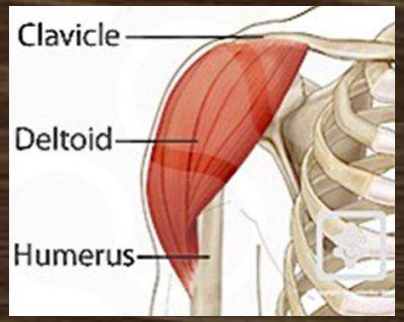
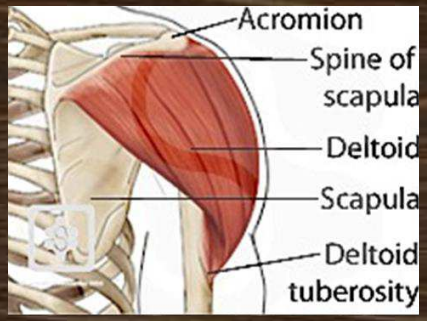
UZ ramena – metodika a nálezy

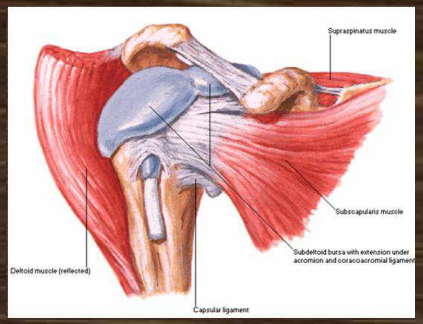
J. Brtková

RDG klinika

LF a FN Hradec Králové

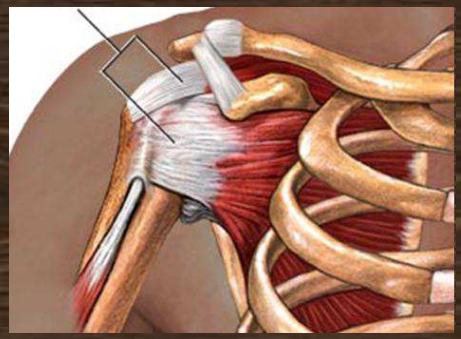


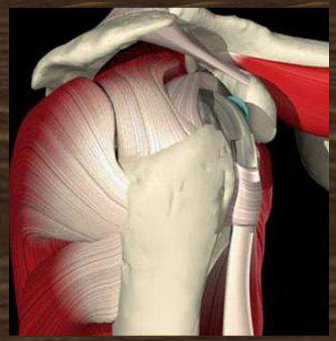


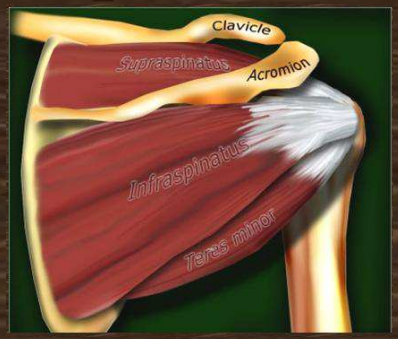


Anatomie

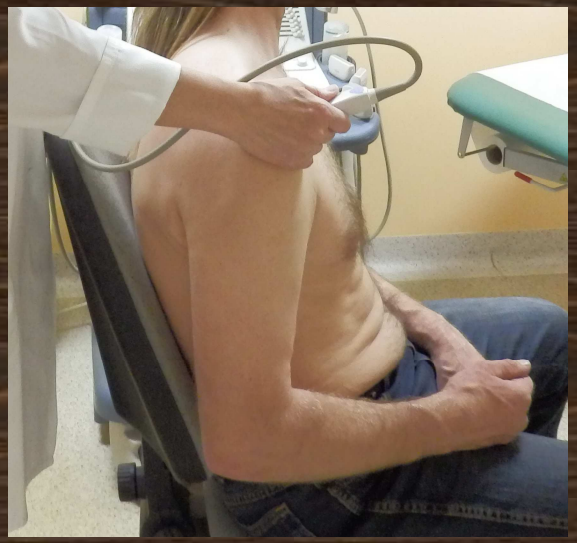
- „ vrstvy cibule“

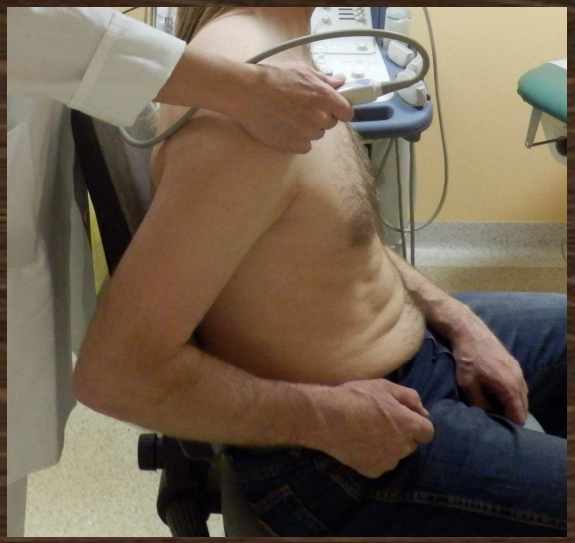






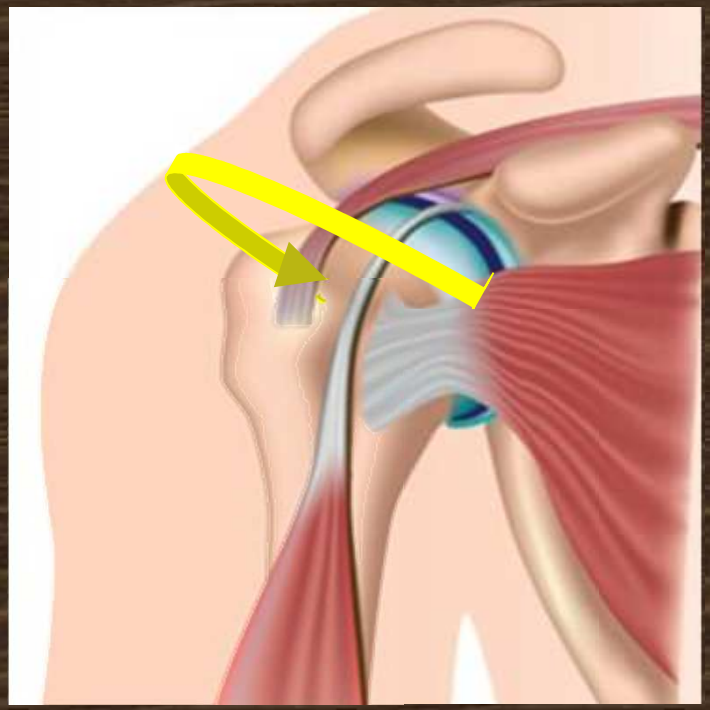
Metodika

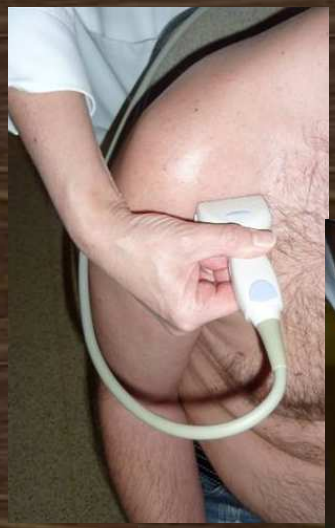


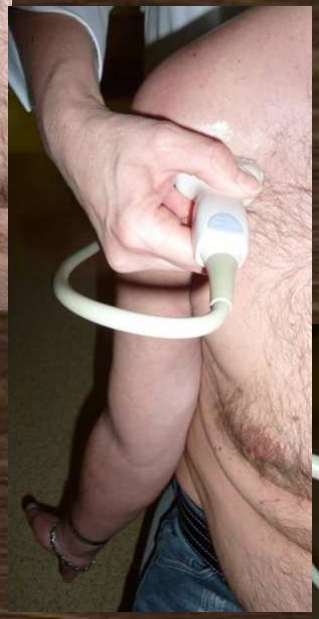


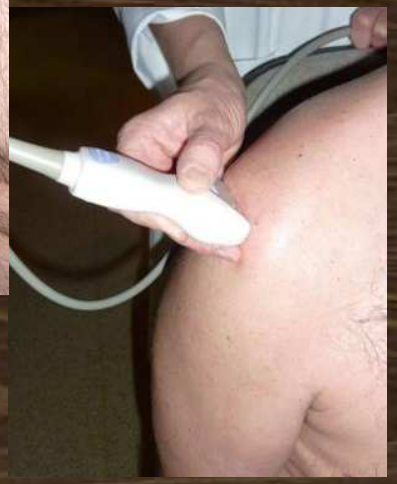
- roviny vyšetření respektují anatomii

transverzální rovina









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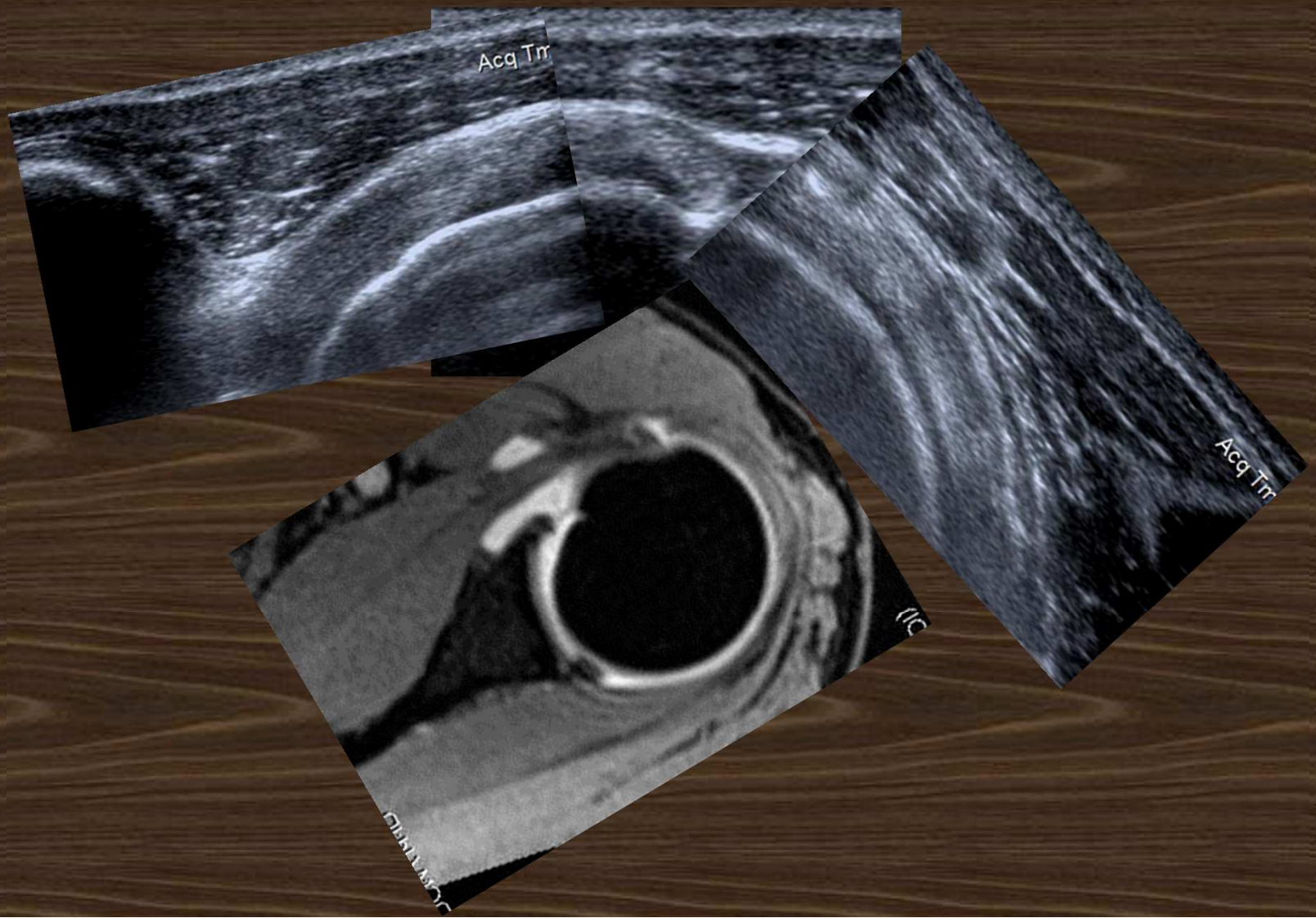

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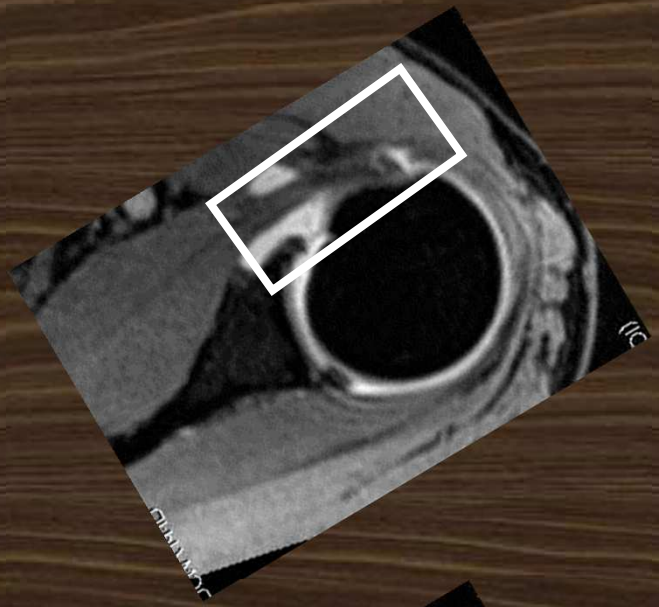

