
« Shoulder Course »

Day 2

12. Sept. 2014

Secret shoulder secrets

Dominik Meyer



PROTHETIC

Head of the prostheses better too big or too small?

In case of stiffness: smaller (loosening of capsule)

In case of hyperlaxity / instability or strong correction of a glenoid retro/anteversion: bigger (stuffing)

In case of doubt: smaller



PROSTHETIC

Combination head / glenoid:

good: small head / big glenoid
bad: big head / small glenoid

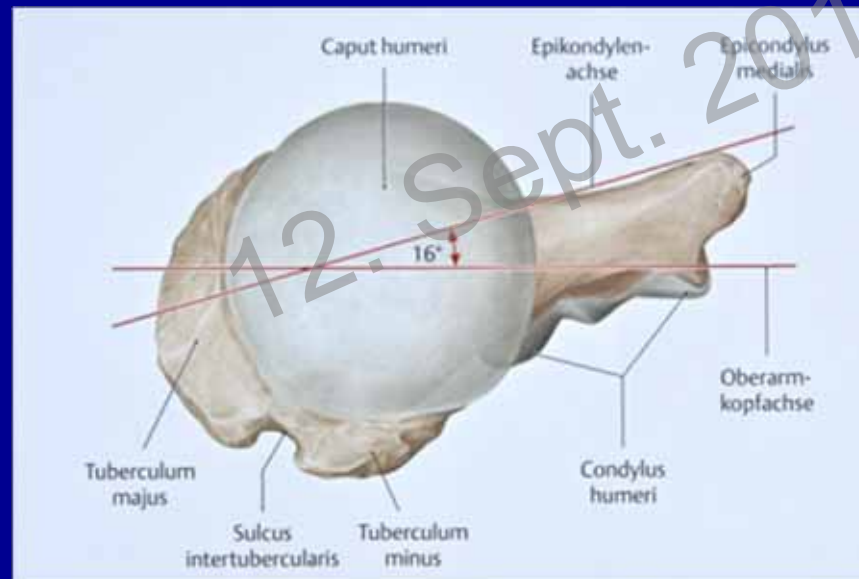
because of loosening of the glenoid



PROSTHETIC

Retrotorsion of the head (i.e. torsion of humerus)?

normal: 18-25 ° , 45-74 ° (average approx 60 °)
Anatomical Prosthesis: 20 °
Inverse Prosthesis approx. 0 °



PROSTHETIC

Orientation of inverse prosthesis:

If antetorsion: difficult to reduce,
posterior impingement

If retrotorsion: risk of dislocation

Position of dislocation: Internal rotation, adduction or
abduction



PROSTHETIC



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PROSTHETIC

Flexion movement:



PROSTHETIC

If glenoid in anteversion: antetorsion of the shaft

If glenoid in retroversion: retrotorsion of the shaft



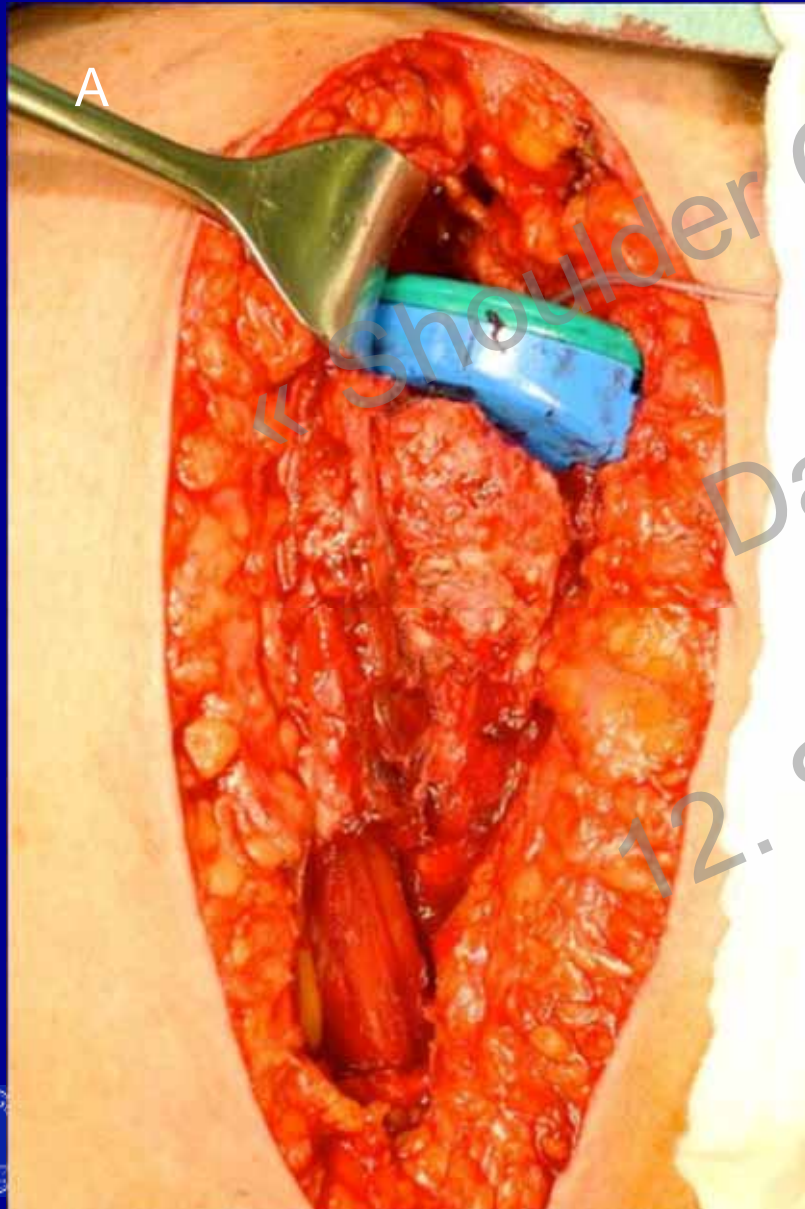
PROSTHETIC

Shaft too long, cannot reduce inverse prosthesis:

- 1. Use smallest inlay possible**
- 2. Relax patient**
- 3. you may consider metaphyseal component with no offset or correct for torsion (if stable)**
- 4. If still in trouble:
Consider distraction clamp
(from rotator cuff repair or arthrodesis distractor).
Danger of later acromion fracture (!)**



