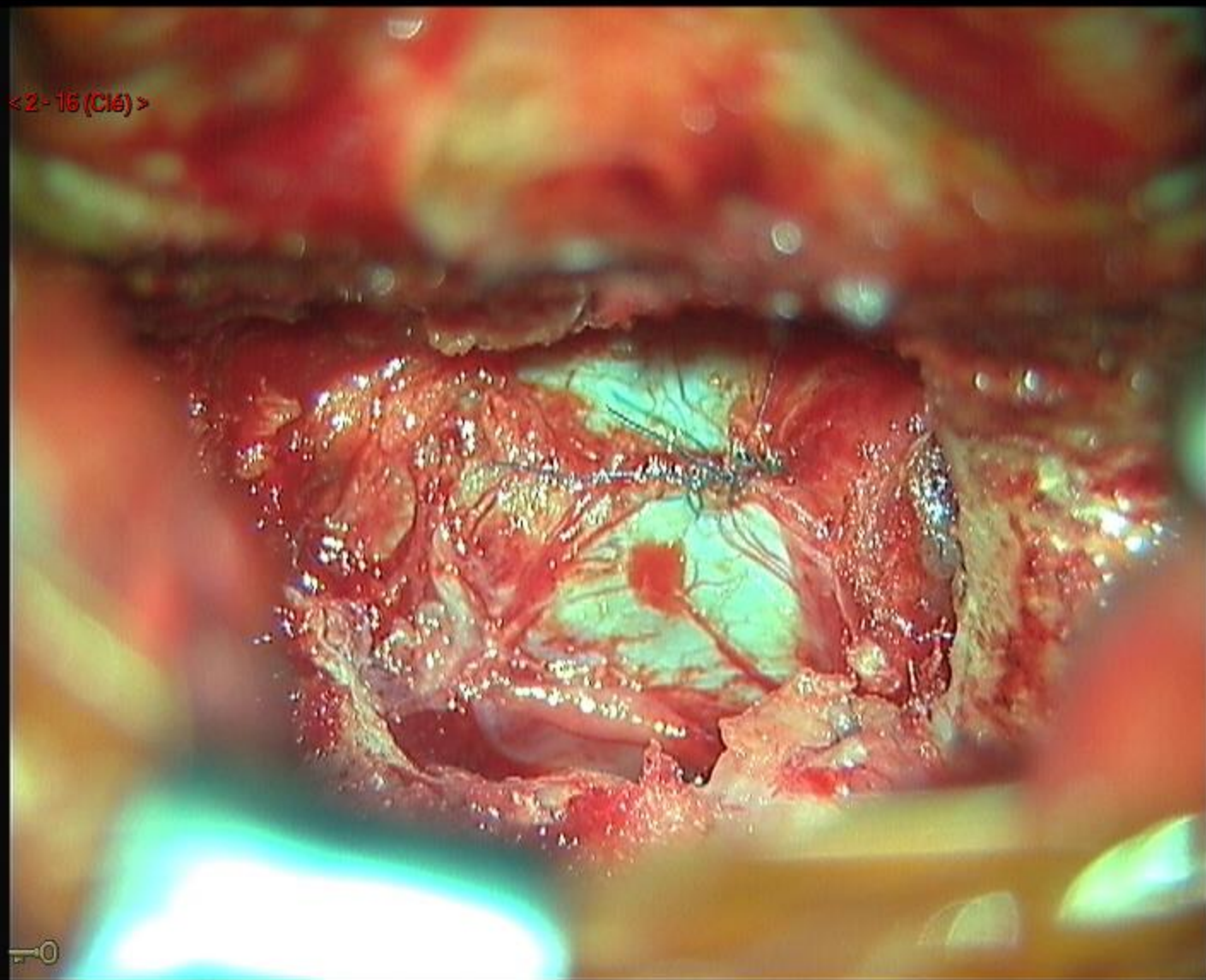
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< 2 - 13 (C1B) >