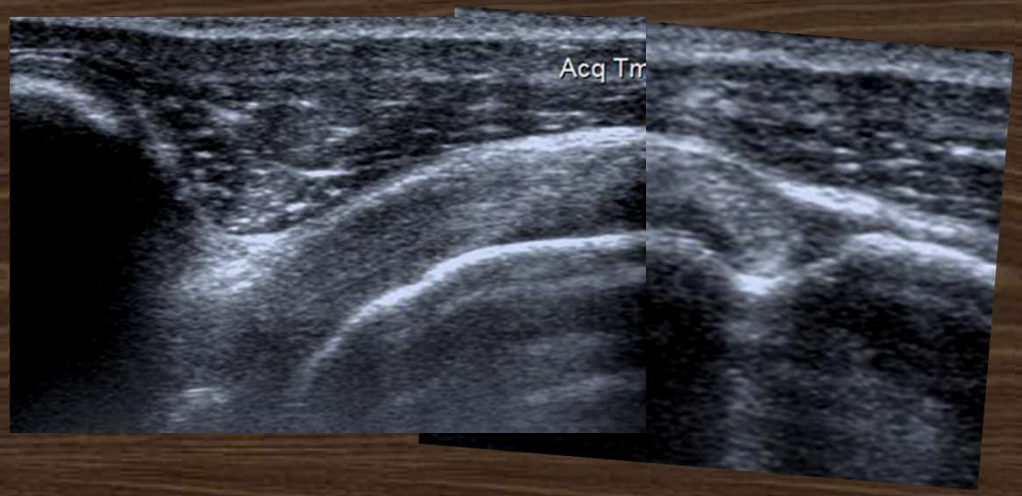

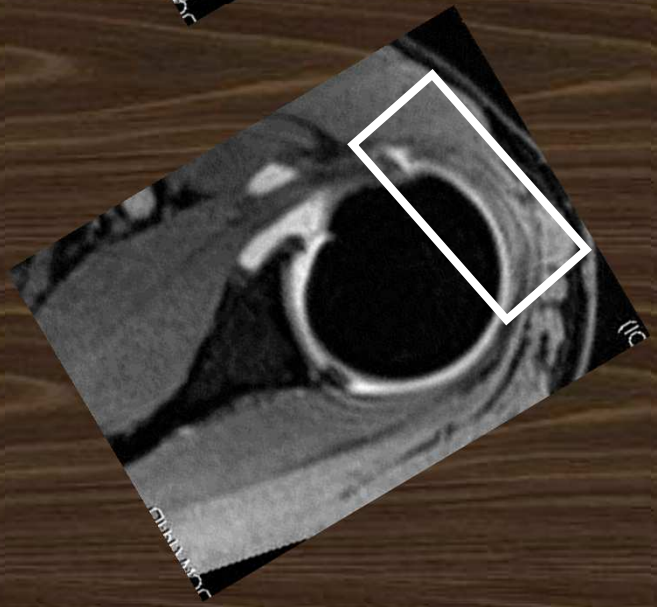

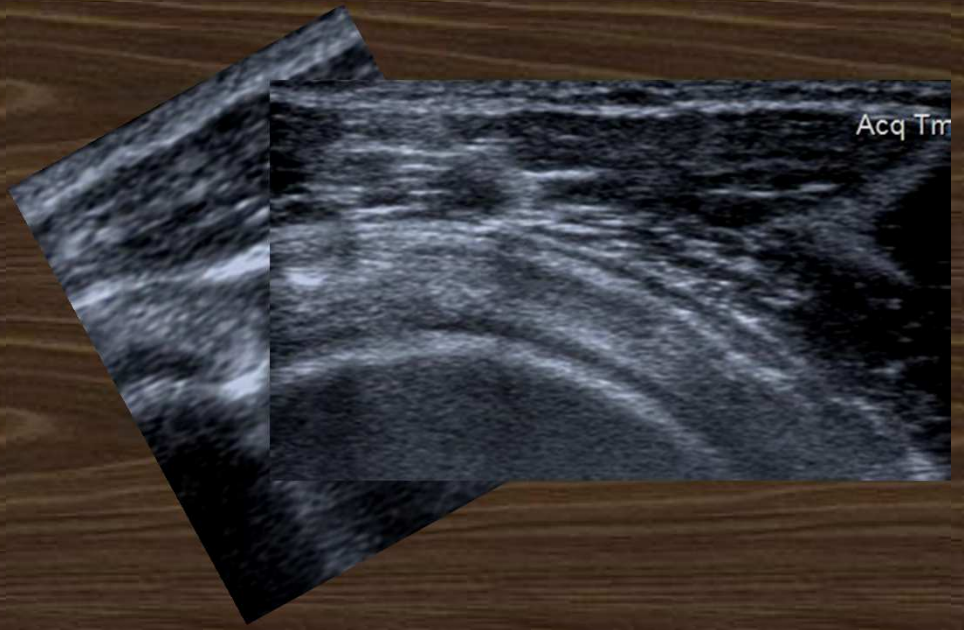

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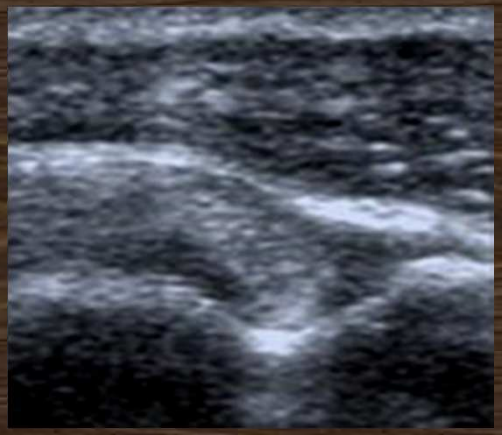
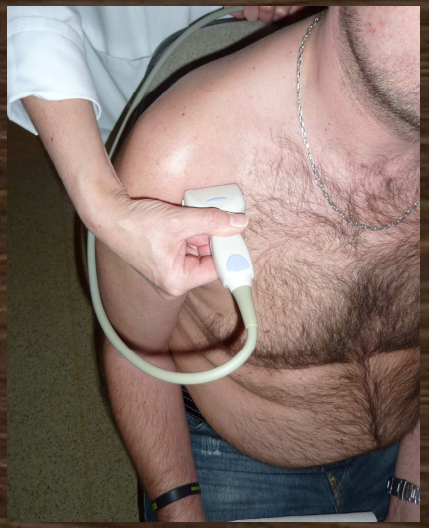
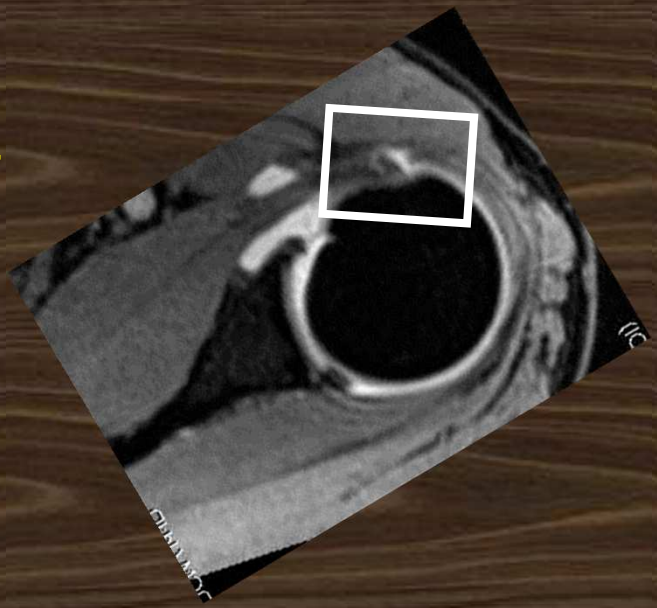
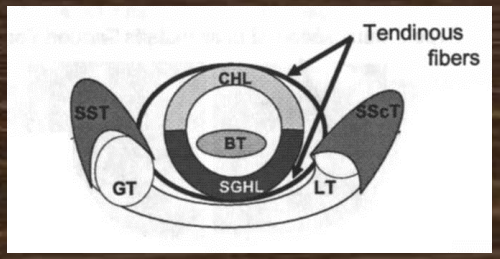
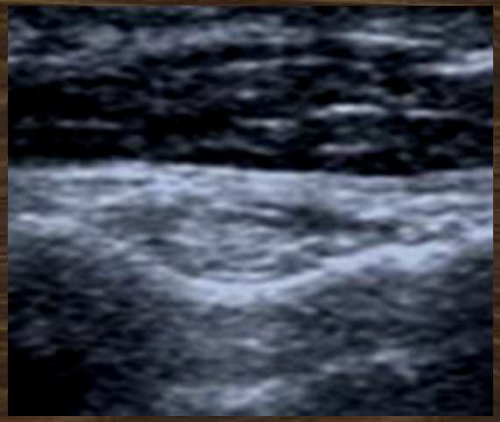
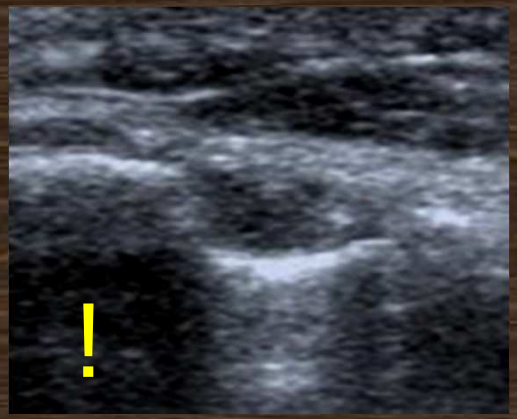