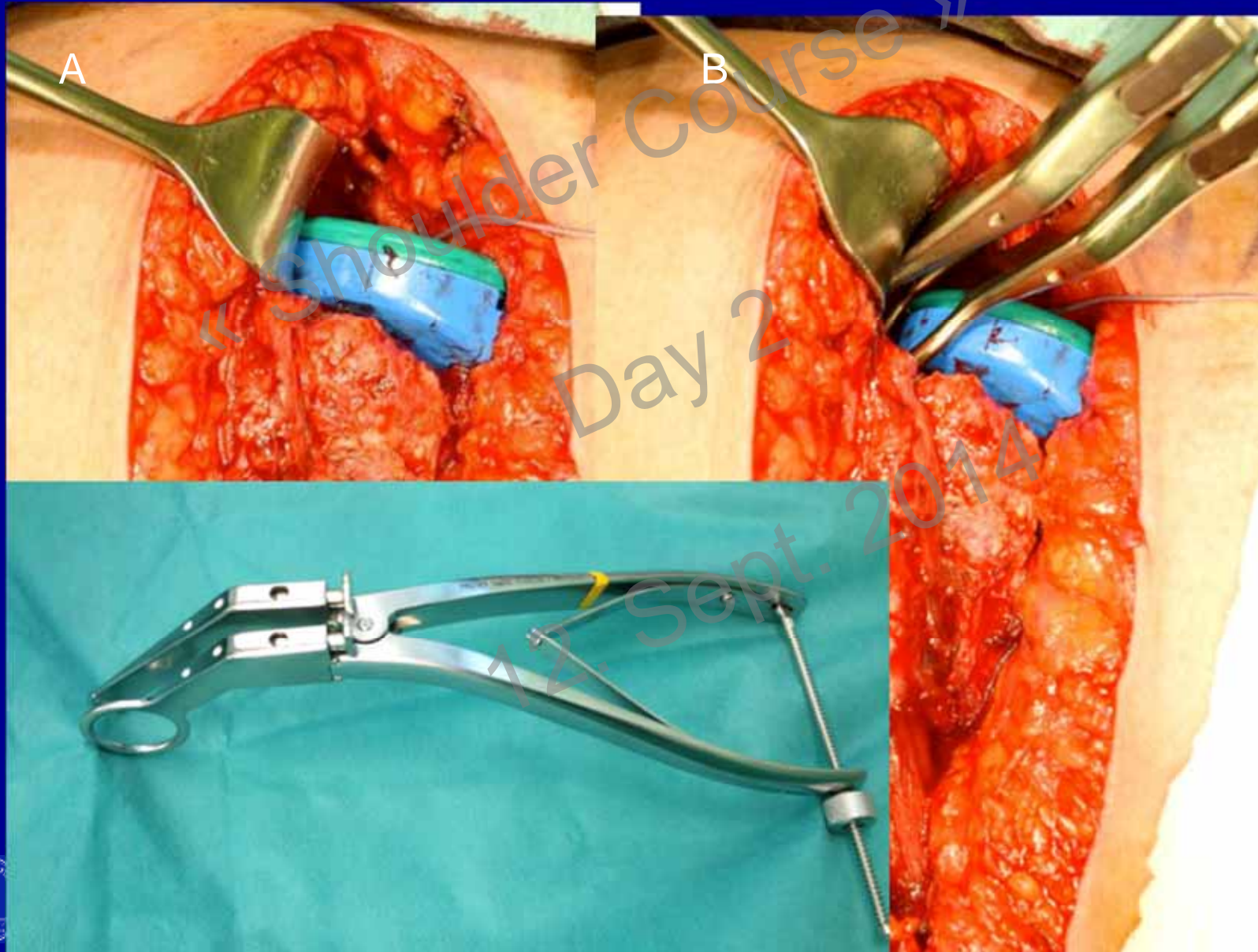
REDUCTION



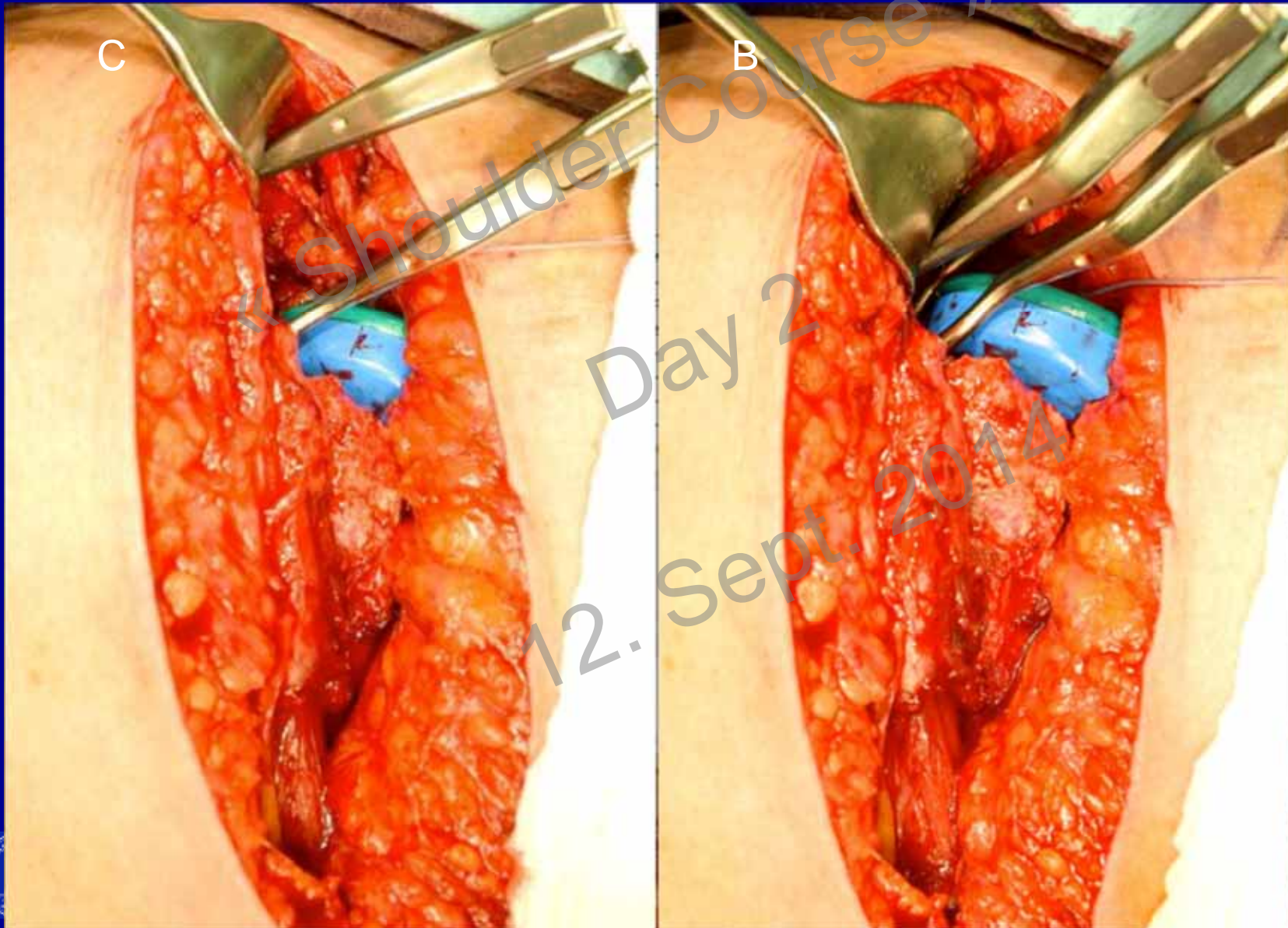
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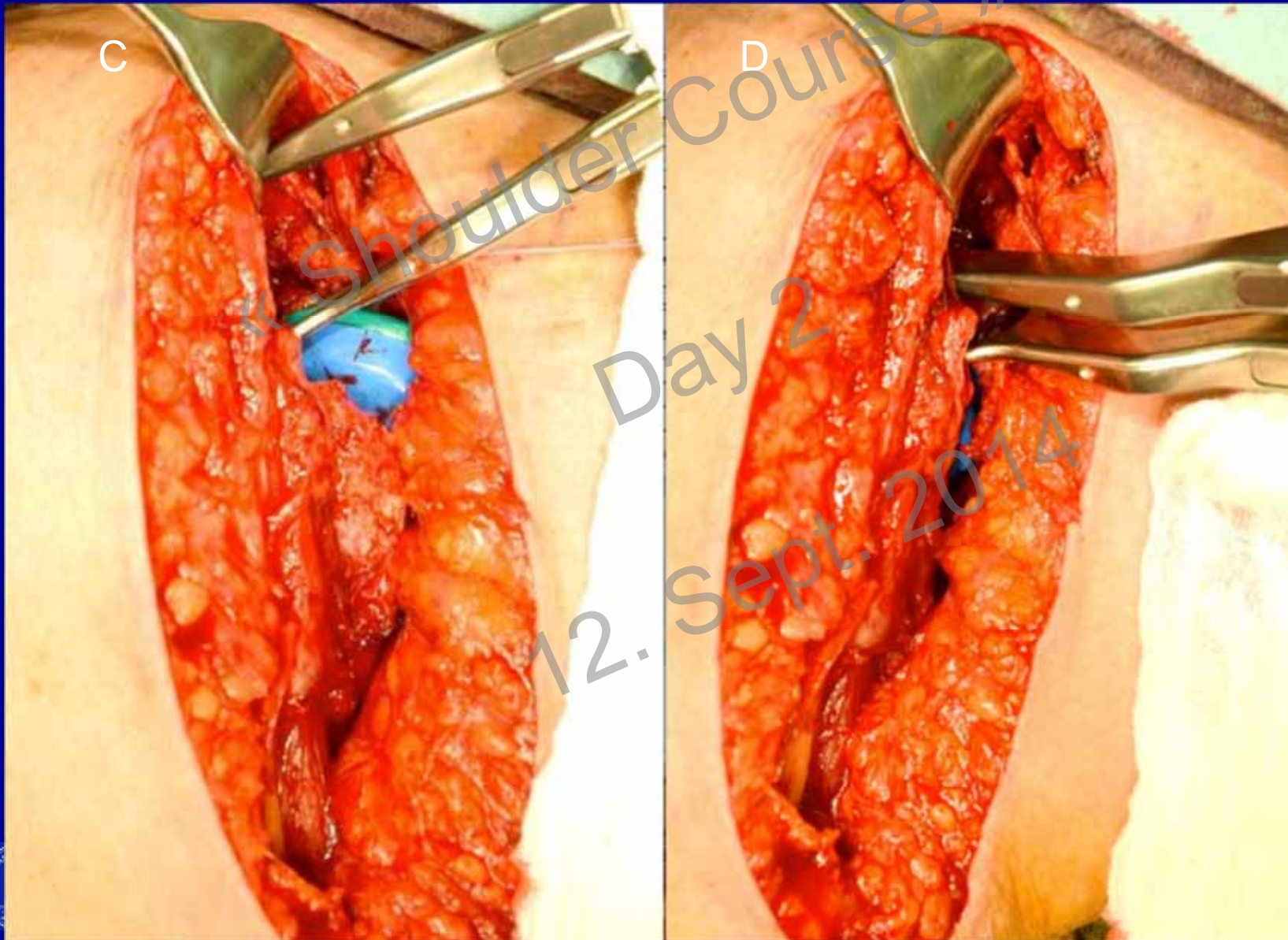