10

<2-16 (Cl6)>



Preop





# Postop J2

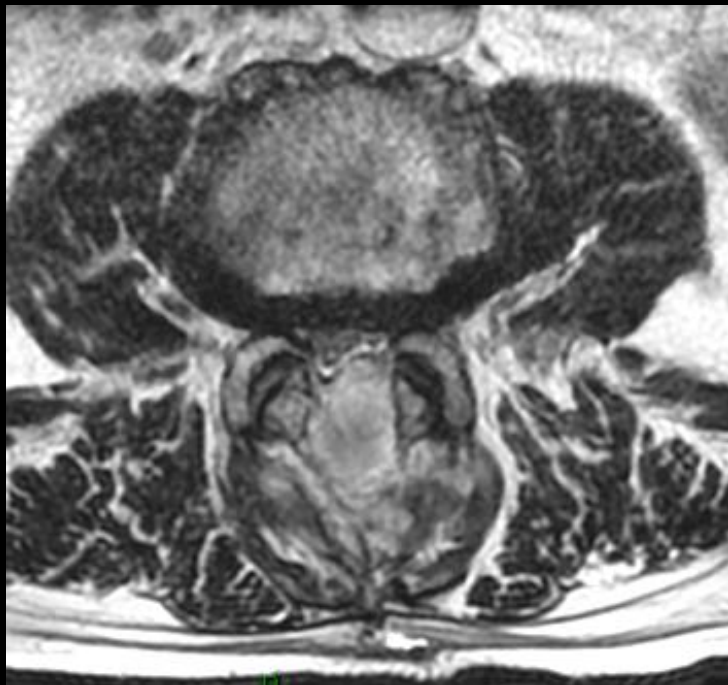


T1

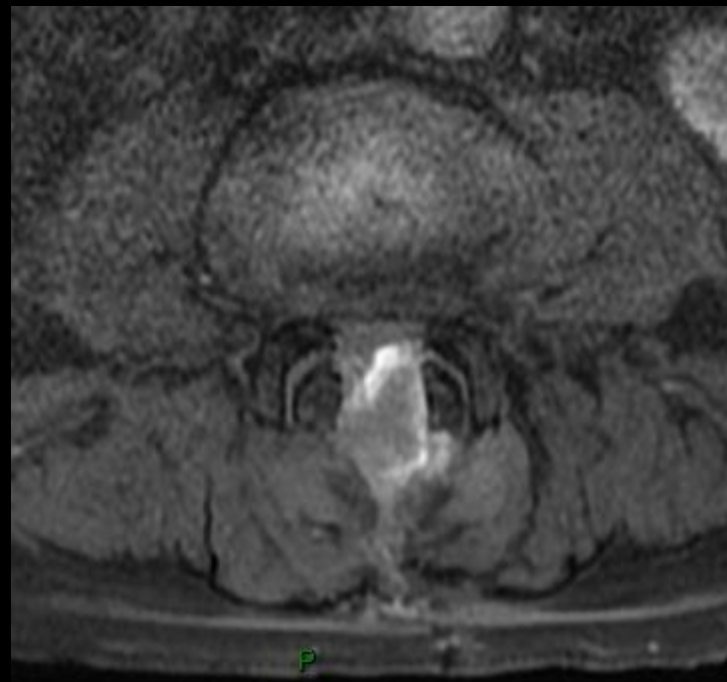


T2

# Postop



T2

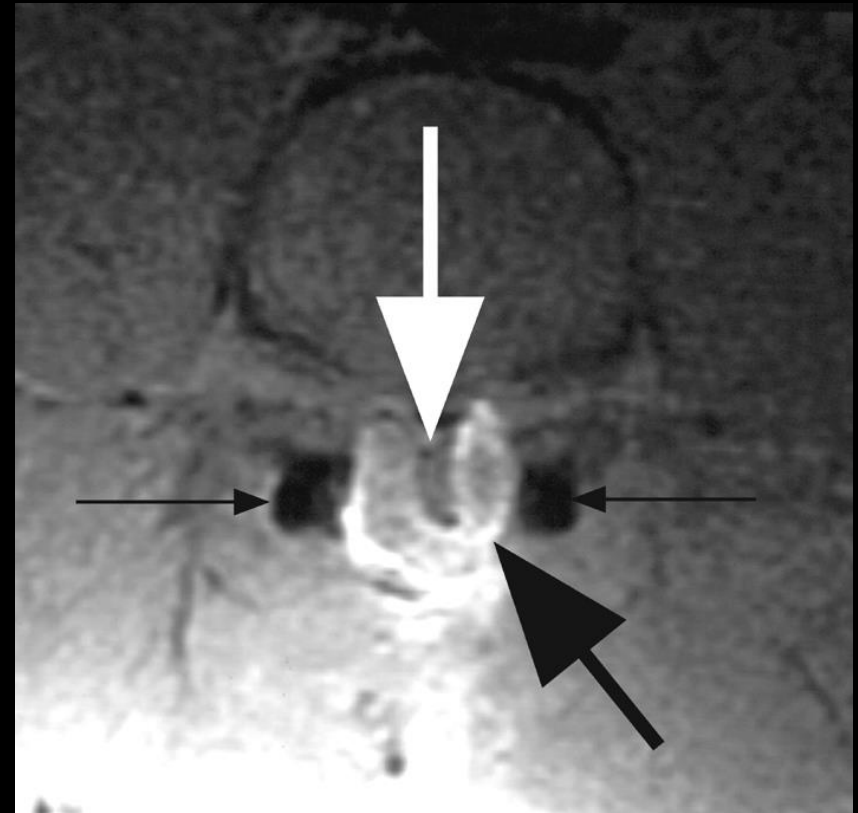


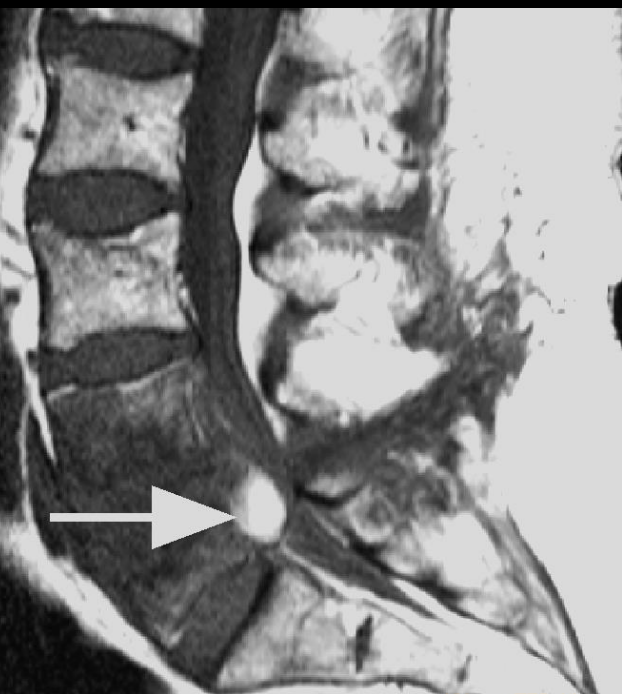
T1fs



# Hematoma

- Rare 1 %
- Difficult at CT
- MRI : - sensitive  
- specific
- Fat sat T1 !