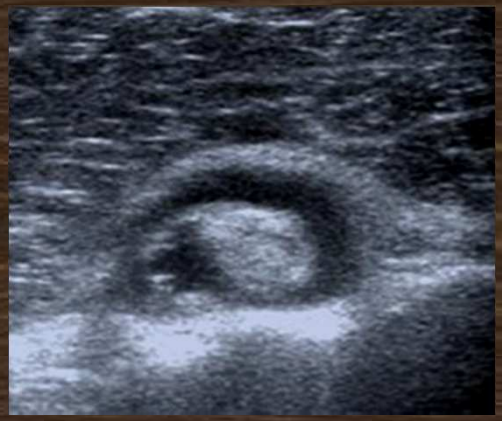




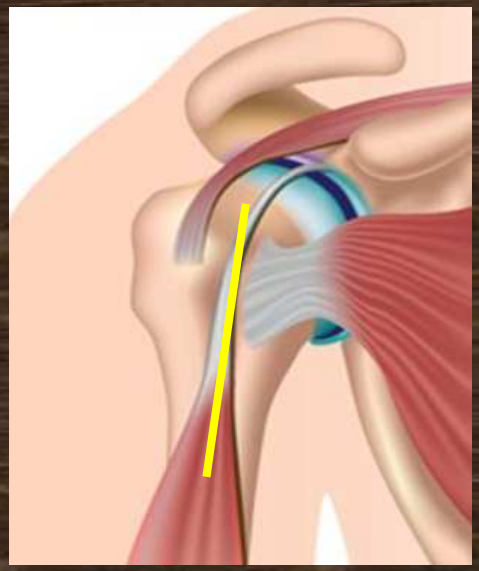


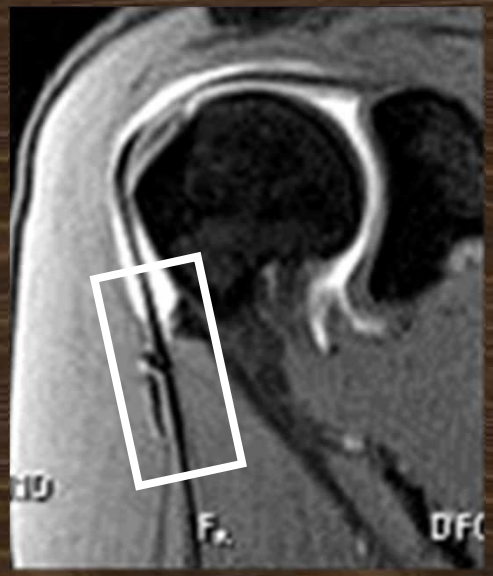


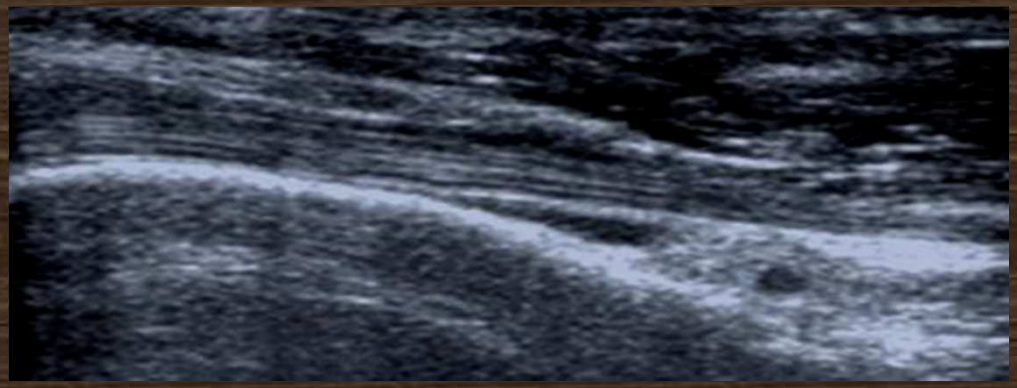




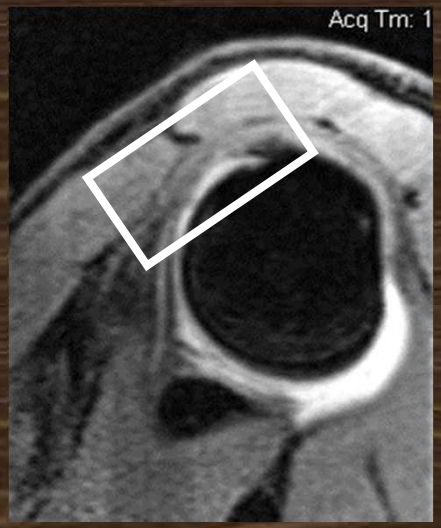
sagitální rovina

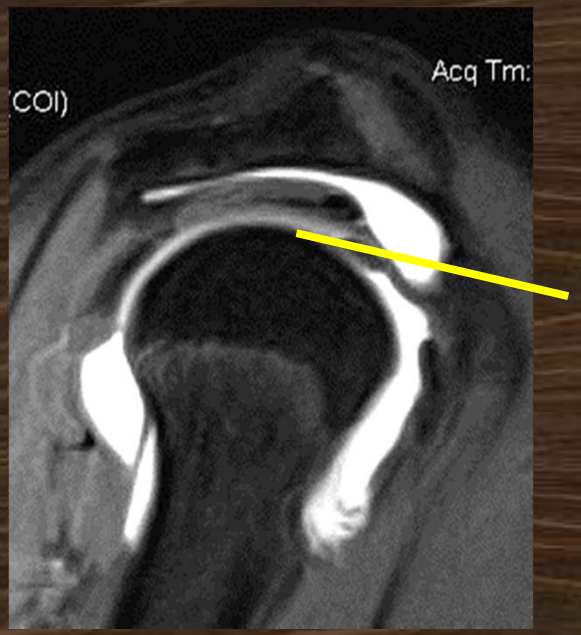


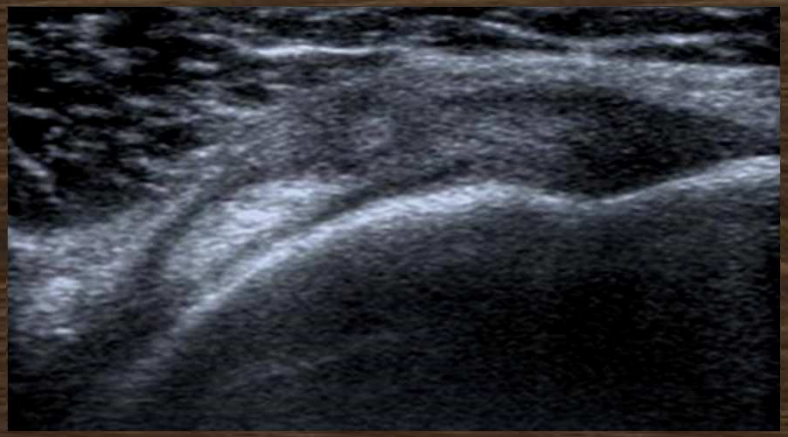




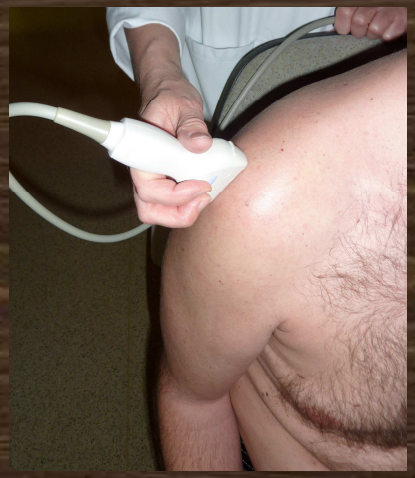
transverzální rovina

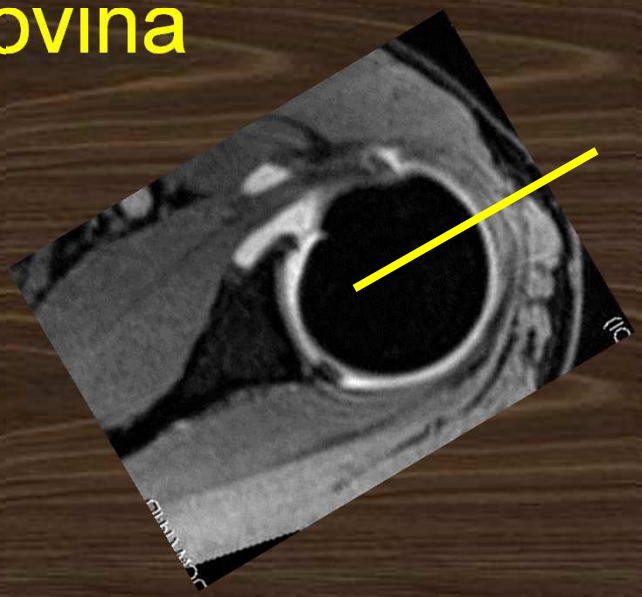


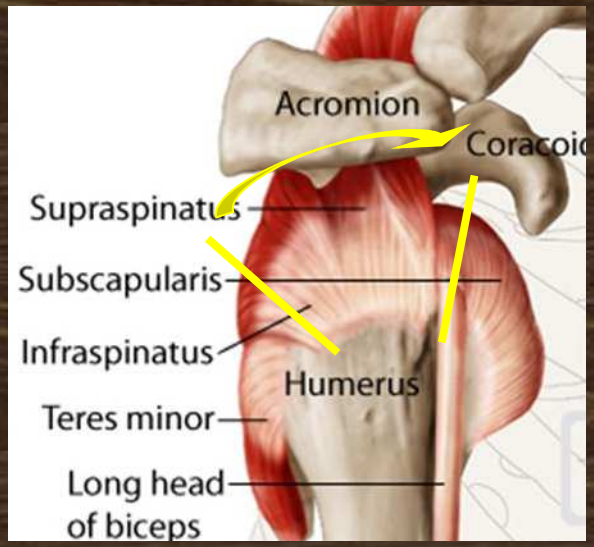


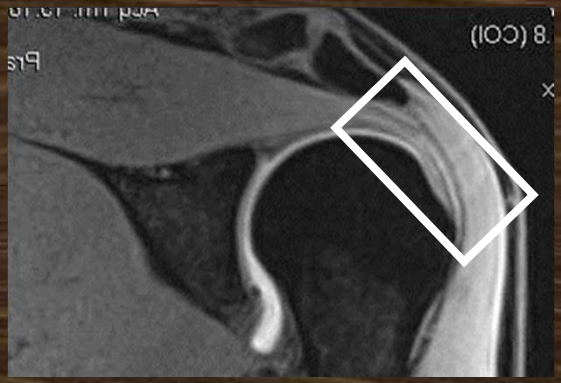


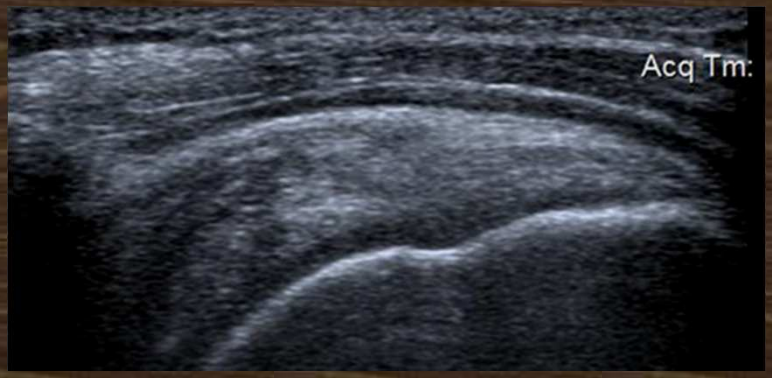
coronární rovina

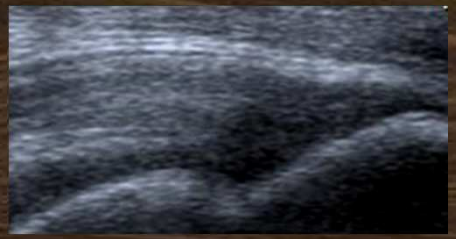












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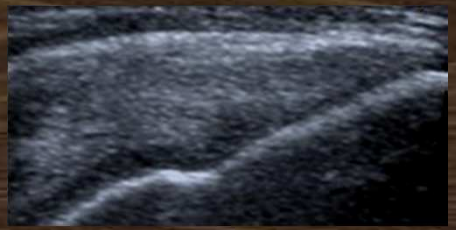
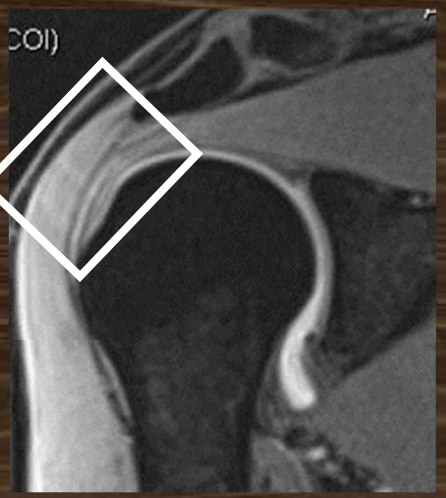
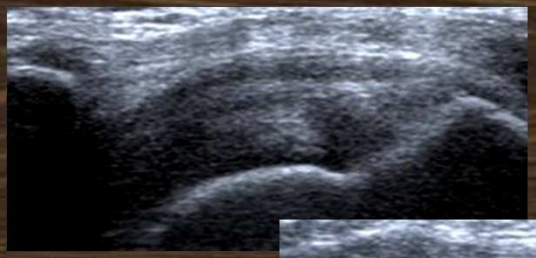