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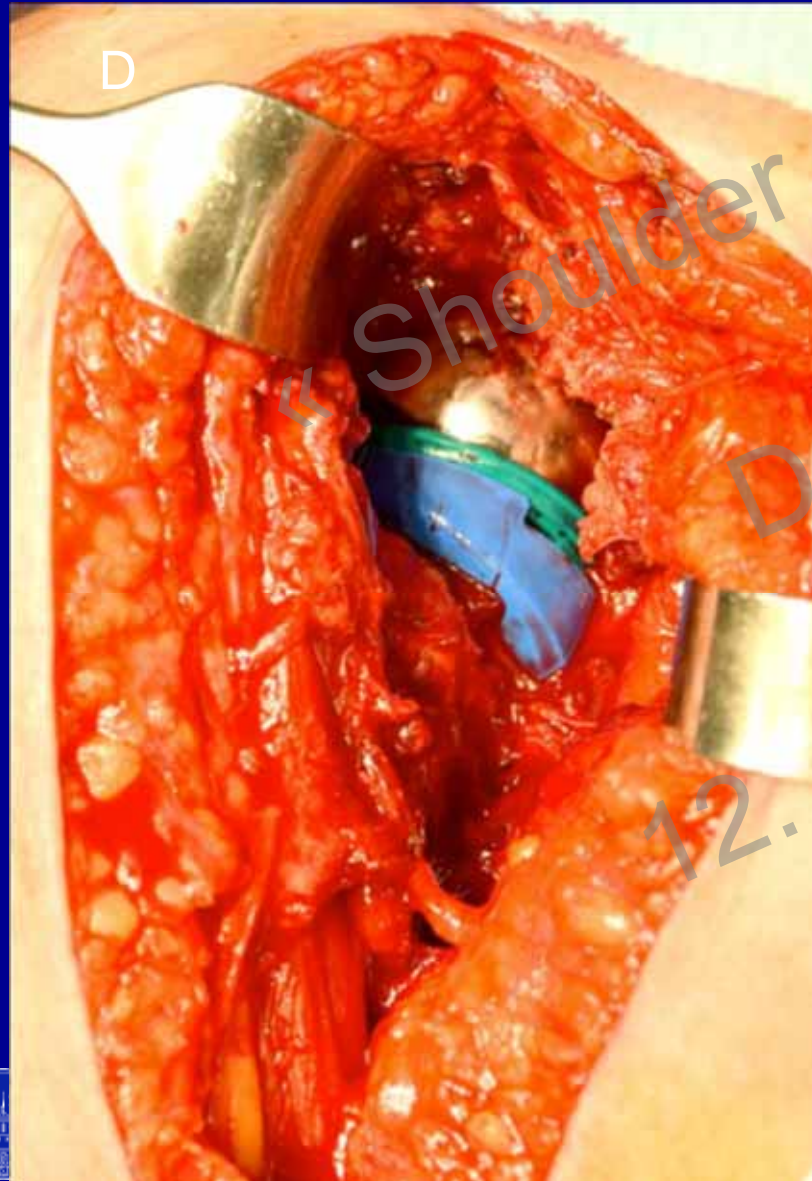
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REDUCTION