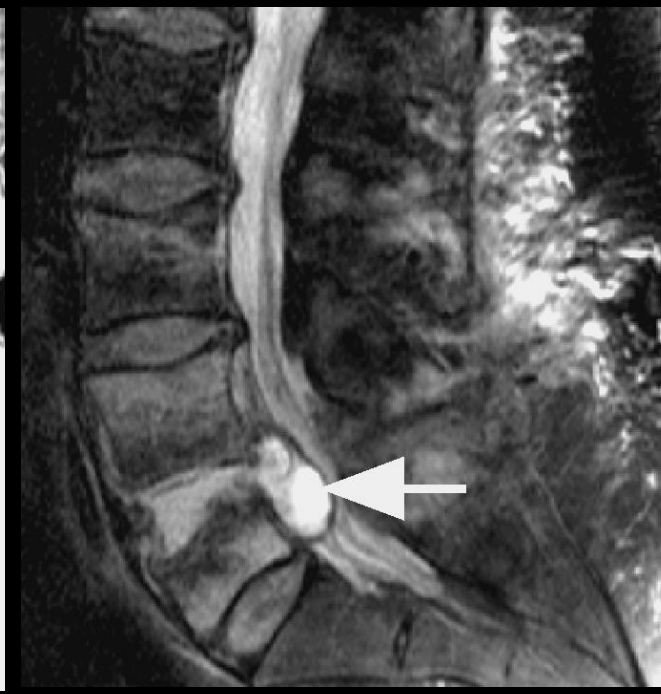




T1

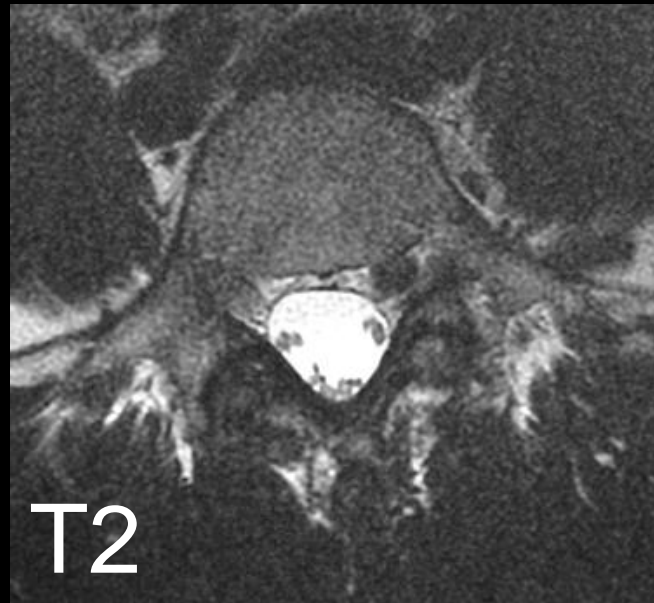


T1G



T2fs

Preop



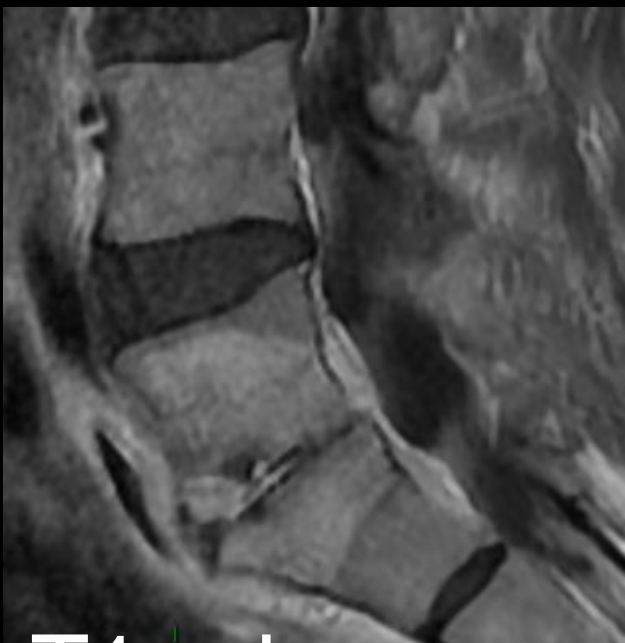
**Postop  
2 m**



**T1**



**T2**



**T1 gd**



**T1 gd fs**

**Postop**



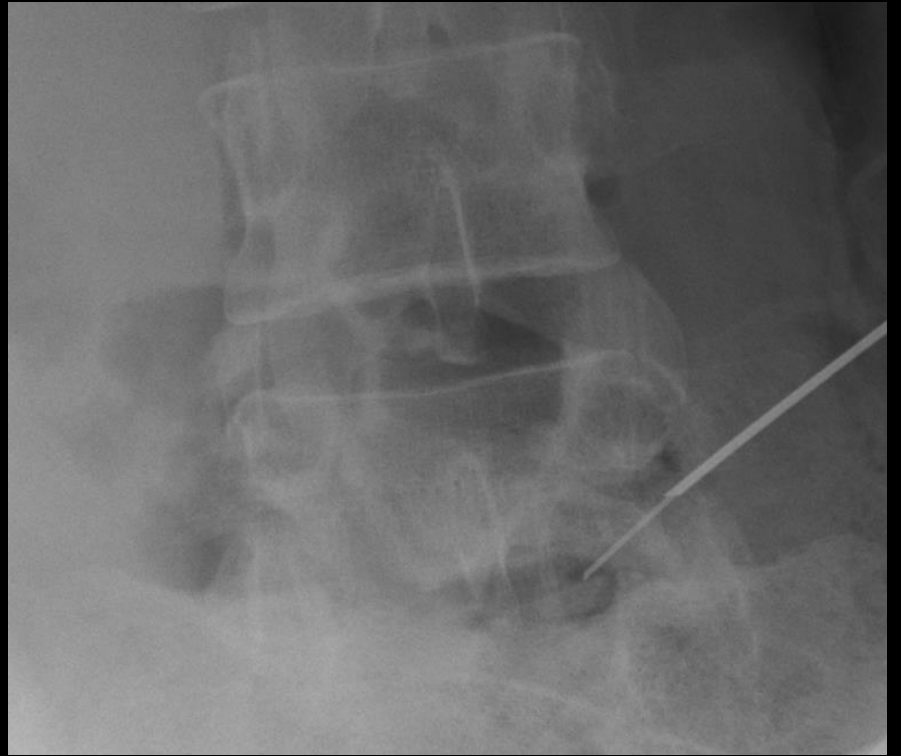
**T1**



**T1 Gd**



# Postop



# Infection

- < 1 %