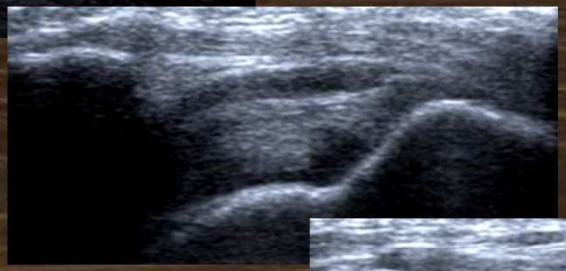
dynamické vyšetření

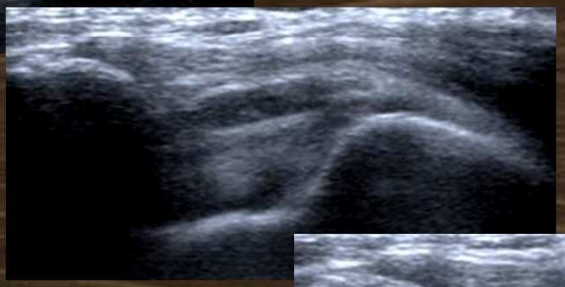
SA-SD bursy

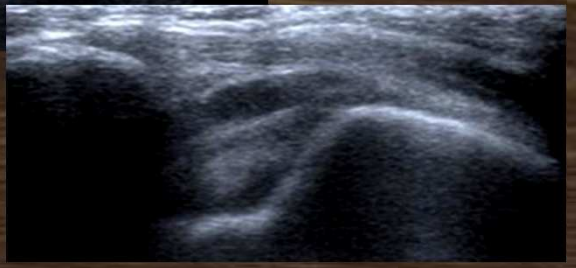
- „pooling“ při abdukci

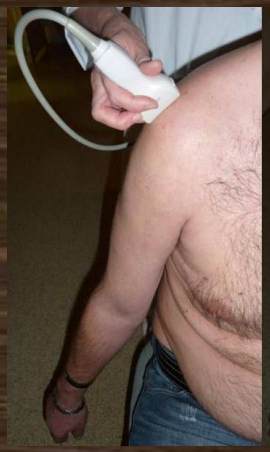


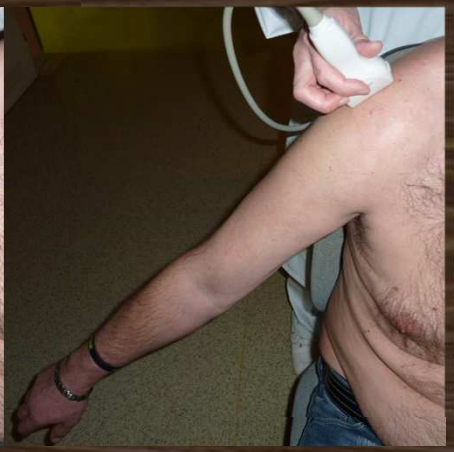






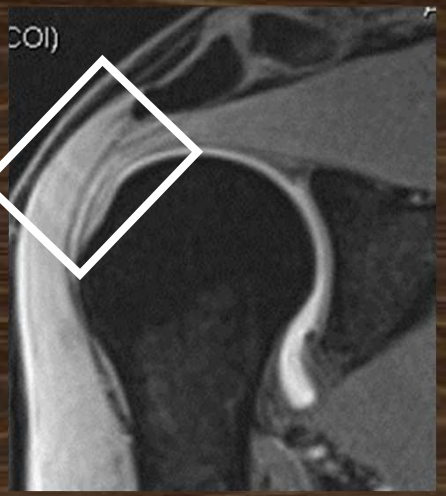


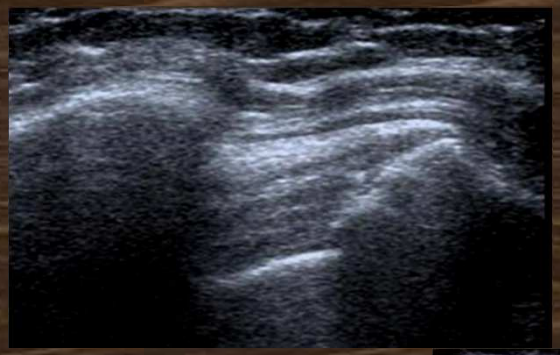


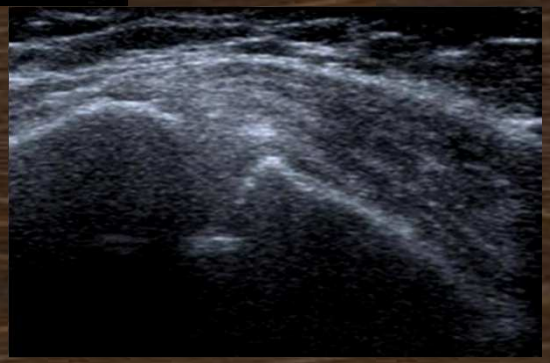


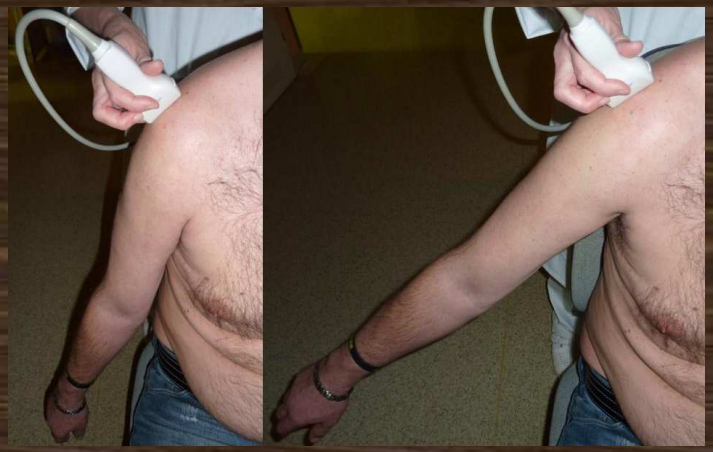
dynamické vyšetření

- konflikt prominujících fragmentů VH s akromiem

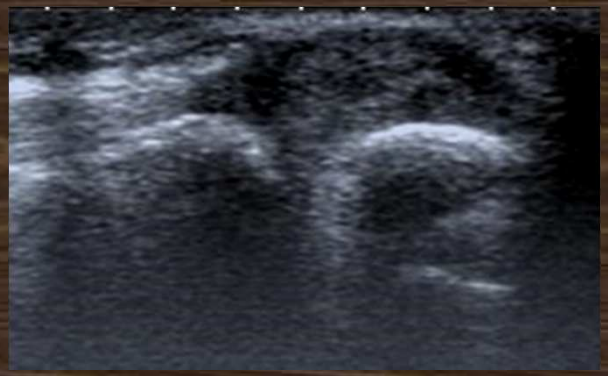


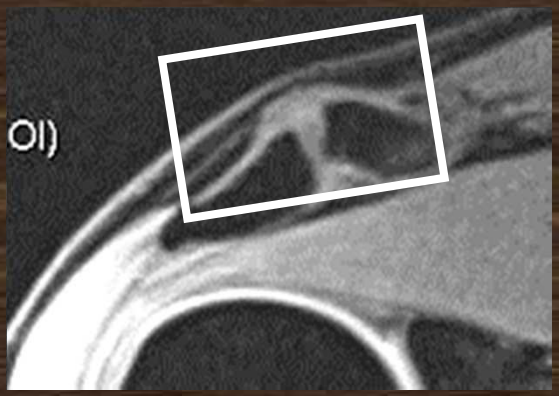


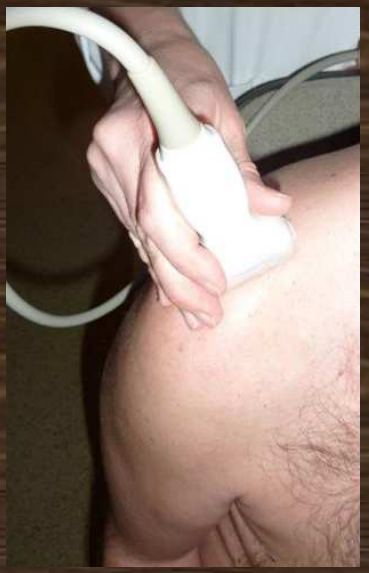


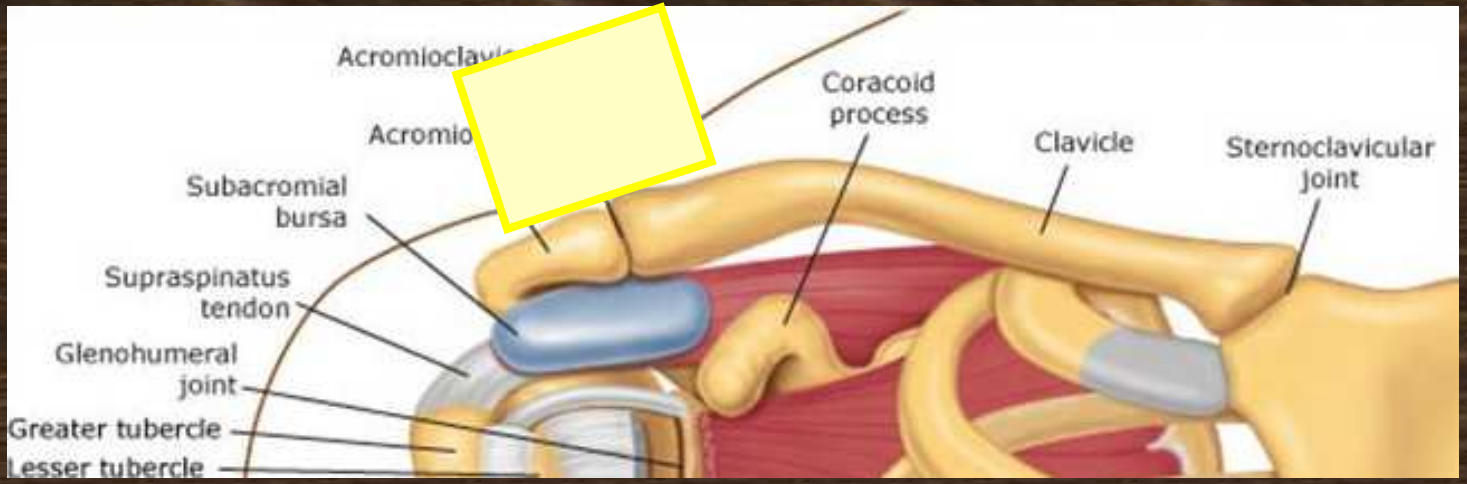


coronární rovina

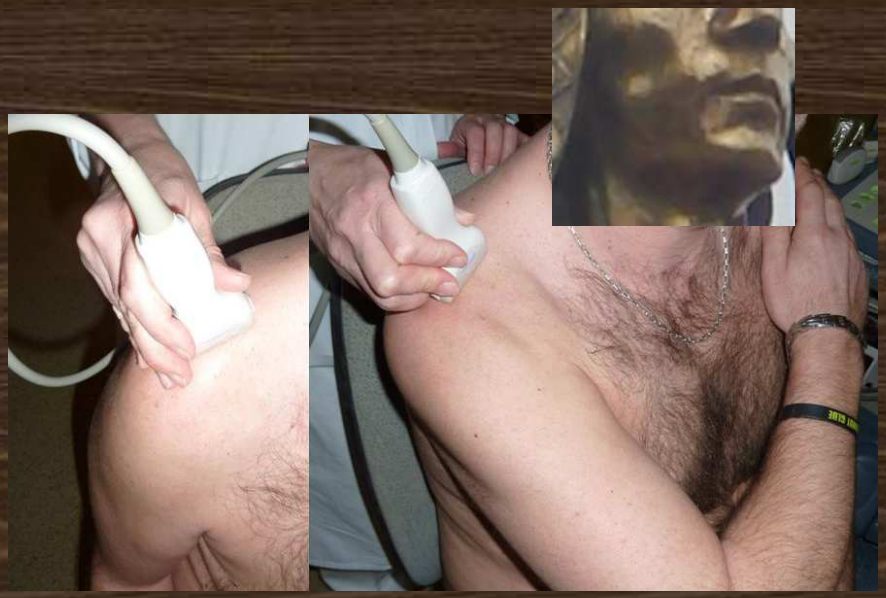


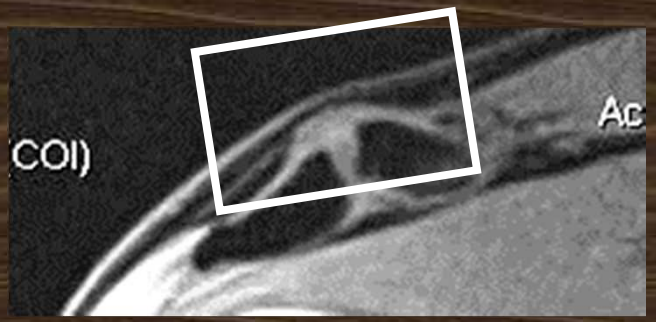


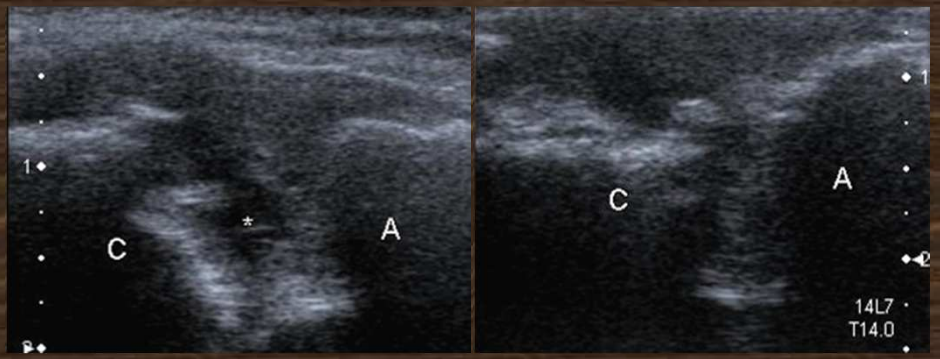




dynamické vyšetření AC kloubu
- instabilita při addukci





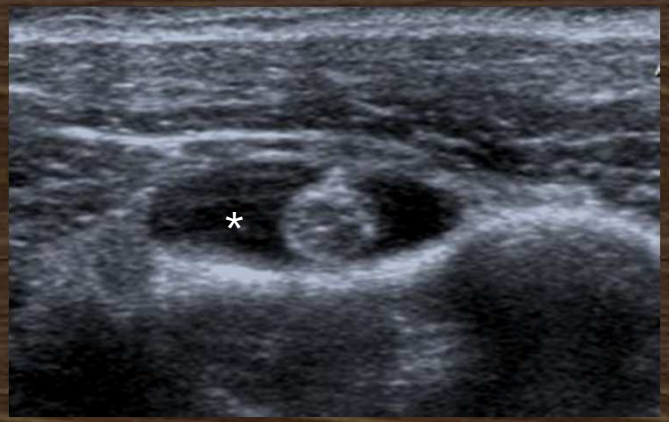


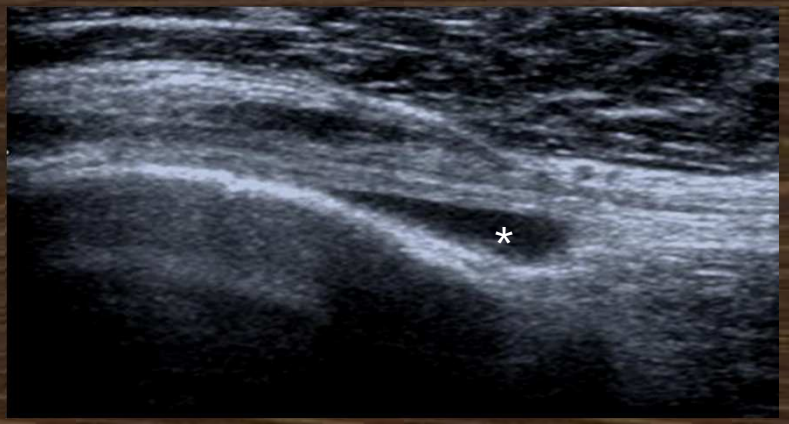
Neutrální Addukce

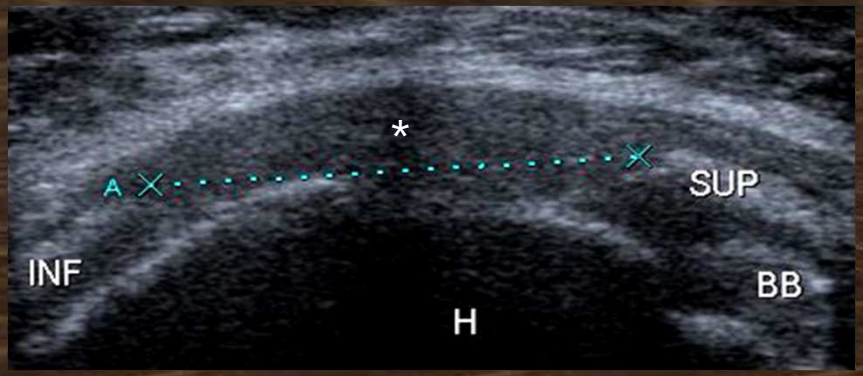
Nálezy

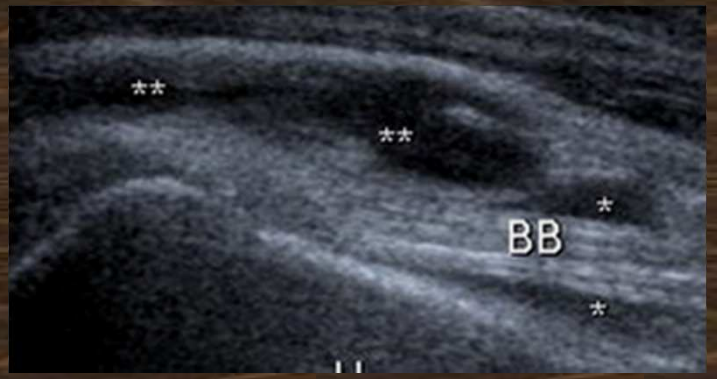
Detekce tekutinové náplně

- synoviální tekutina v kloubu *



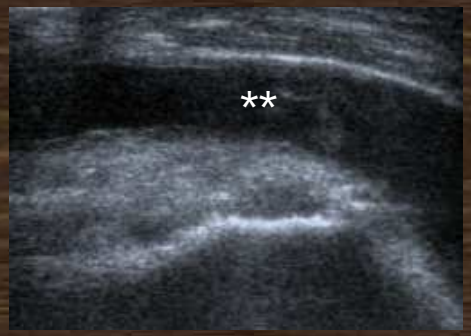


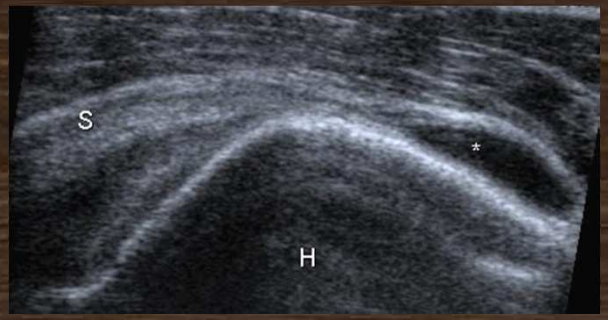


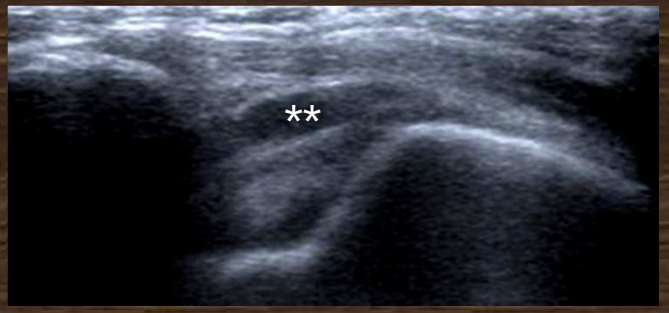


(** SA v burse)

- synoviální tekutina v SA-SD burse **

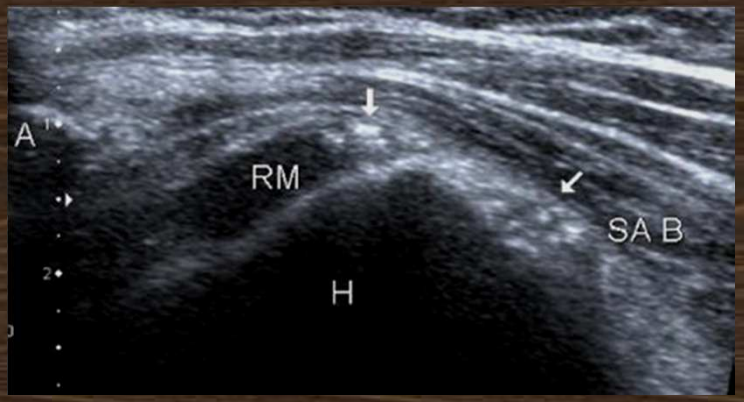






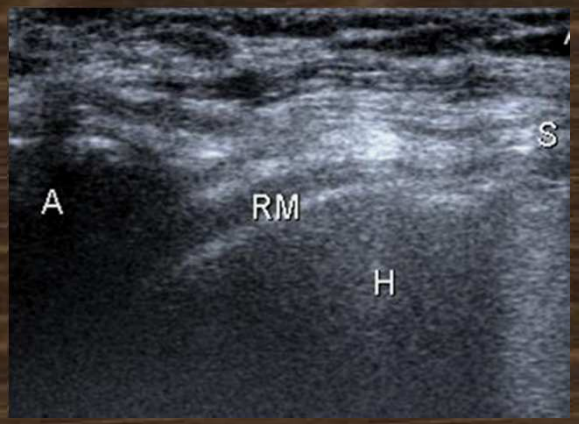
** pooling

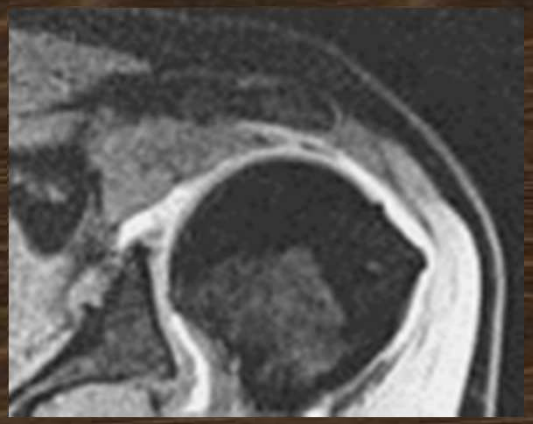
- kalcifikace v SA-SD burse - bursitis calcarea



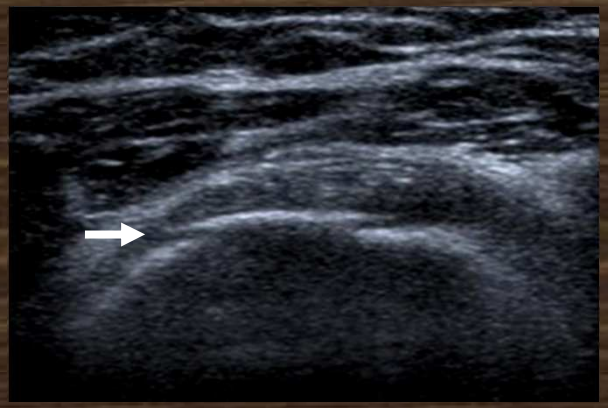
Zhodnocení pozice a kvality anatomických struktur

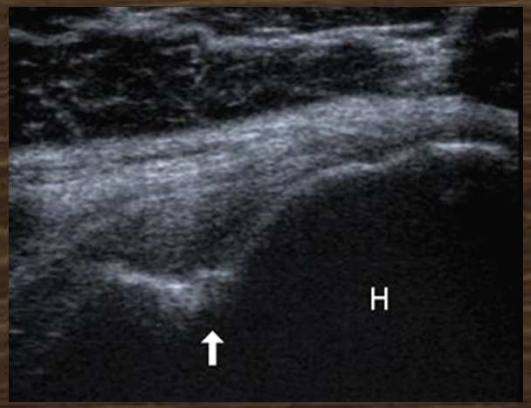
- elevace hlavice



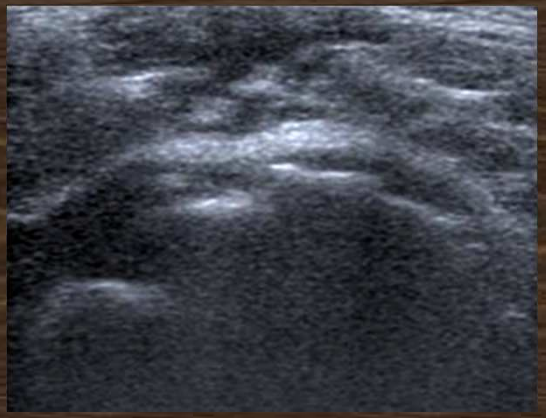


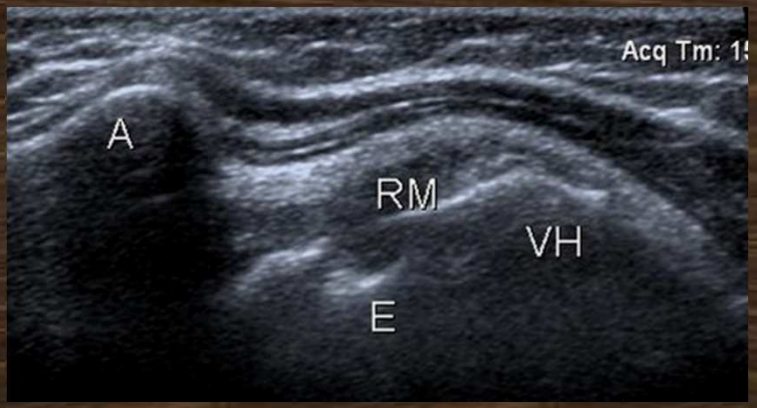
- fraktury - VH, H.-S. defekt

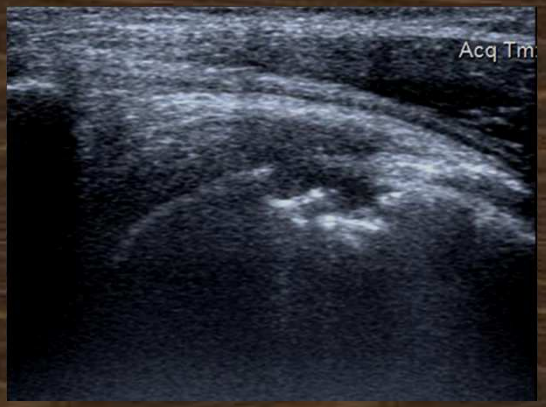




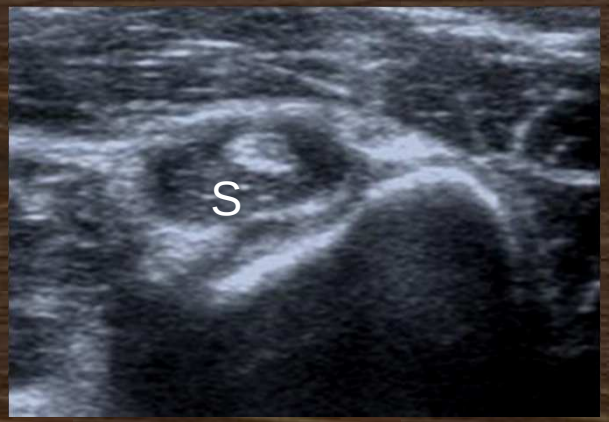
- eroze hlavice humeru

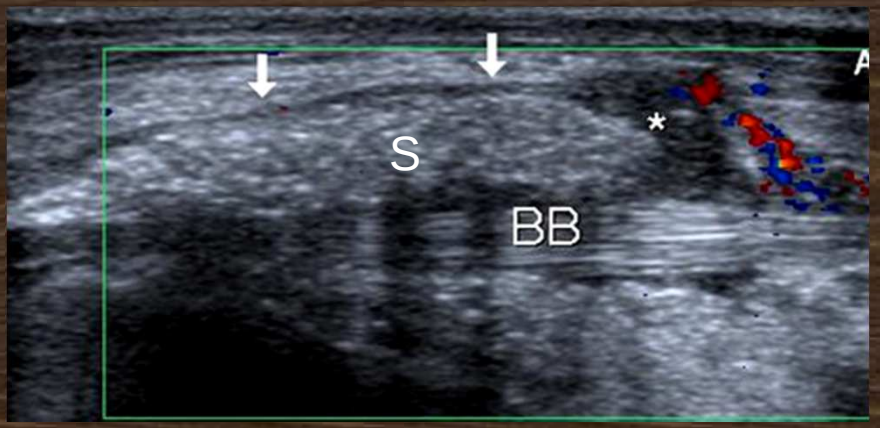




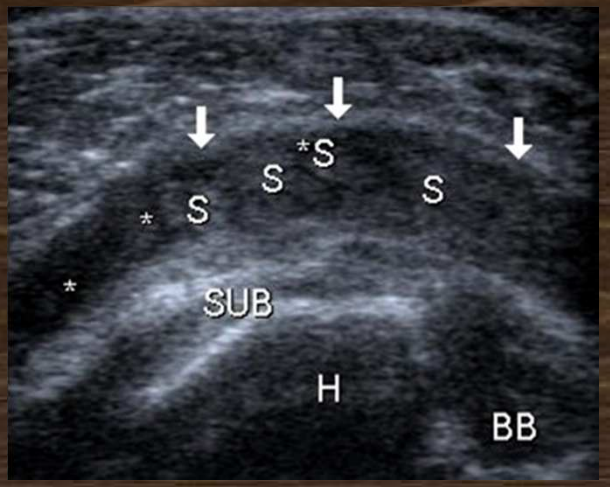


- zbytnělá synoviální výstelka GH kloubu (S)