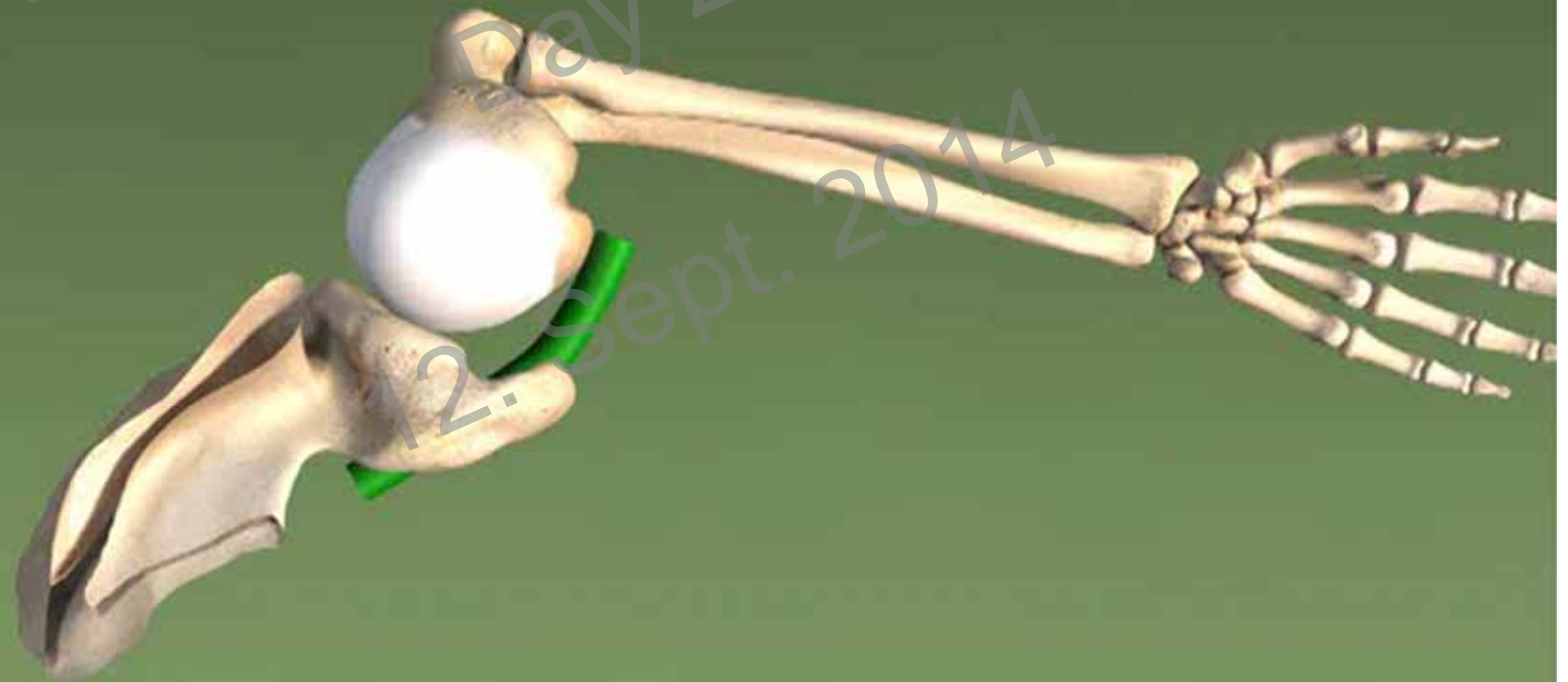
REDUCTION



...and how to take it out?

PROSTHETIC

Fix the subscapularis?

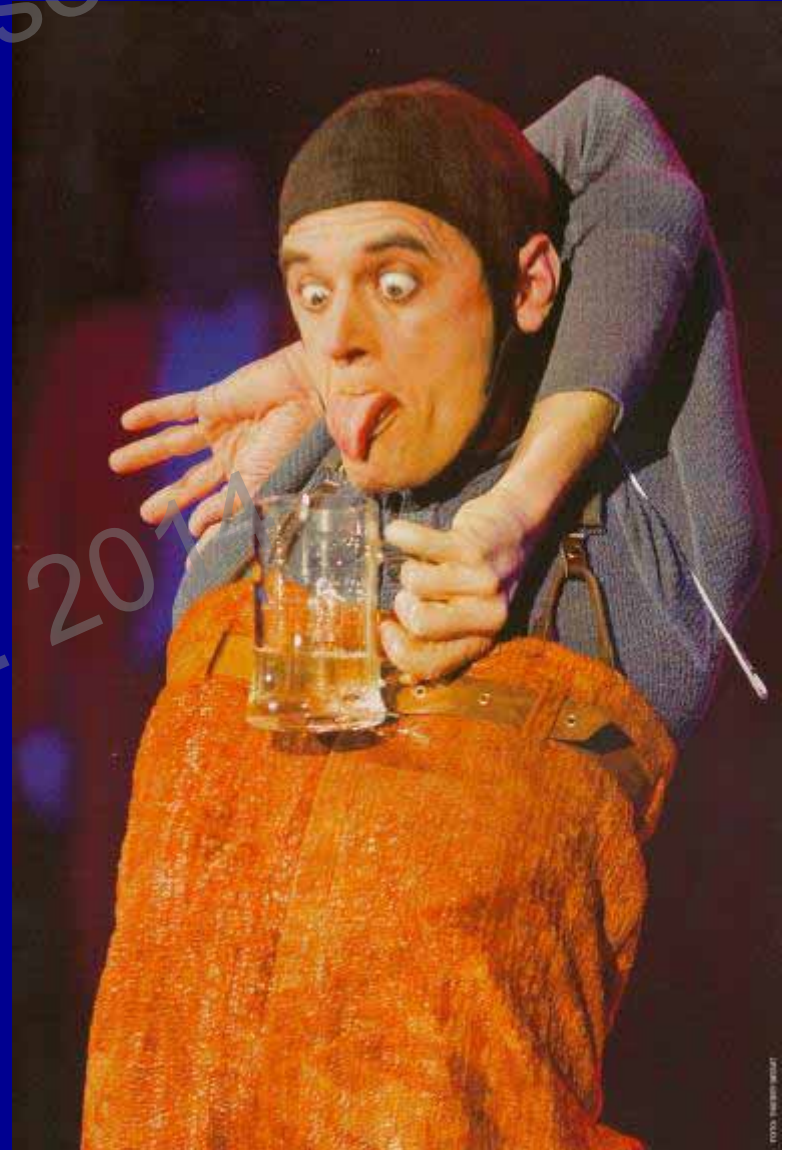


INSTABILITY

If there is an unstable hyperlax patient:

Do not correct laxity, only the defect causing instability

Otherwise, you may create osteoarthritis



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INSTABILITY

Stabilization:

**open versus arthroscopic
bony versus soft tissue**

-> repair the pathology

In case of doubt: bony more reliable than soft tissue



ARTHROSCOPY

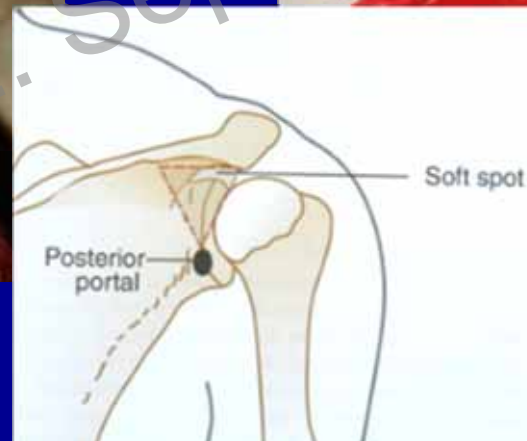
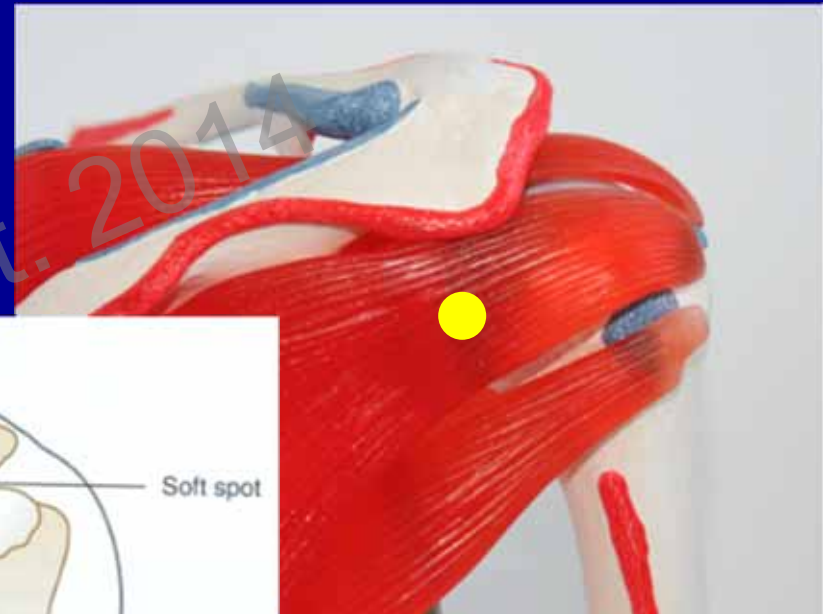
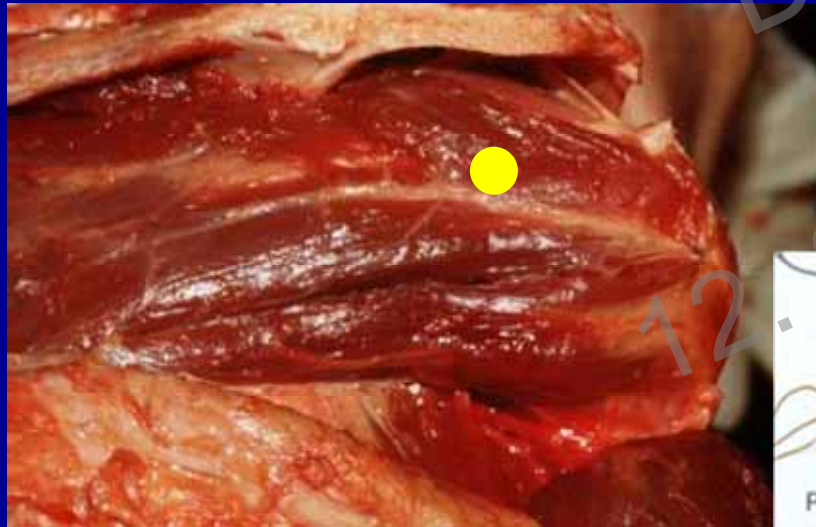
Portals:

posterior:

„soft spot“ 2cm medial, 2cm inferior:

Can be easier in IR, more medial, better piercing of muscle.

look for the acromion and feel the head



ARTHROSCOPY

2cm medial, 2cm inferior of acromion



more lateral:

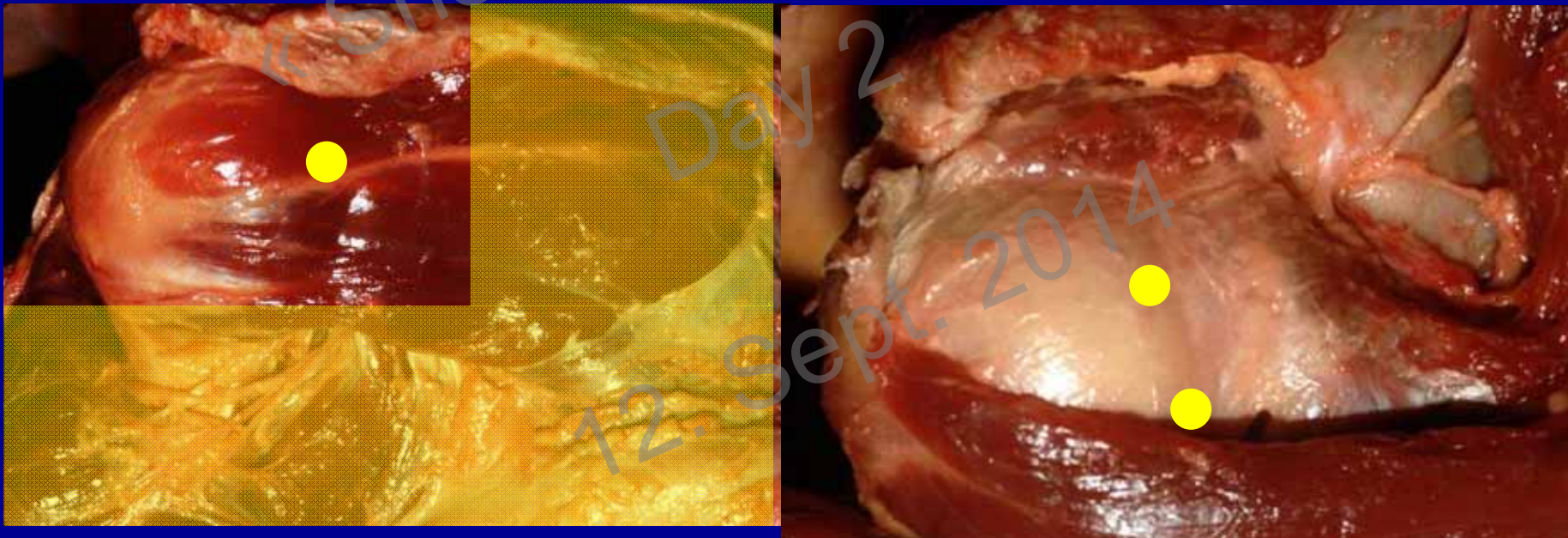
problems with posterior cuff, problem to pierce the cuff, less mobility