- bacteria : 1) CoNS (*St. epidermidis* ...)  
2) *St. aureus*
- discrete clinical signs
- biology : ESR +/-; CRP +; WBC -

**POST-OP. 1 m**



**T1**



**T2**



**T1 gado**



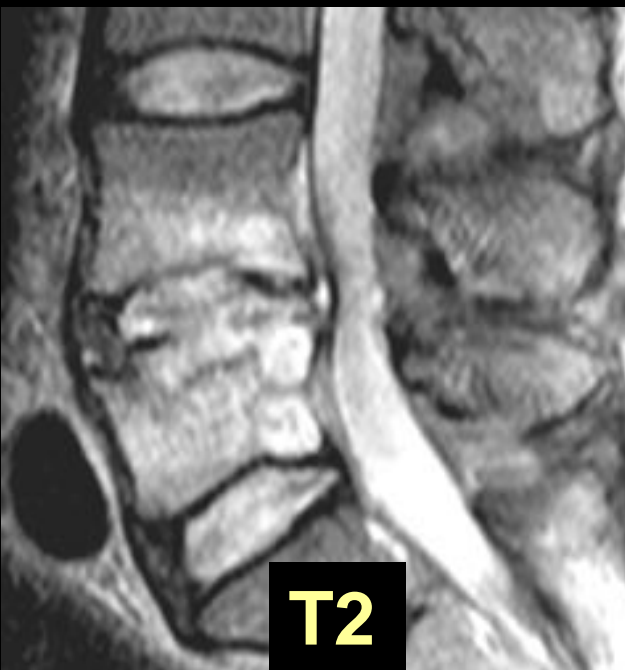
**T1 FS gado**

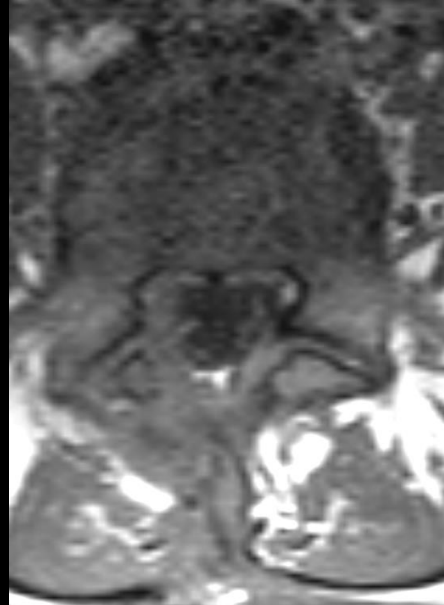


**POST-OP. 1 m**



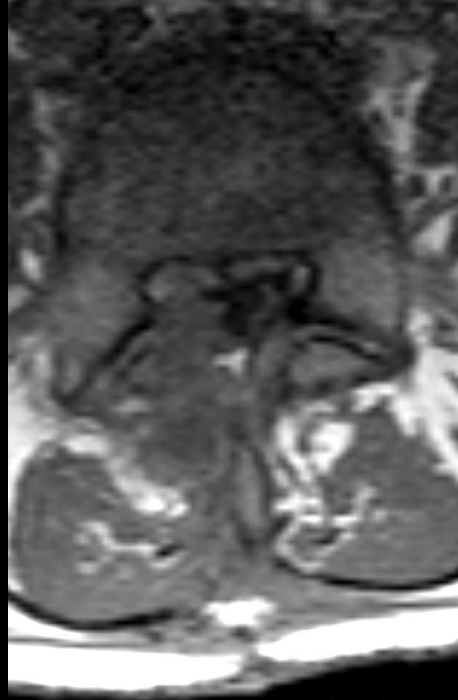
**POST-OP. 2 m**





T1

2 w.