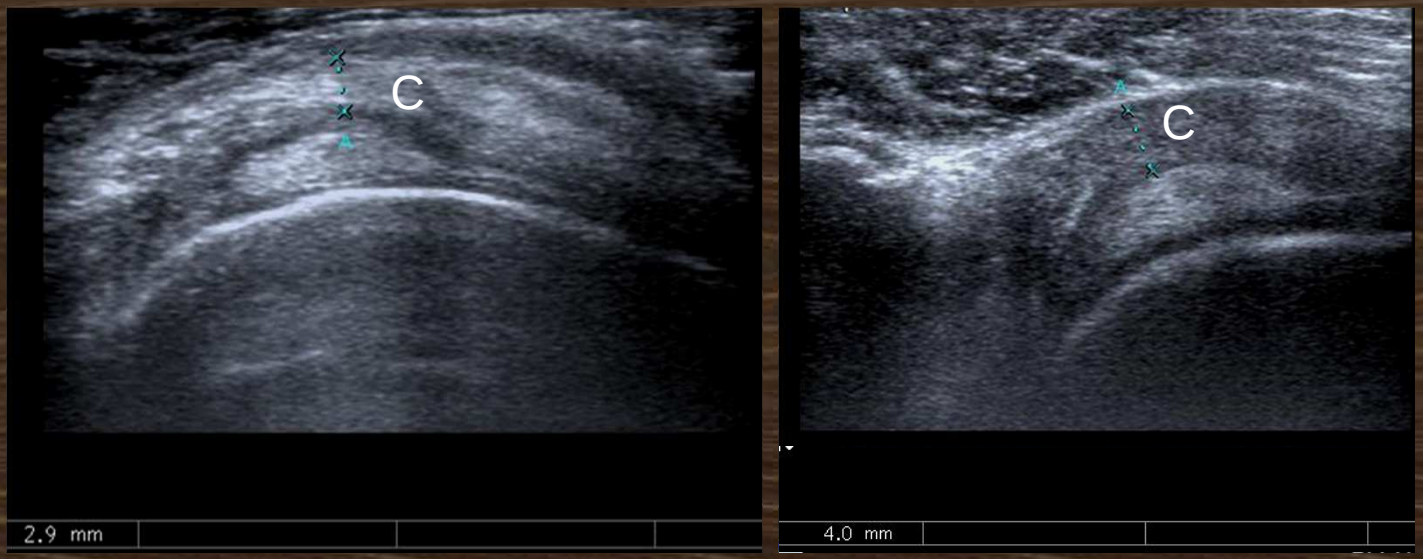




- zbytnělá synoviální výstelka SA-SD bursy (S)

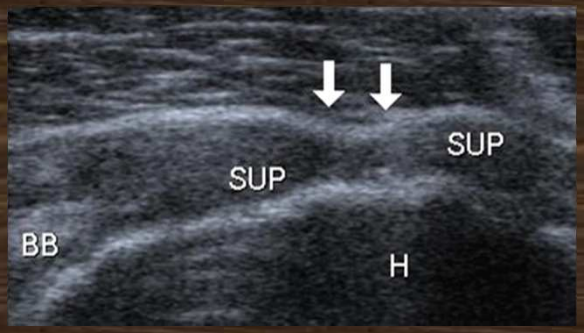


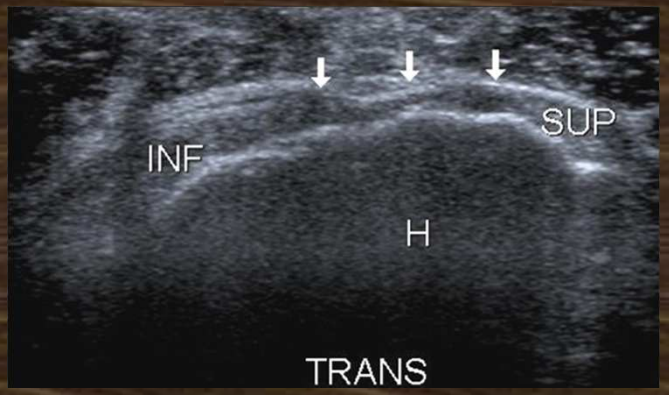
- capsulitis (C)

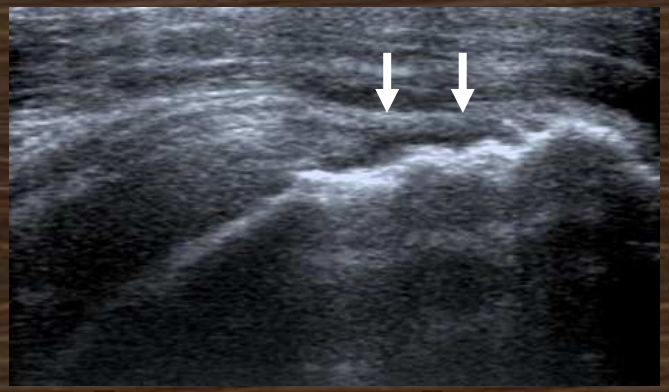


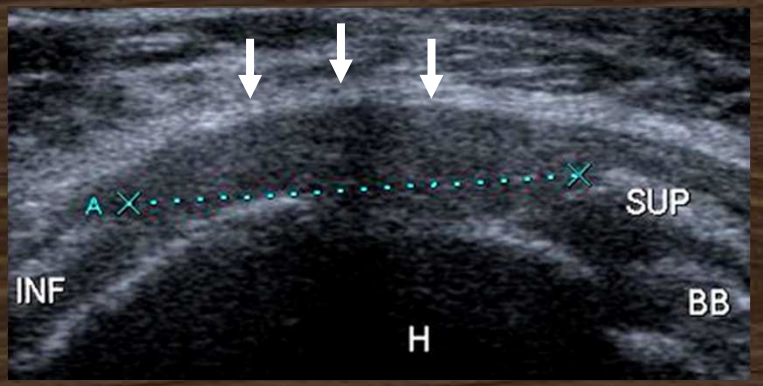
- ruptura RM:
  - rpt. m. subscapularis
    - → dislokace biceps brachii
  - rpt. m. supraspinatus
  - rpt. m. infraspinatus
    - masívní
  - ŠÍŘE
    - totální → retrakce
    - parciální (partial)
  - TLOUŠŤKA
    - penetrující (full-thickness)
    - nepenetrující (partial-thickness)
  - LOKALIZACE
    - v úponu → abrupce (footprint rpt.)
    - v kritické zóně (rim-rent tear)