but: better for subacromial, easier to find the bursa



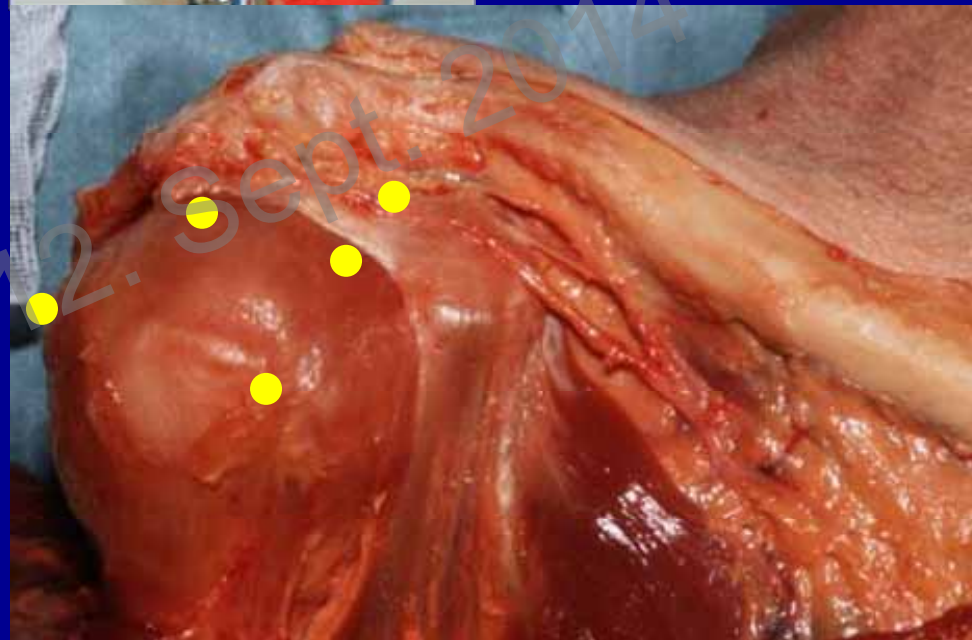
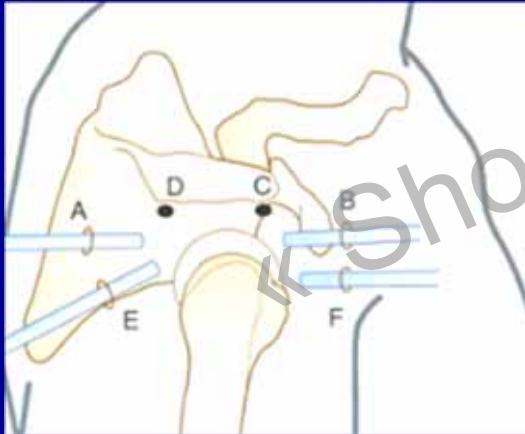
ARTHROSCOPY

Where is it safe to place the posterior portal?



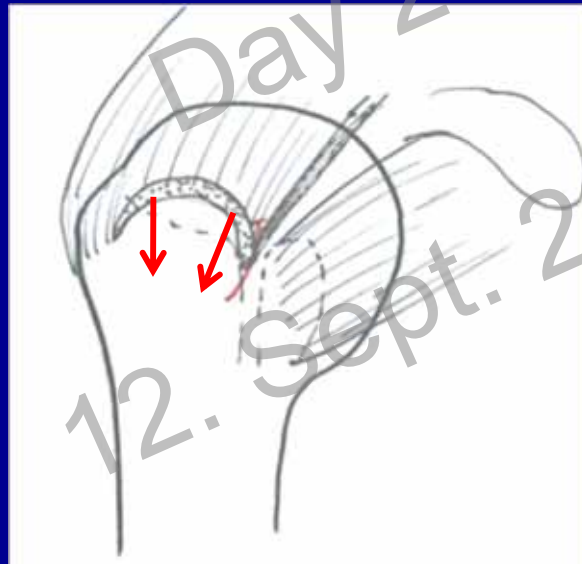
ARTHROSCOPY

Portals anterior and lateral:



CUFF REPAIR

Assure that the anterior edge can be brought back to the subscapularis



CUFF REPAIR

If closing the interval is not possible, partial repair may be an option, but there is a risk that the head pushes through the buttonhole



CUFF REPAIR

If you cannot bring the cuff to the footprint after extensive release:

1. consider debridement

particularly if there was good function

2. consider partial repair

try to bring the posterior to the anterior edge

3. consider augmentation of the cuff
difficult, expensive

4. consider medialization of the cuff
maximal 1.5cm



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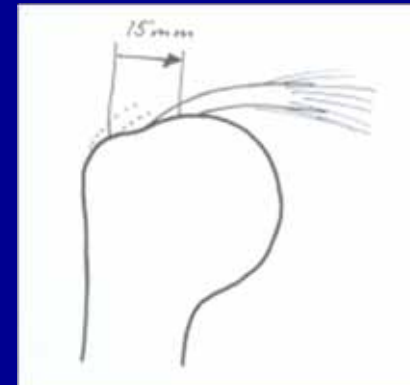
maximal 1.5cm



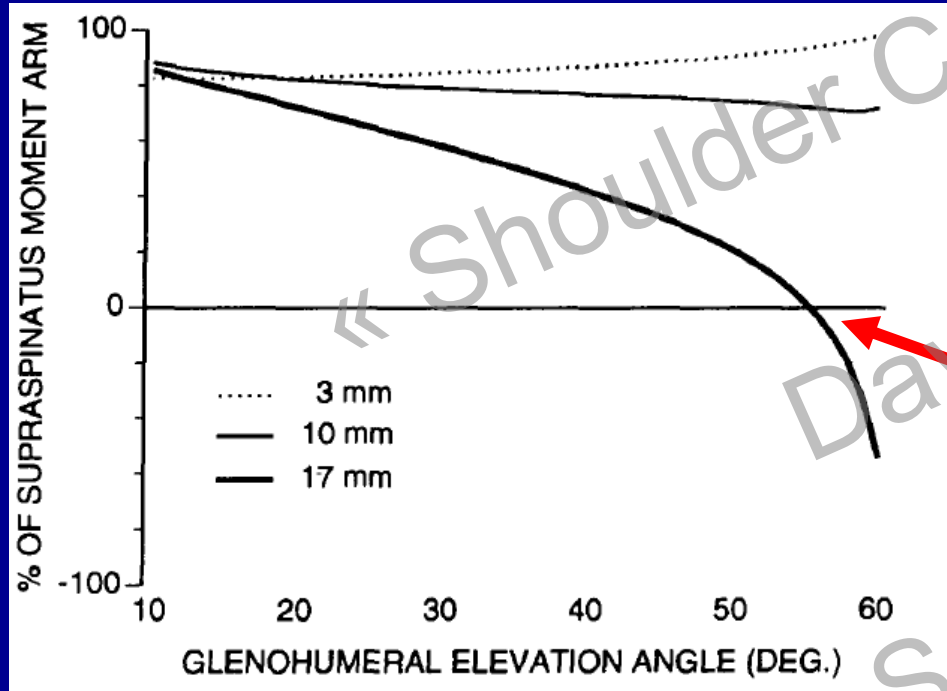
CUFF REPAIR

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2. consider partial repair try to bring the posterior to the anterior edge
3. consider augmentation of the cuff difficult, expensive
4. consider medialization of the cuff maximal 1.5cm



SSP MEDIALIZATION – MOMENT ARM



No significant changes with 3 and 10 mm medialization

17mm medialization:

- Moment arm: 0 mm at 57 °
(tendon restricts elevation)

Liu J, JBJS 80-A: 853, 1998



CUFF REPAIR

Pseudoparalysis is treated with rotator cuff repair

but

Pseudoparalysis is a contraindication for rotator cuff repair

???