T1 gado



# Infection: imaging

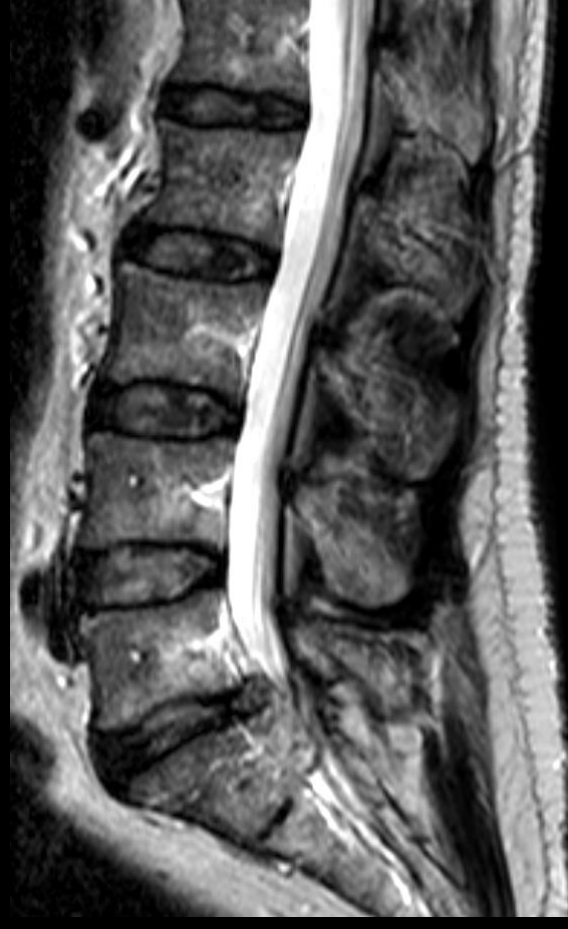
- difficult
- usual post-op findings // spondylodiscitis
  - disk narrowing
  - bone erosions
  - inflammation bone / disk / soft tissues
- Repeat imaging / biology !
- Best clues = collection (abscess), distant abnormalities  $\Rightarrow$  sampling

Preop

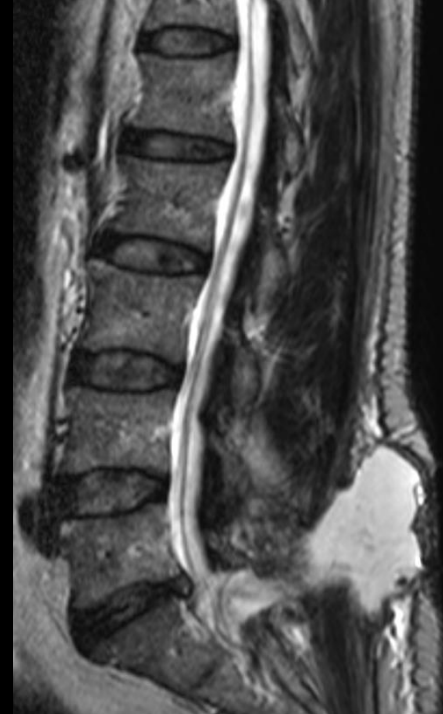
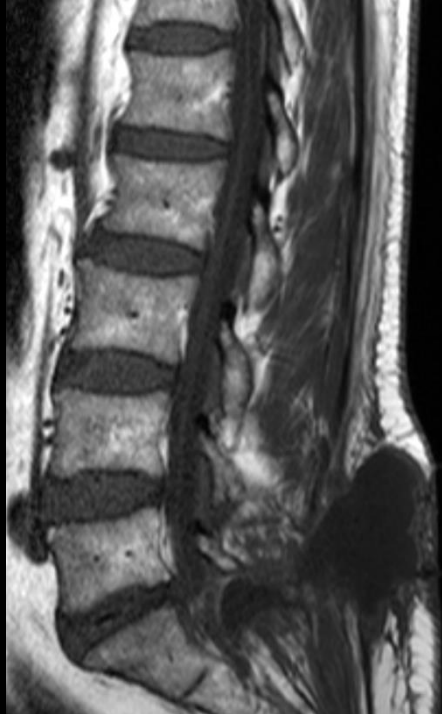
T1