- abrupce
  parciální penetrující

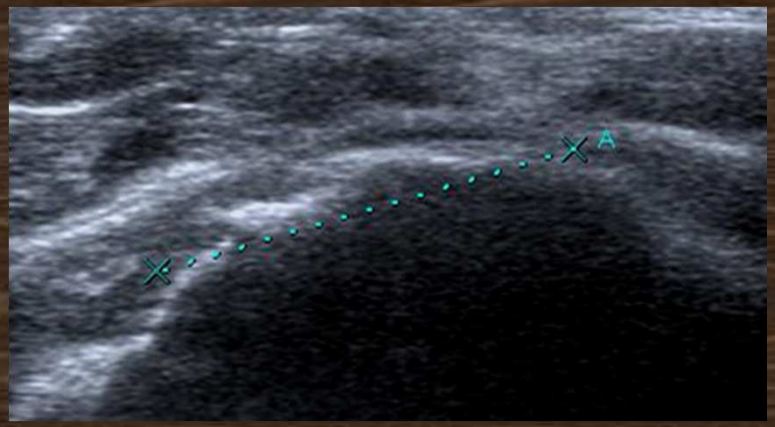


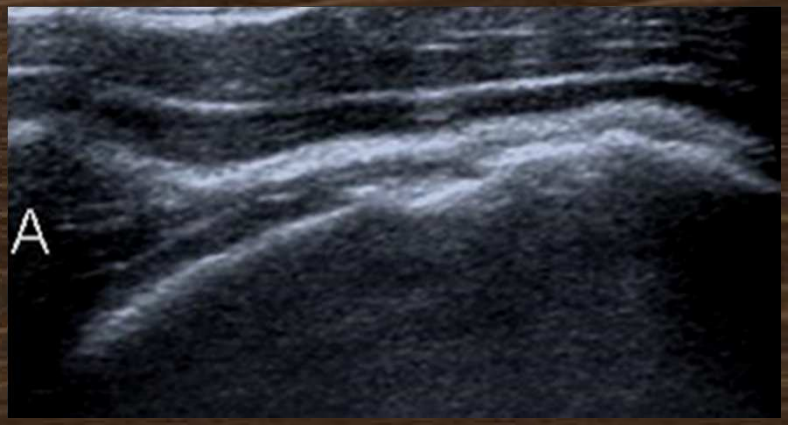




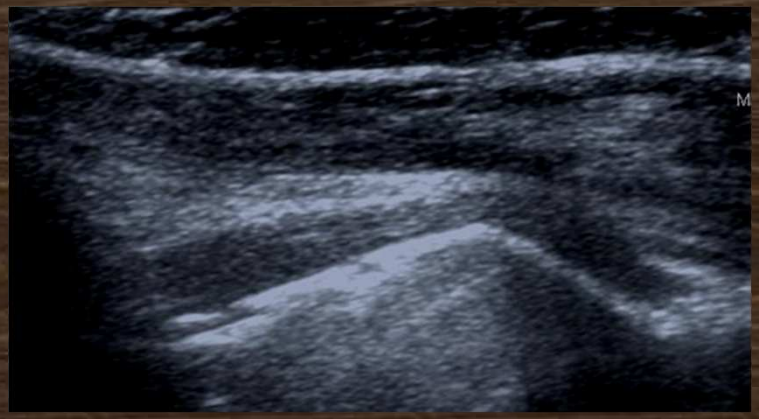


- abrupce totální penetrující s retrakcí

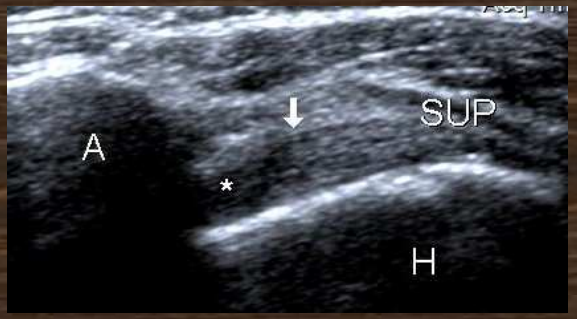




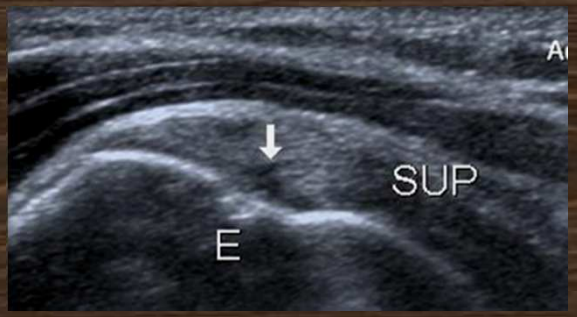
- RM absentní po TEP



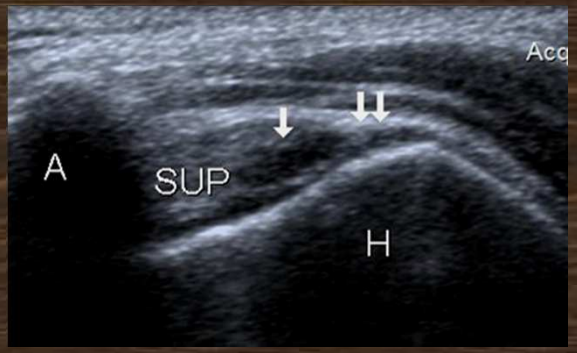
- rpt. v kritické zóně



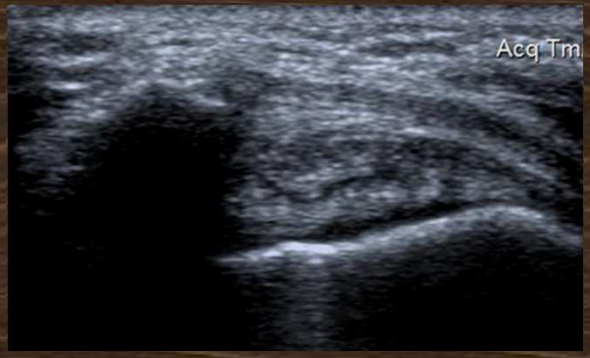
- rpt. nepenetrující



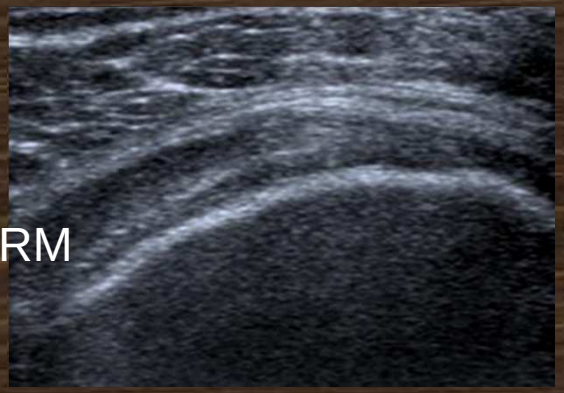
- rpt. intratendinózní

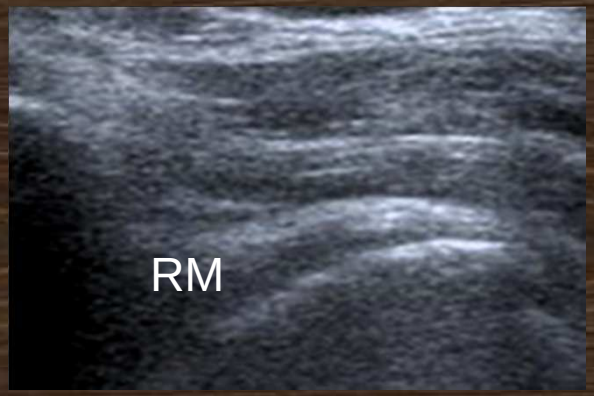


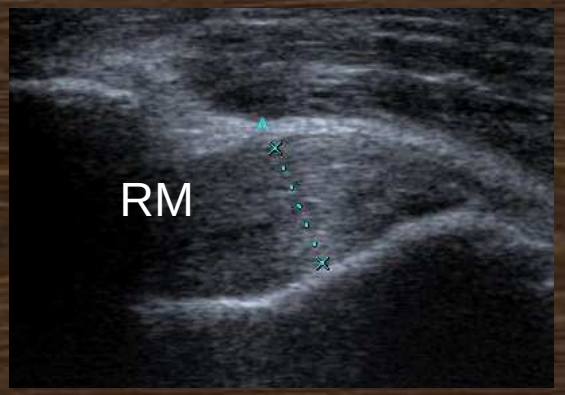
- rpt. longitudinální

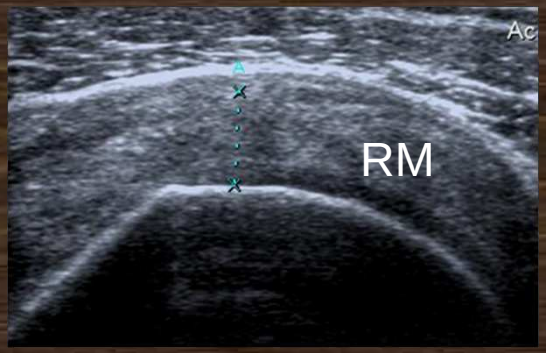


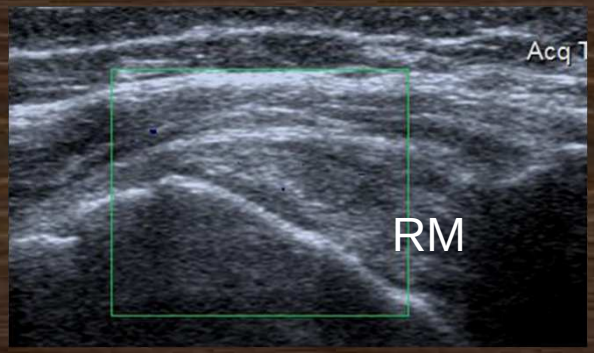
- chronická tendinopatie/ tendinitis RM

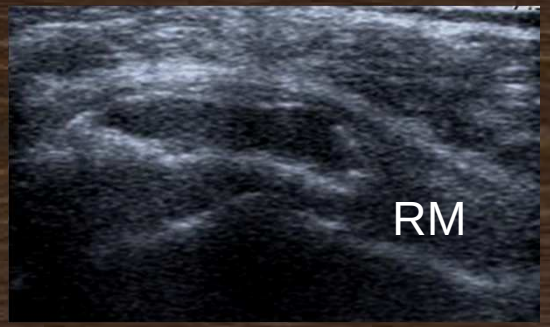




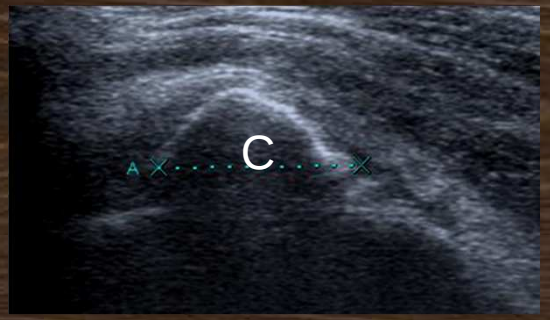




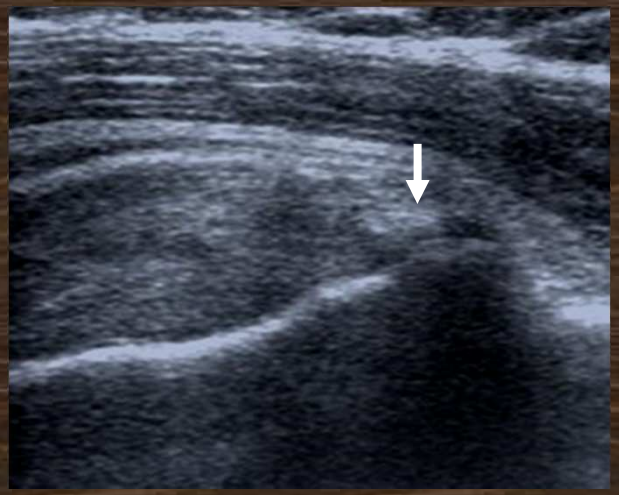


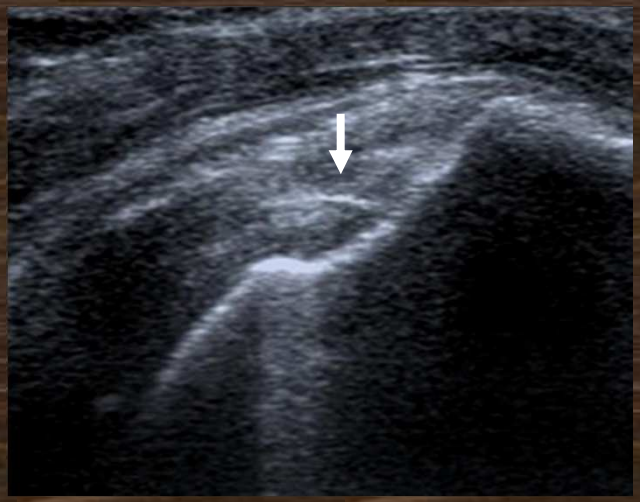


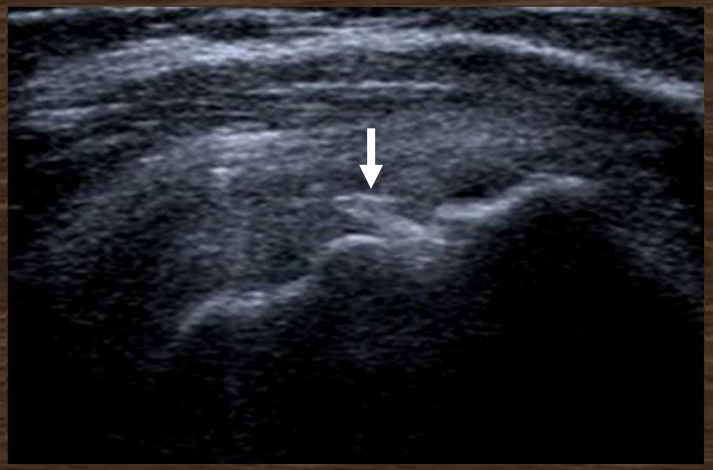
- tendinitis calcarea RM



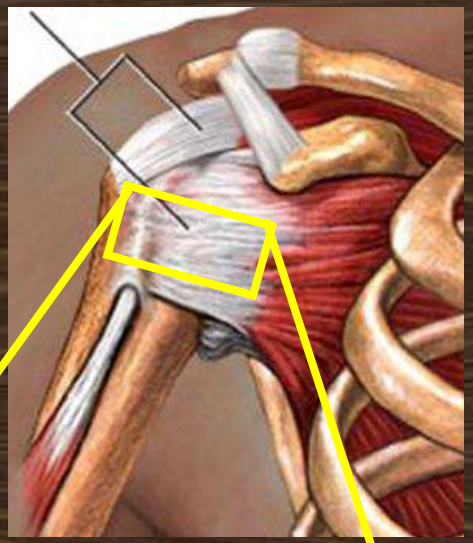
- chronická entezopatie/ entesitis RM





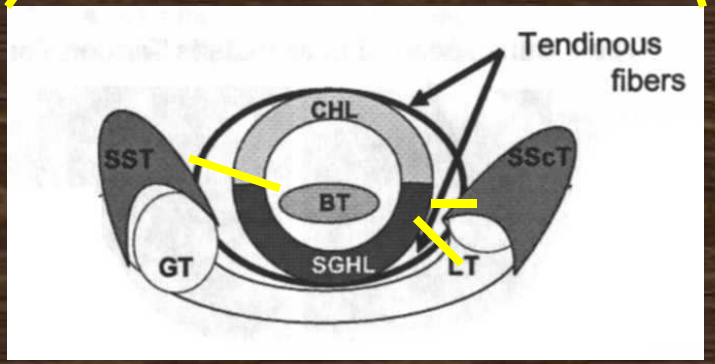


- mediální dislokace proximální šlachy dl. hlavy m.biceps brachii
  - na povrch m. subscapularis
  - do m. subscapularis
  - pod m.subscapularis

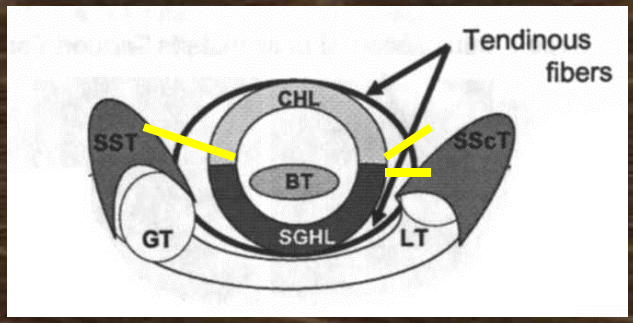


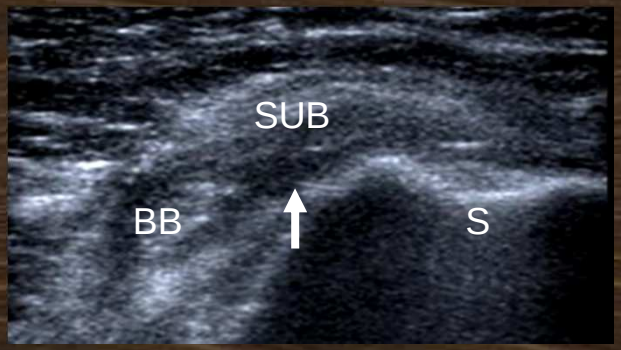
↓

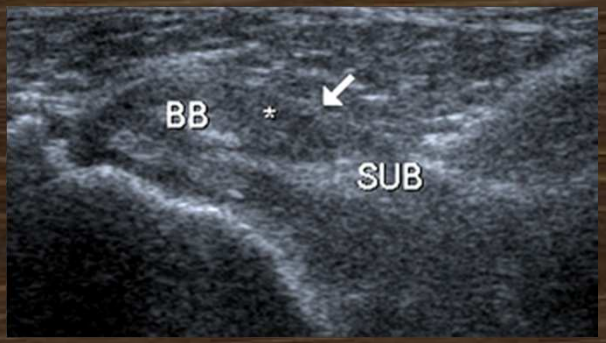
chron. tendinopatie šlachy

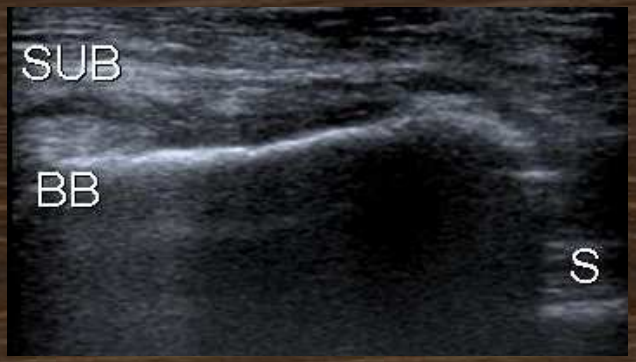


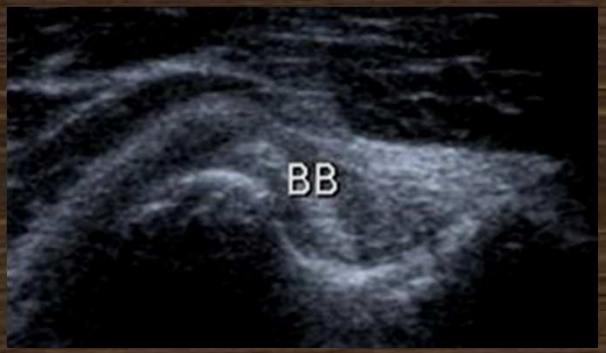
- mediální dislokace proximální šlachy dl. hlavy m.biceps brachii



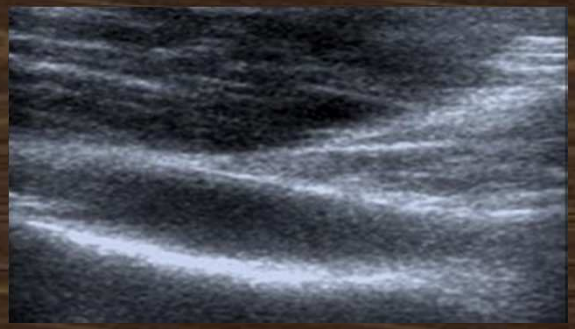


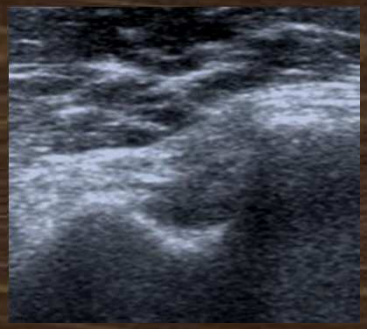


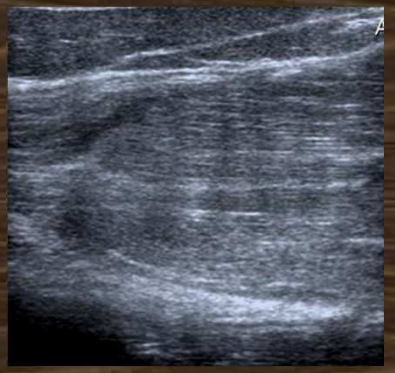


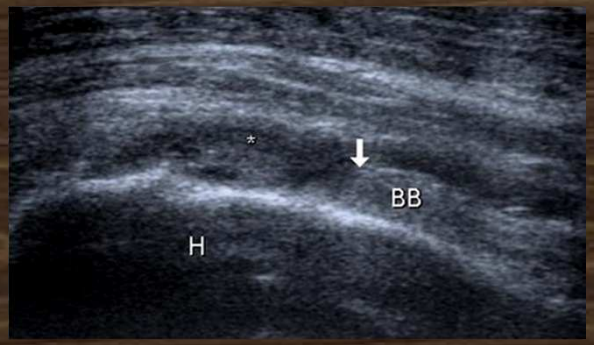


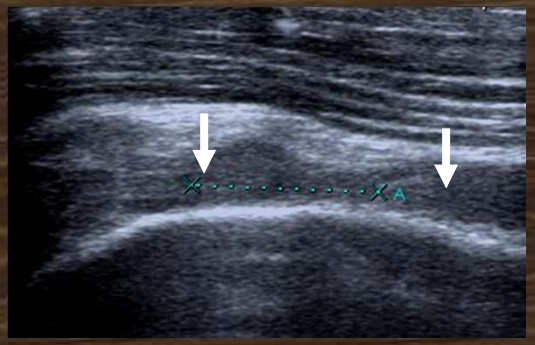
- ruptura prox. šlachy dl. hlavy m.biceps brachii
  - v sulcu
  - v muskulotendinózní junkci

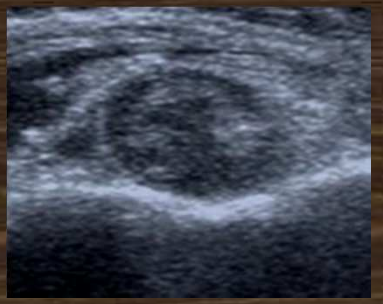




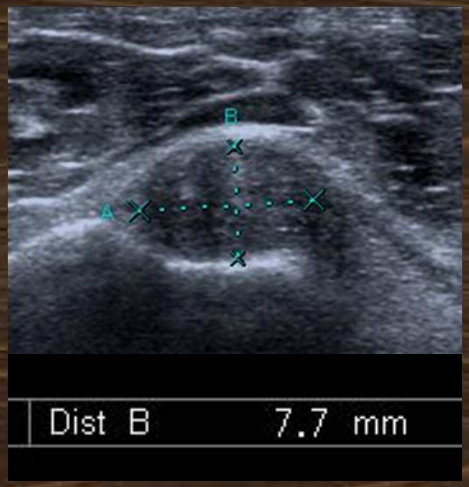


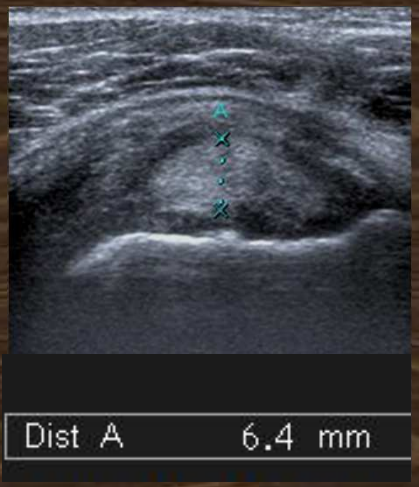


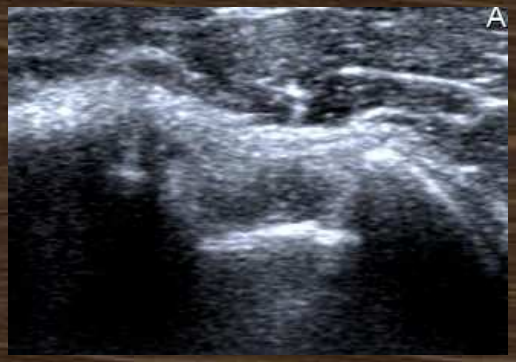


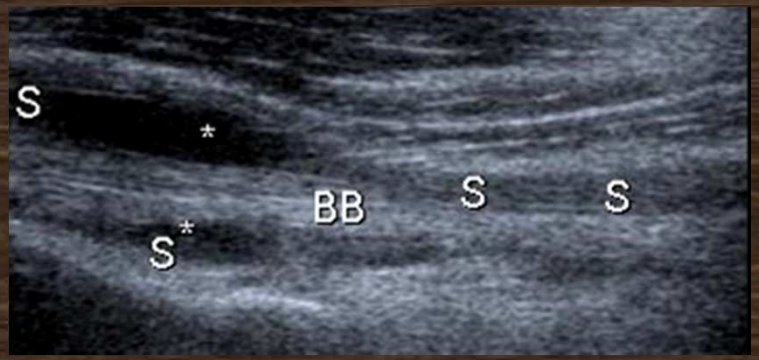


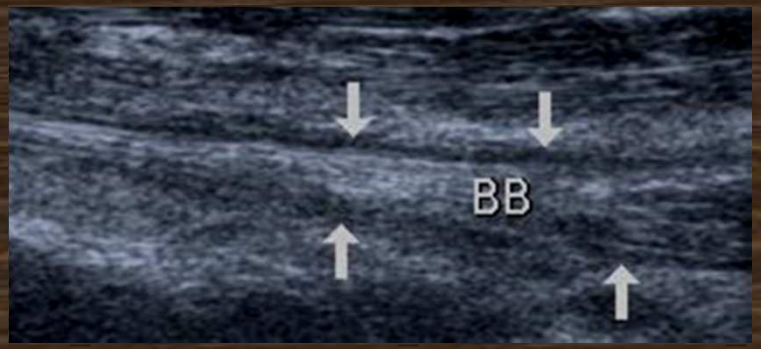
- chronická tendinopatie / tenosynovitis proximální šlachy dl. hlavy m.biceps brachii