CUFF REPAIR

1. Painful pseudoparalysis?

If yes, inject with 10cc Lidocain and see. Exclude stiffness.

2. When painfree:

Bad for cuff repair:

Dynamic anterosuperior subluxation

Cranialization <7mm

Patient cannot hold the arm at 90 ° abduction.

Chronic situation

Good for cuff repair:

Patient can hold the arm in 90 ° abduction

(moderate)

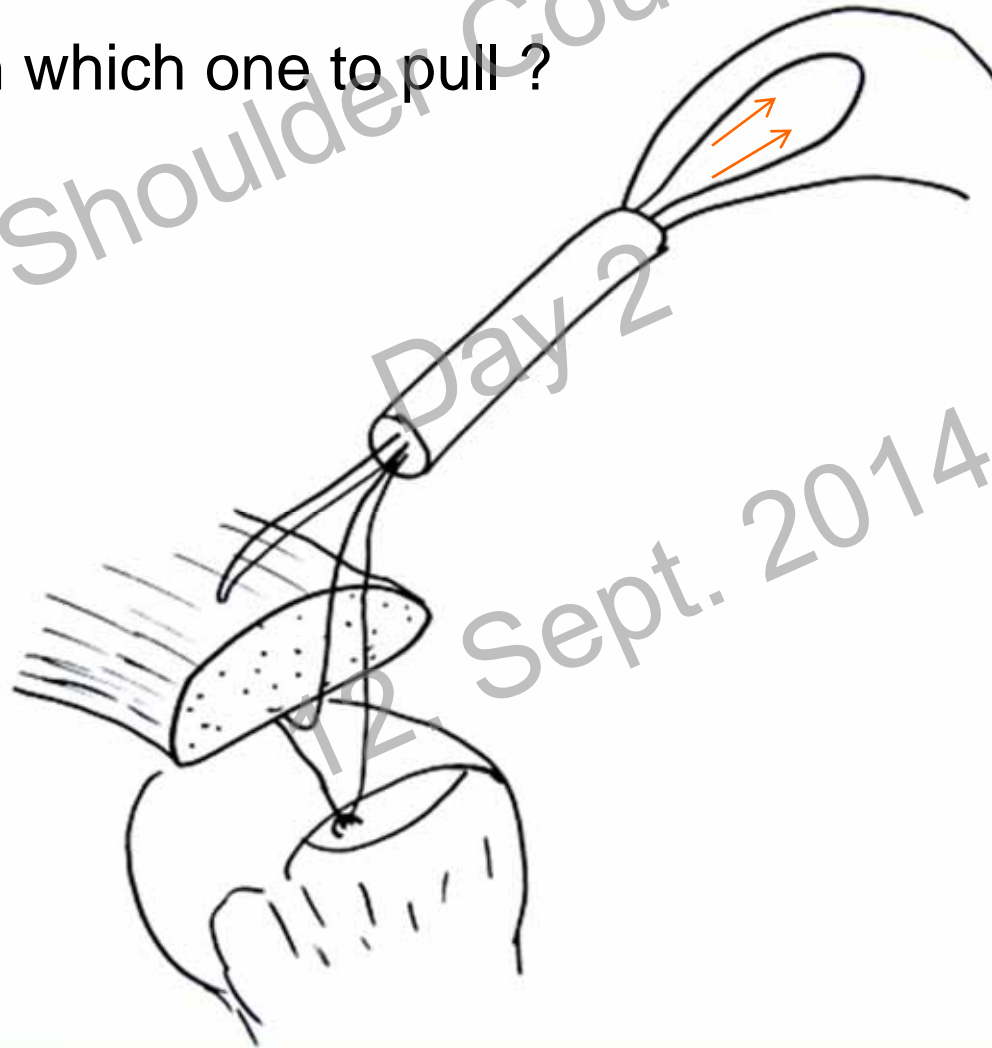
Patient can bring the arm to 90 ° abduction