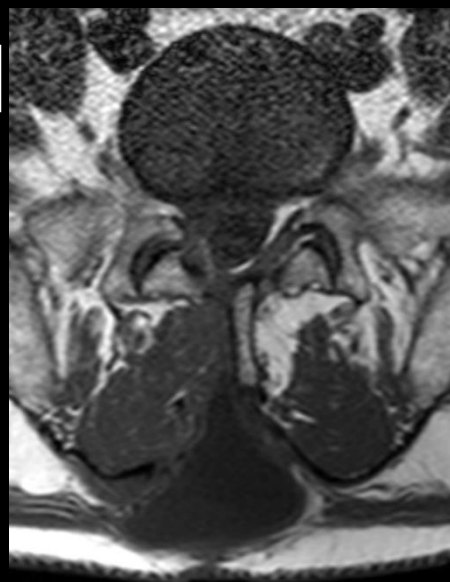
T2



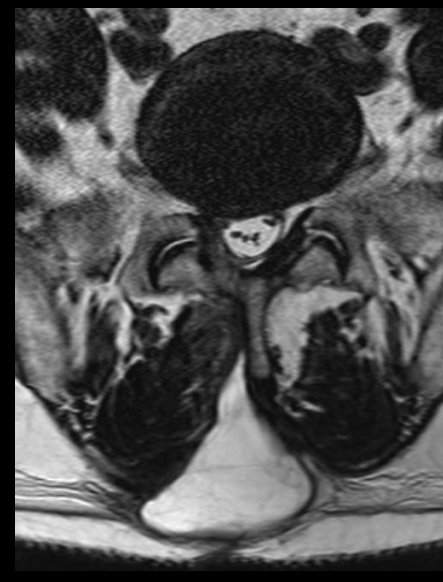
**Postop  
1 mois**



**T1**

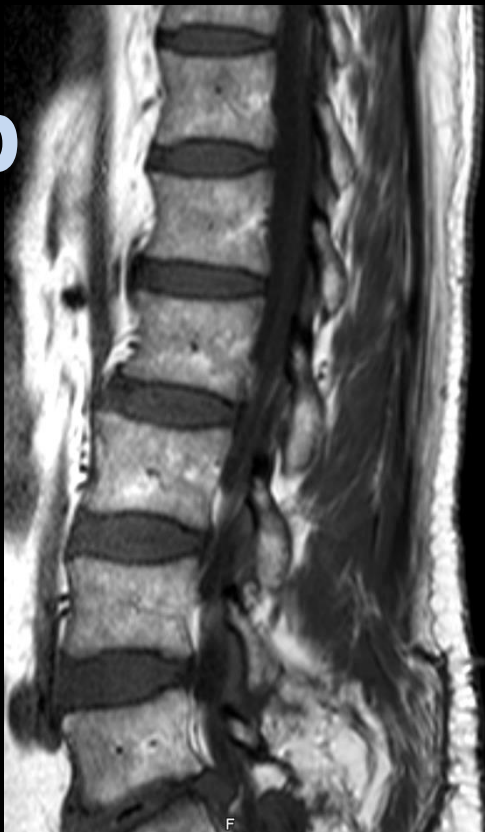


**T2**

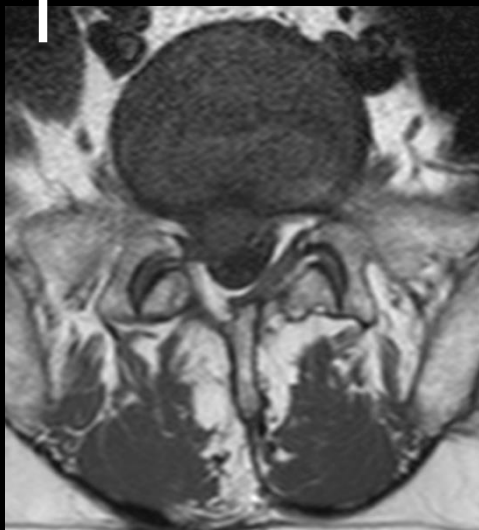




Postop  
2 ans



T1



T2



# Recurrent herniation

- 1/3 causes of recurrent radicular pain
- same level, same side : 80 %
- other level, other side : 20 %