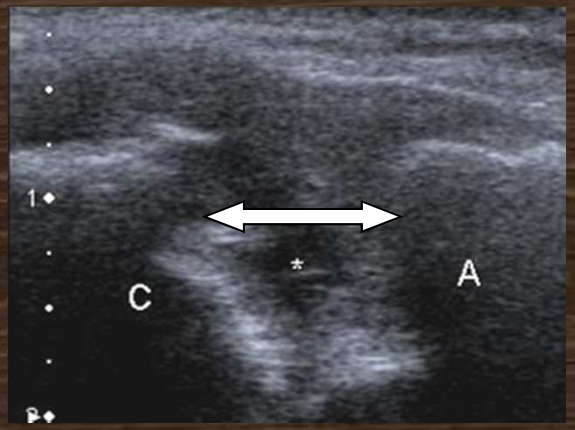




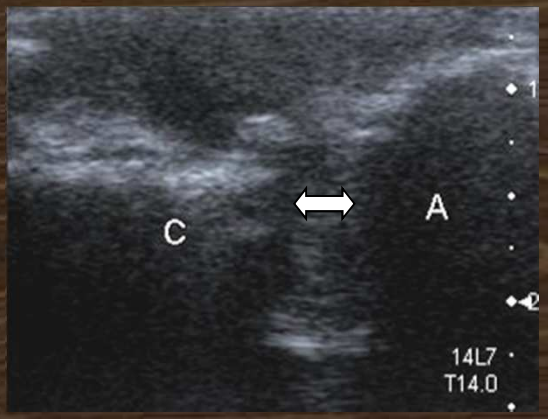




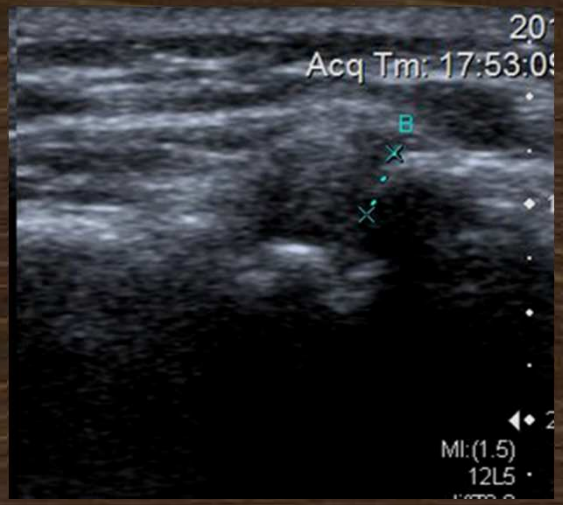
- diastáza / nestabilita AC kloubu

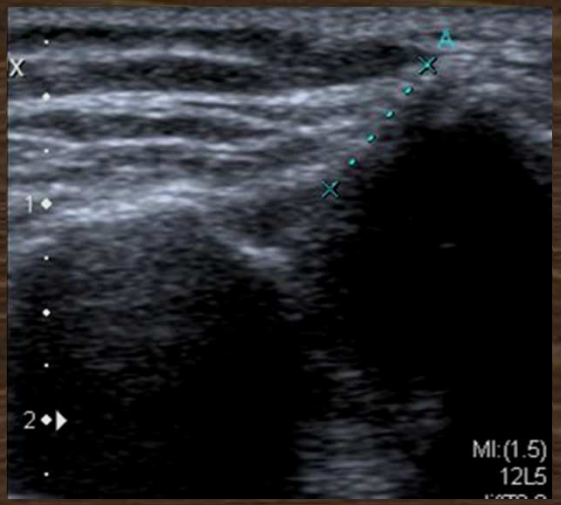


Neutrální

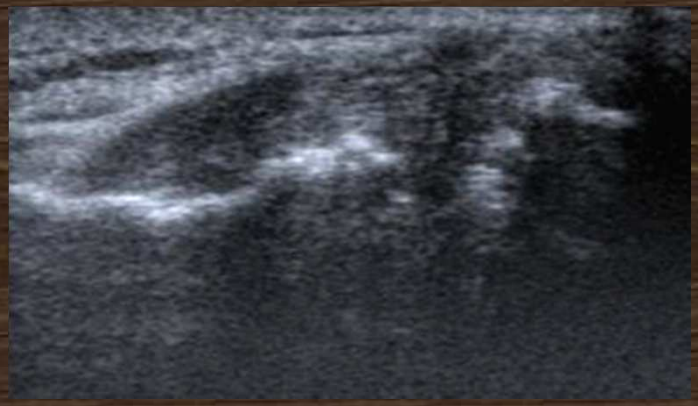


Addukce

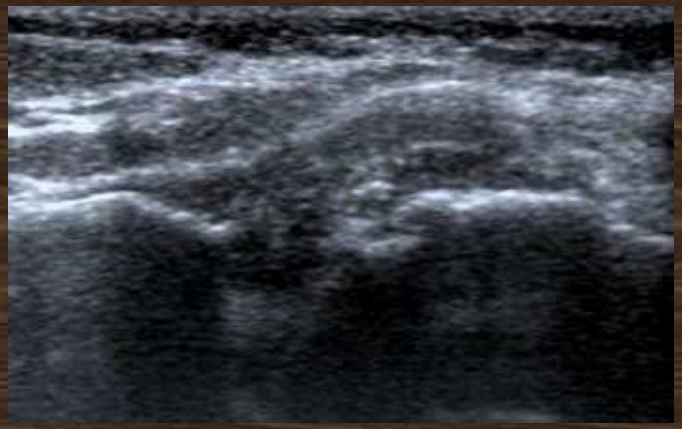




- artróza / artritis AC kloubu



artróza



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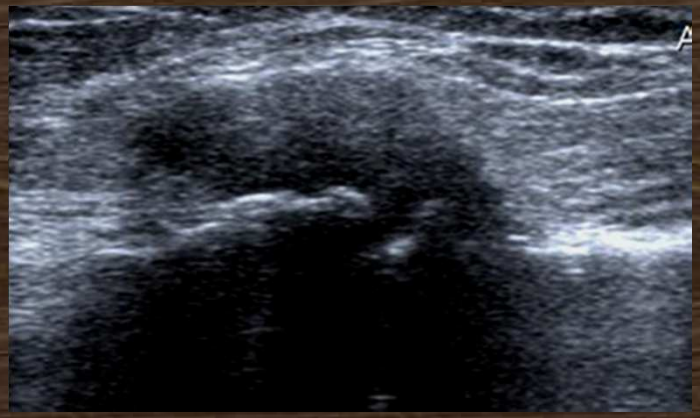
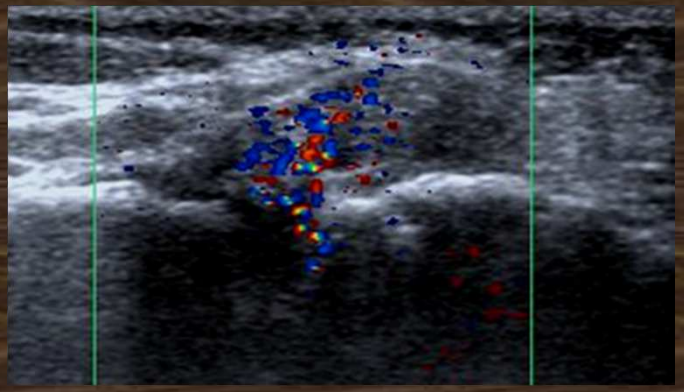
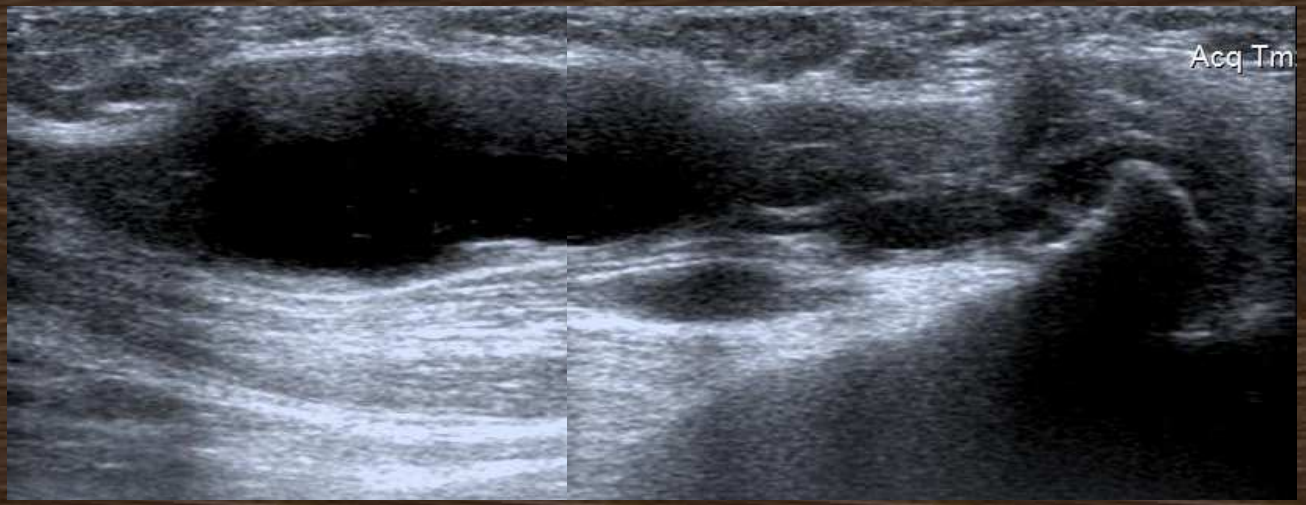


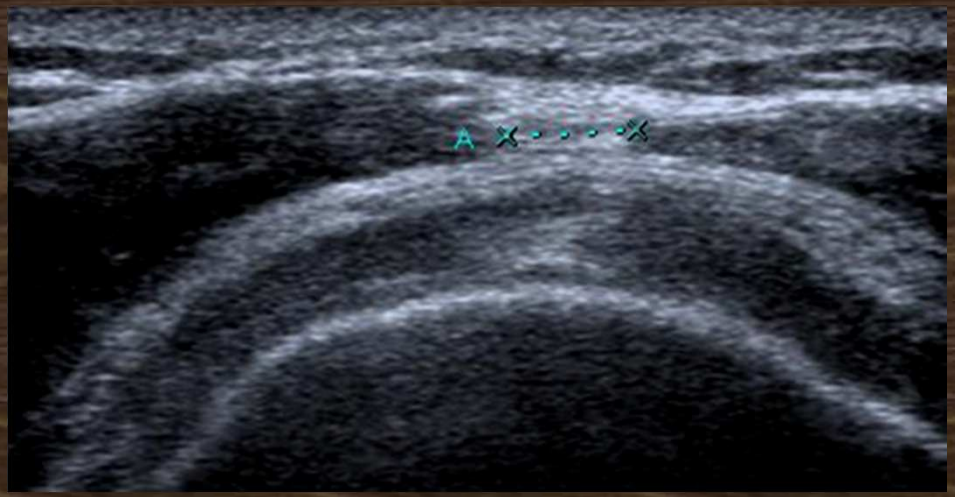
sklerodermie



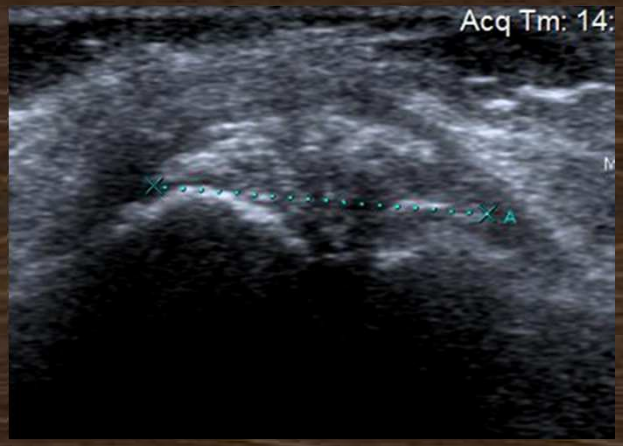
- ganglion AC kloubu
  - ruptura RM

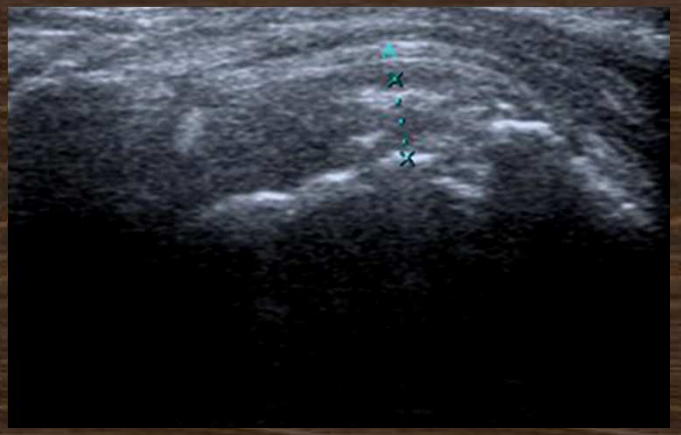


- ruptura m. deltoideus

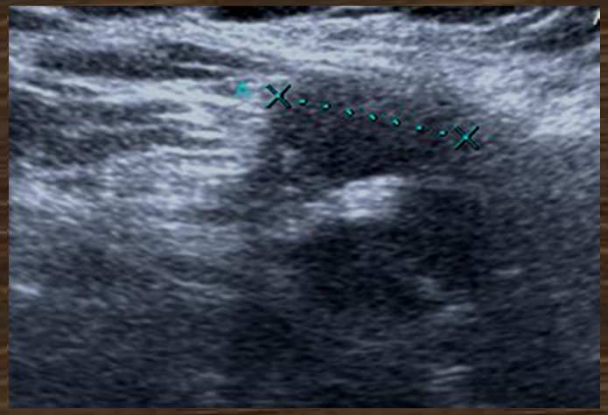


- expanse

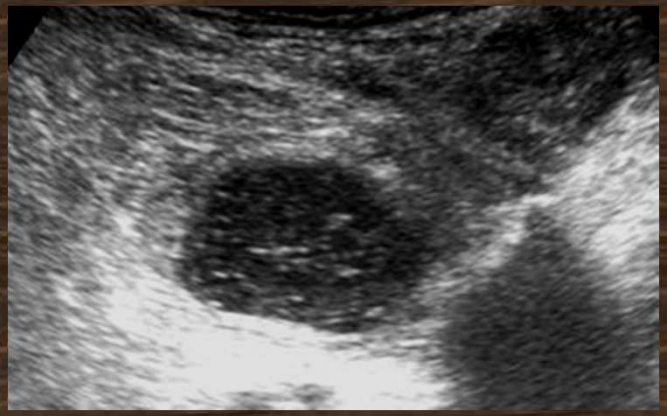




EAD



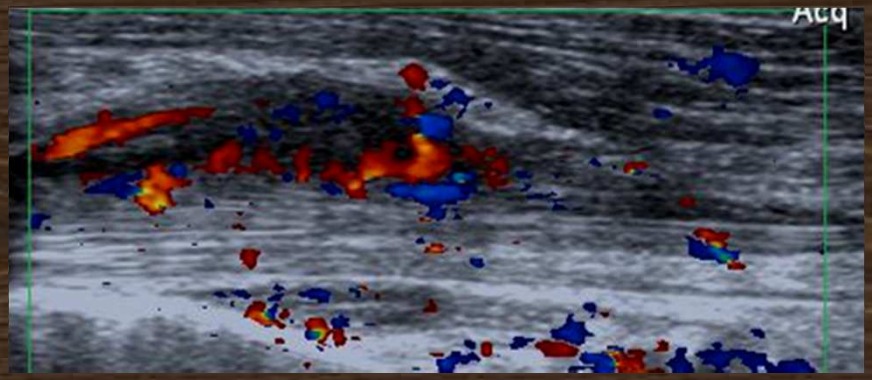
chondrosarkom

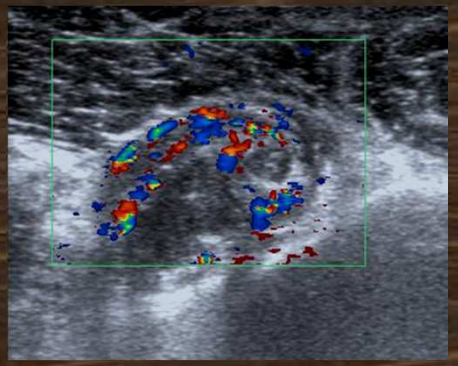


hematom (INR 11)