Acute injury, previous good function



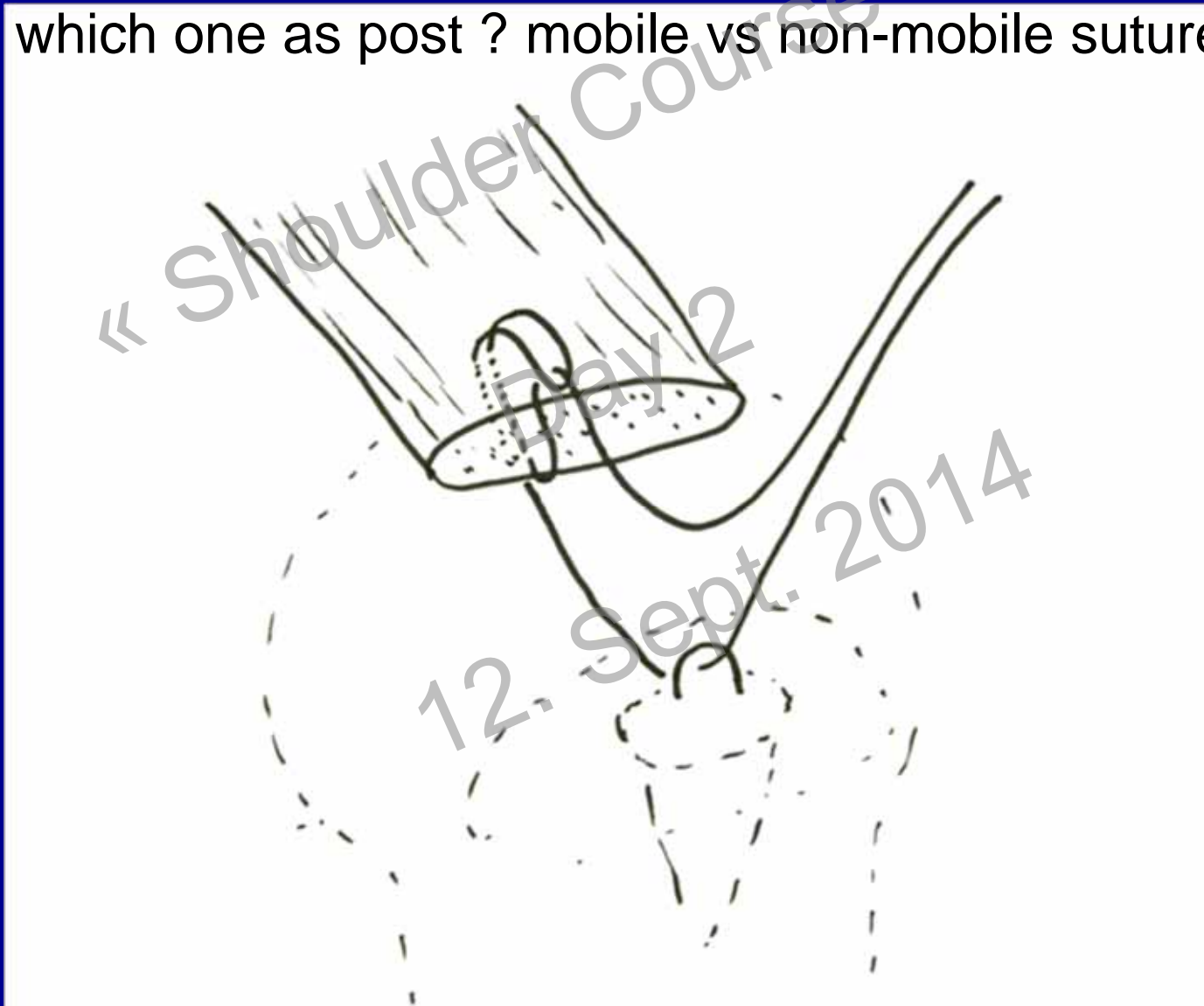
ARTHROSCOPY

on which one to pull ?



ARTHROSCOPY

which one as post ? mobile vs non-mobile suture



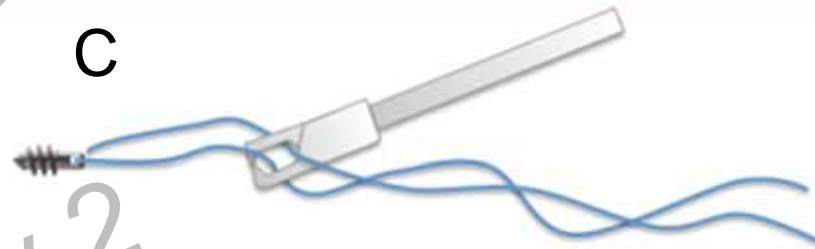
ARTHROSCOPY

untangling of sutures:

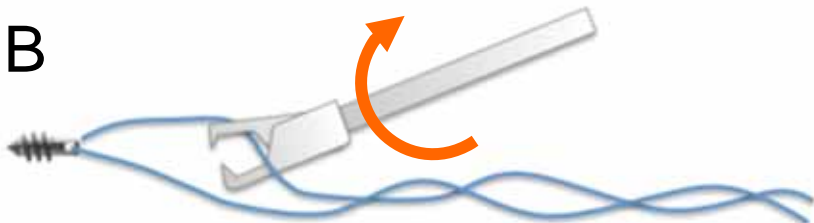
A



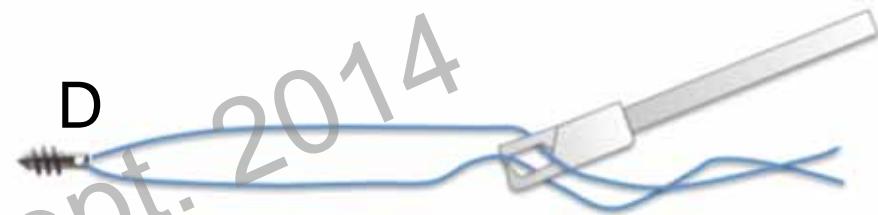
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B



D



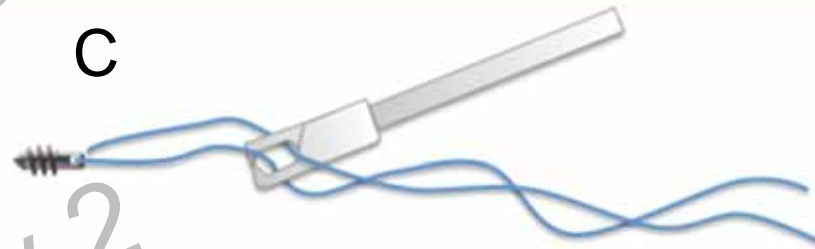
ARTHROSCOPY

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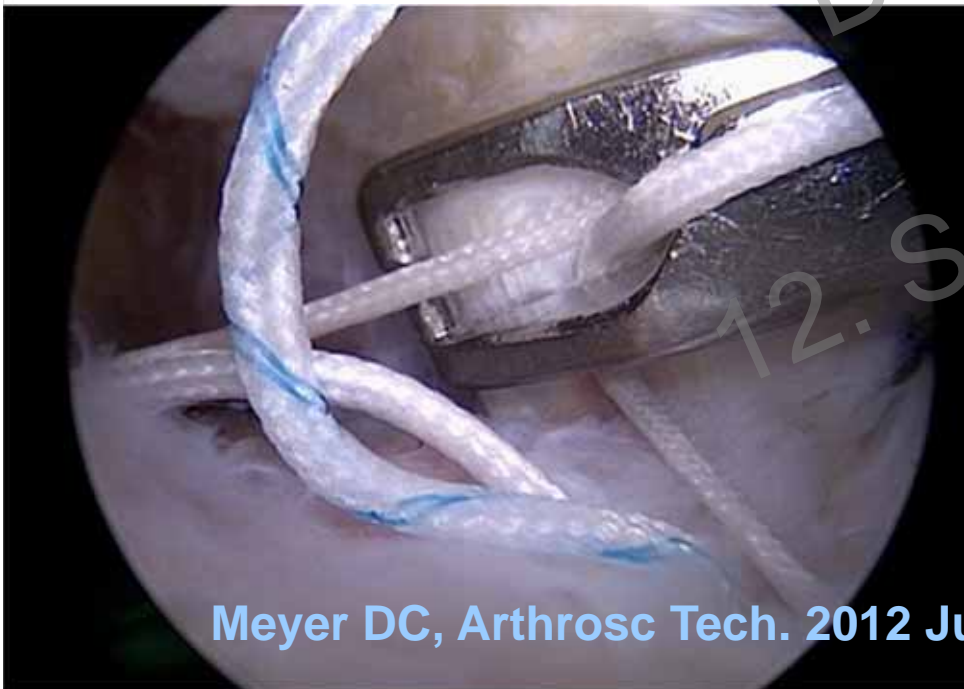
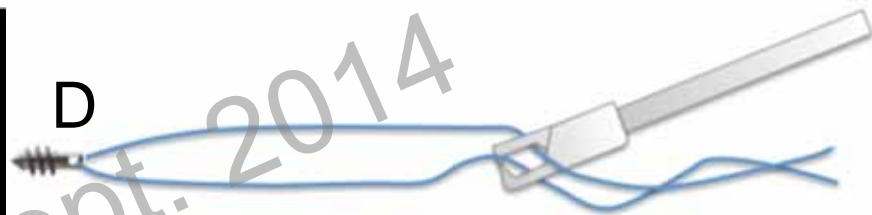
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C



D



Meyer DC, Arthrosc Tech. 2012 Jun



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