T1



T2



T1 gd

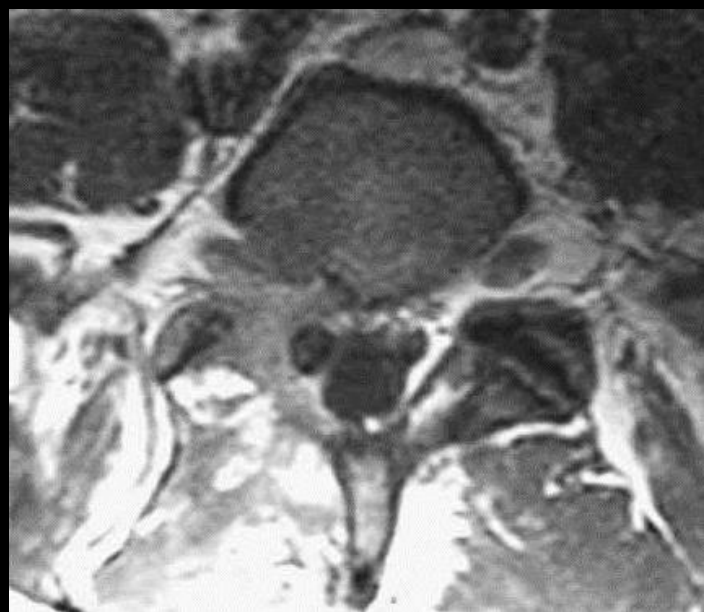


**Postop  
3 ans**



T1

T1 gd



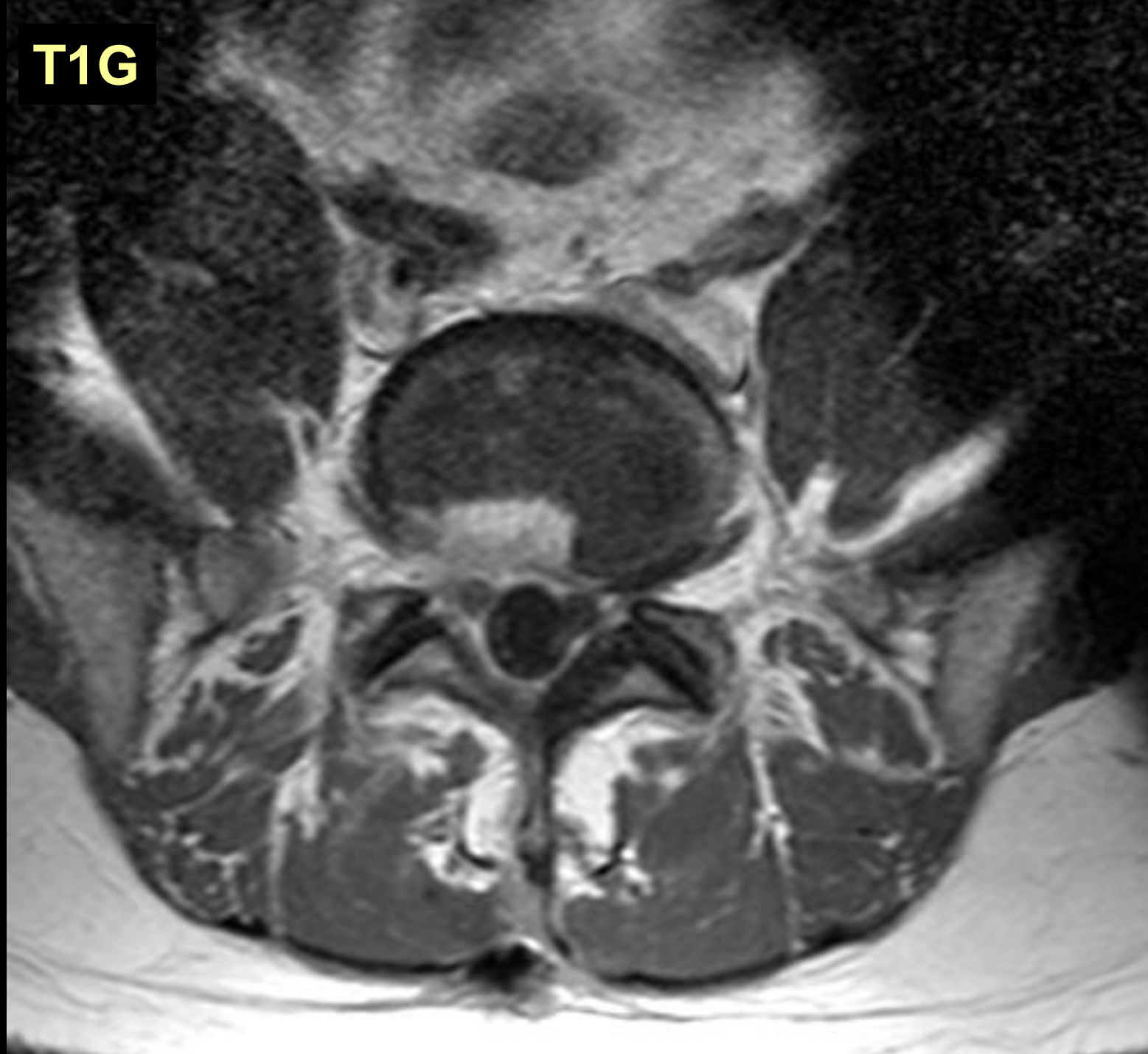
# Fibrosis - scar tissue

- evolution : edema-hemorrhagic → fibrous → sclerous
- +/- mass effect on sac / root
- retraction over time
- no difference at imaging: « normal » scar Vs symptomatic fibrosis

T1



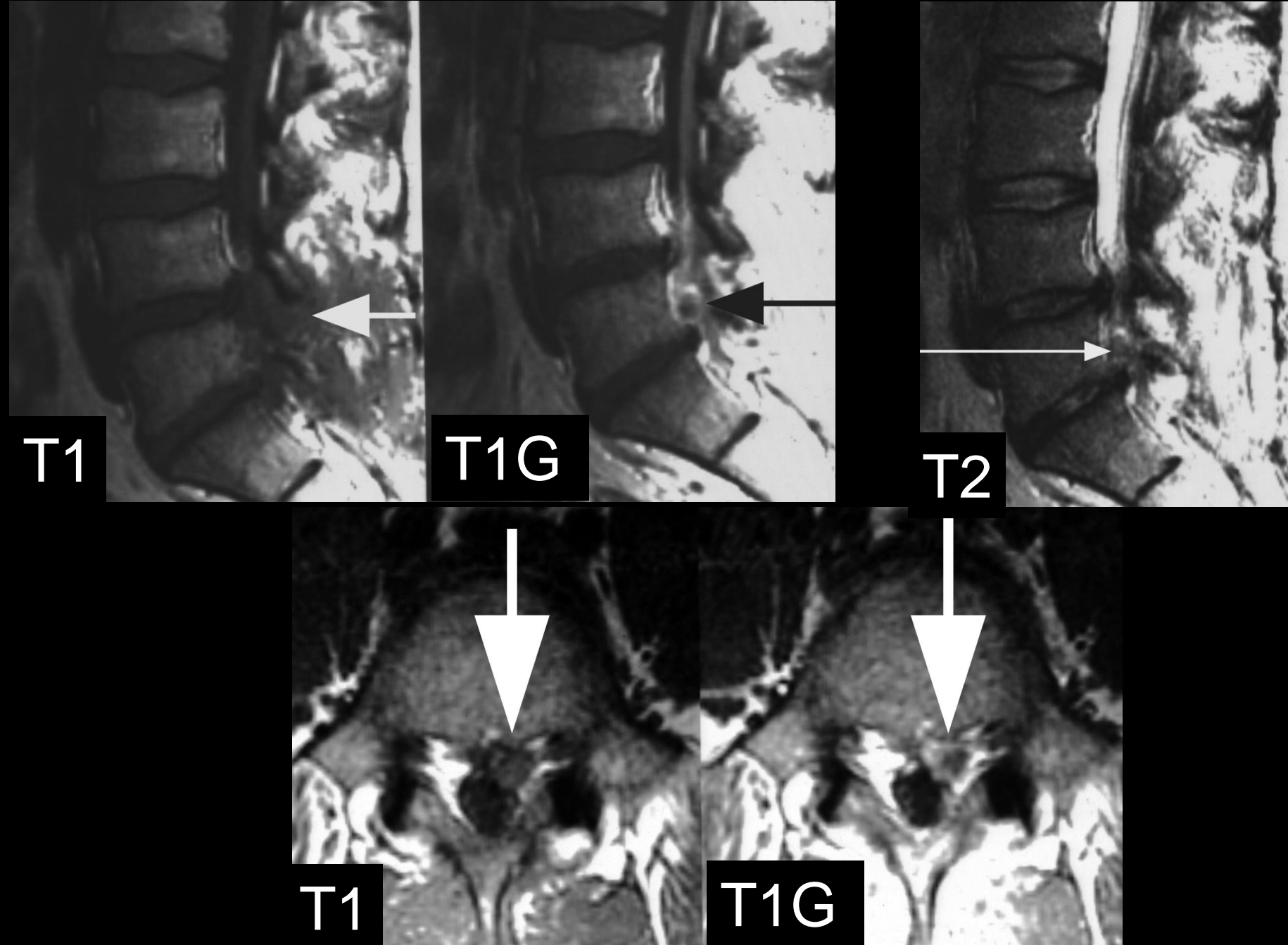
T1G



# Diff. Diagn.: recurrent herniation

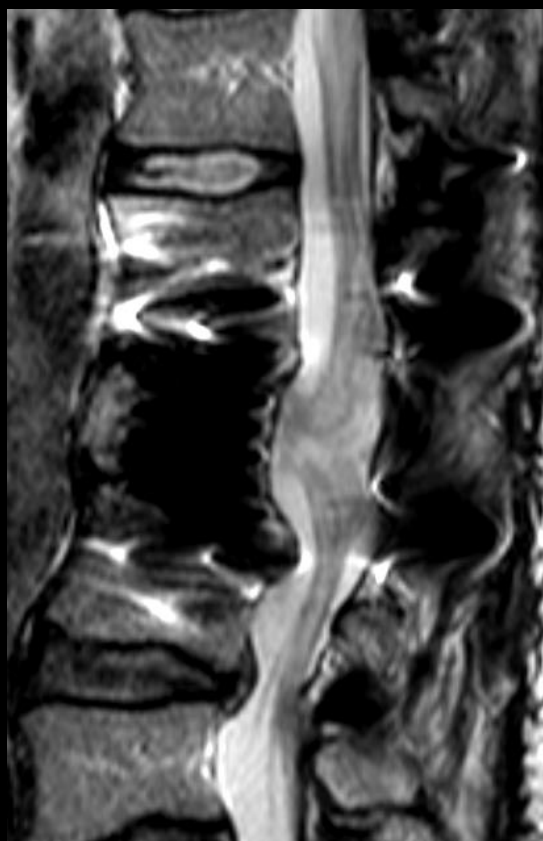
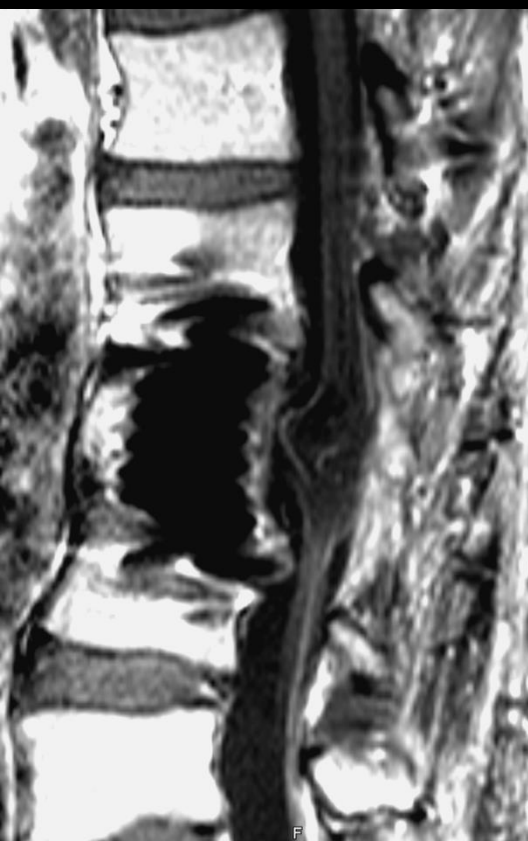
- signal : variable
- best criterion : no enhancement = disk





Operated: disk fragment in fibrosis





# Arachnoïditis

- several causes : surgery, puncture, thecal injection ...
- adherences
  - roots
  - sac
- late observation

# Complications

Early



Late

- Malposition of material
- CSF leak
- Hematoma
- Infection
- Scar (fibrosis...)
- Arachnoïditis
- Recurrent herniation

# Operated spine : when it fails...

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