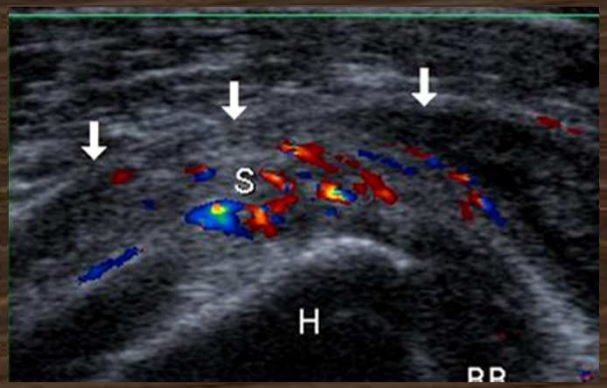
Detekce hyperemie

- synovitis GH kloubu

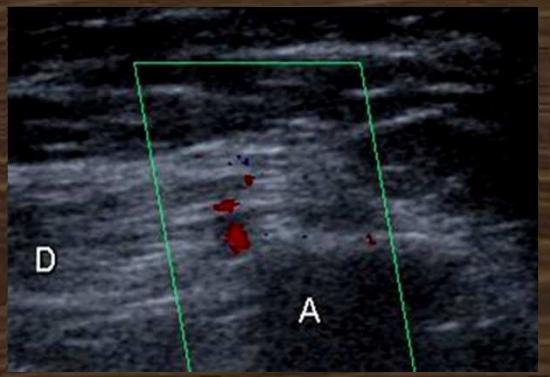




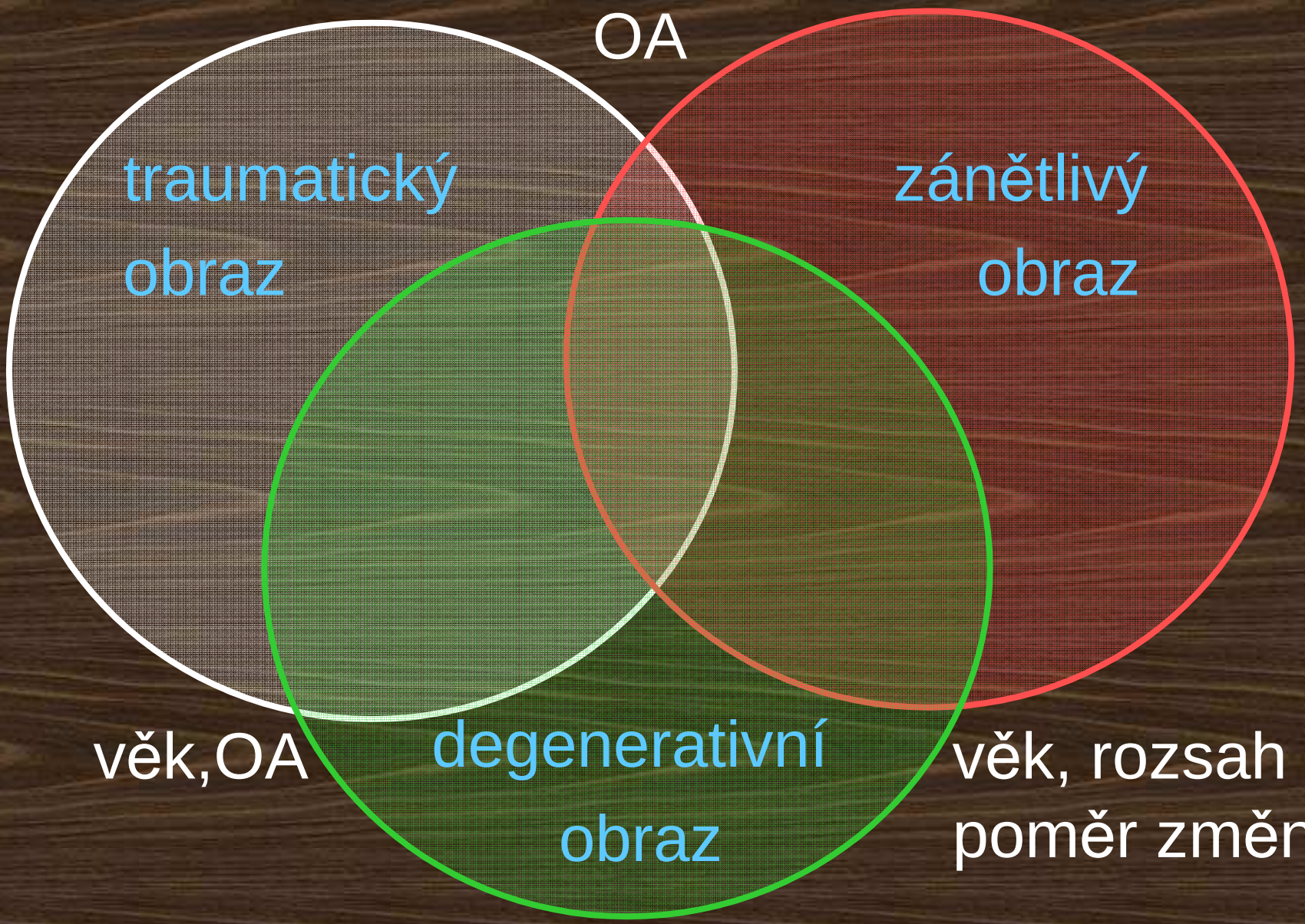
- synovitis SA-SD burzy



- entesitis úponu deltoideu

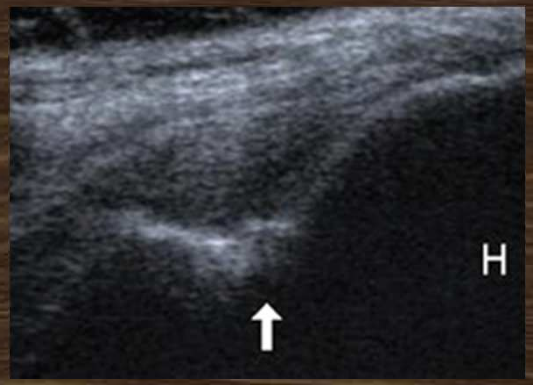


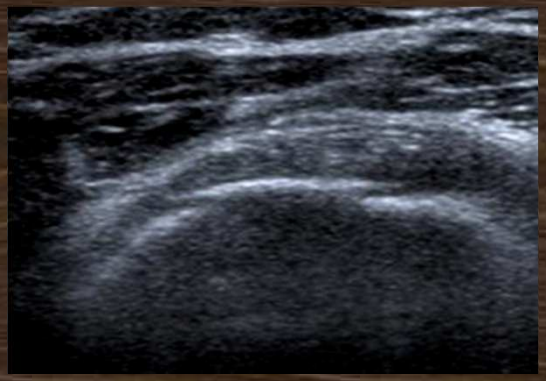
Stanovení etiologie postižení

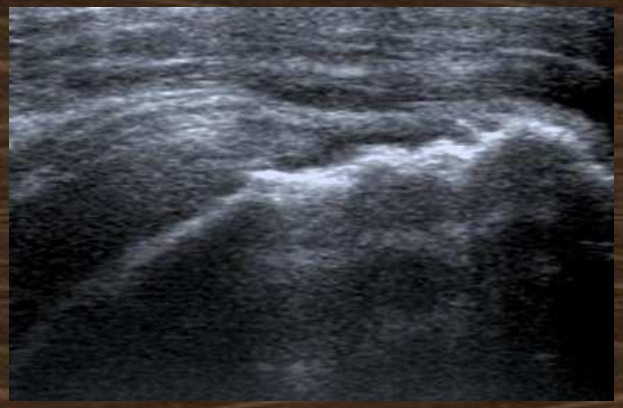


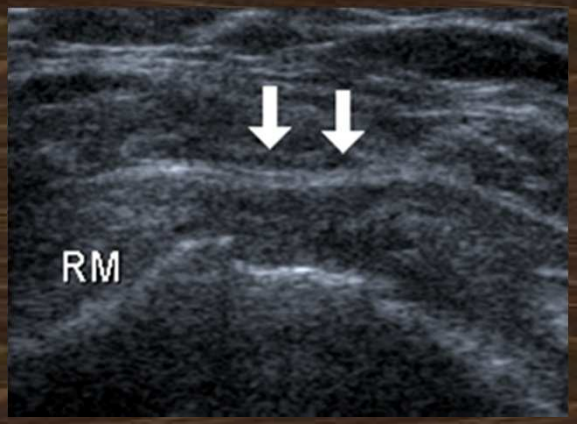
typický traumatický obraz:

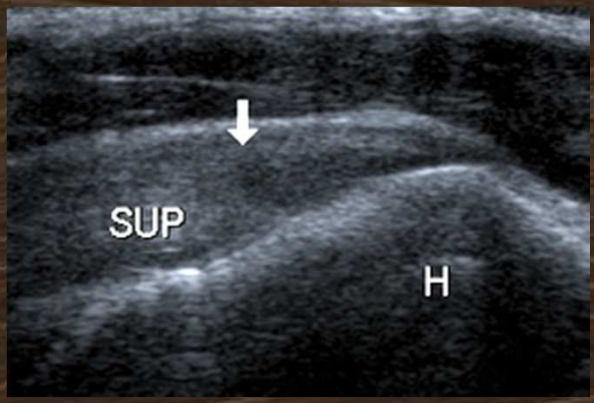
- pac. mladšího až středního věku
- upadl nebo zvedl těžké břemeno / stp. luxaci
- na hlavici jen mírné nerovnosti, fragment ostrých okrajů na VH / Hill-Sachsův defekt
- parciální nebo totální ruptura zevních rotátorů (neztenčený pahýl jen s menší retrakcí), ruptura nebo dislokace šlachy dl. hlavy m.biceps br. / ruptura šlachy m.subscapularis
- tekutina v kloubu pokračující do SA bursy
- tekutina a instabilita AC kloubu
- (synovitis, ztluštělé kl. pouzdro nad 2,5 mm)

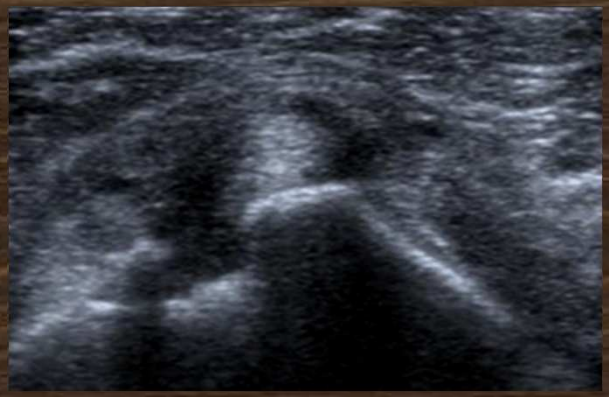

H

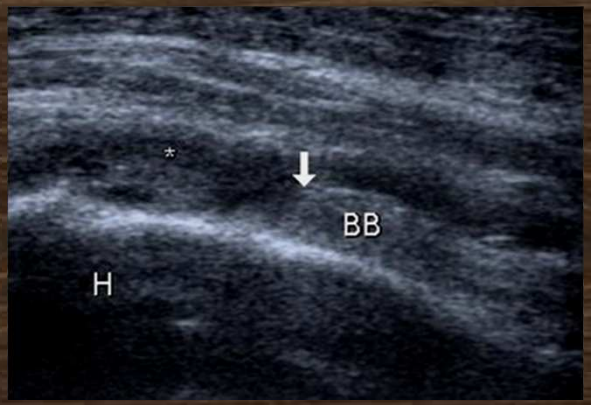


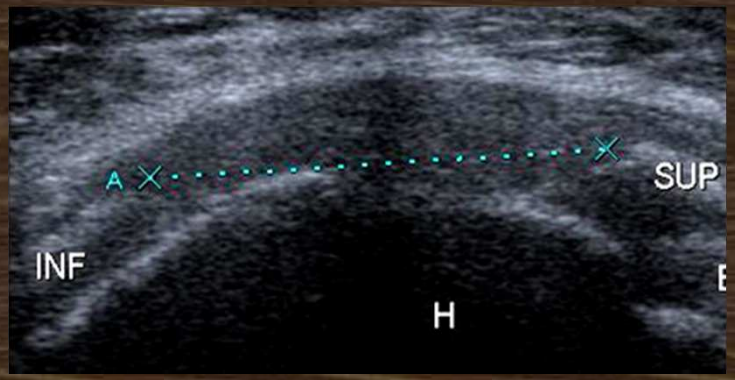


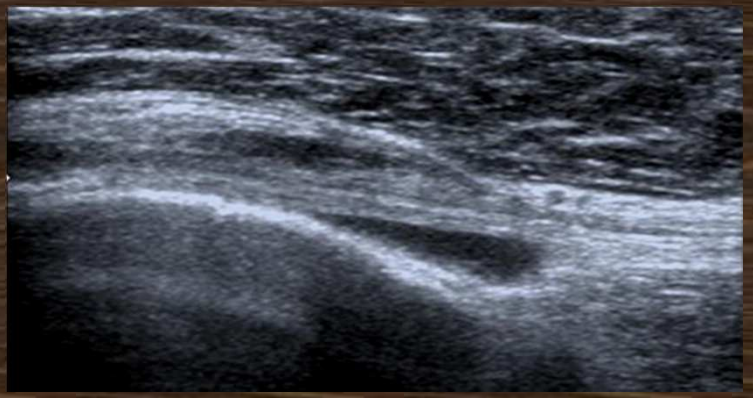

RM

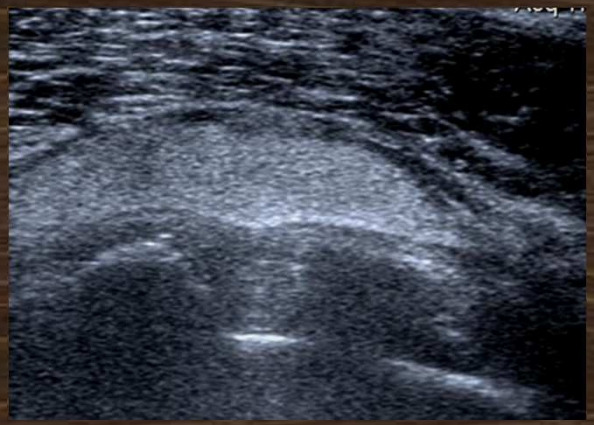

SUP
H

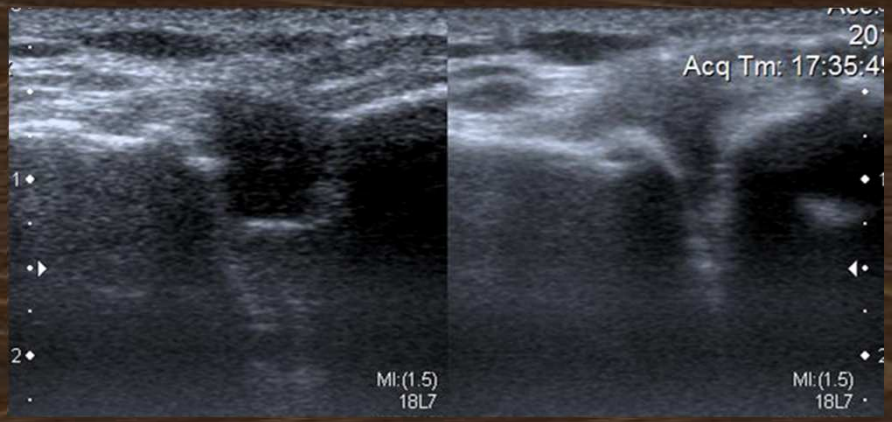


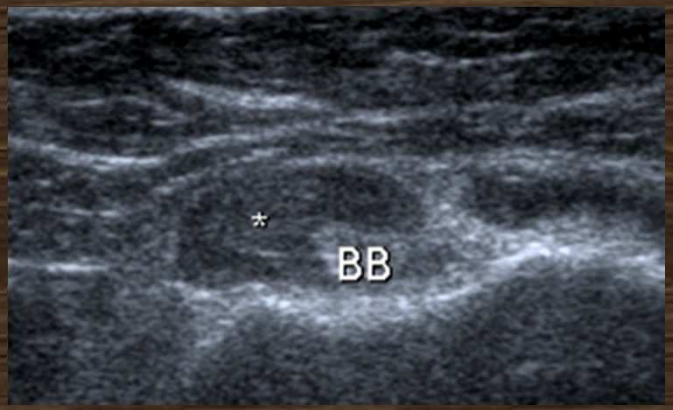

*
BB
H

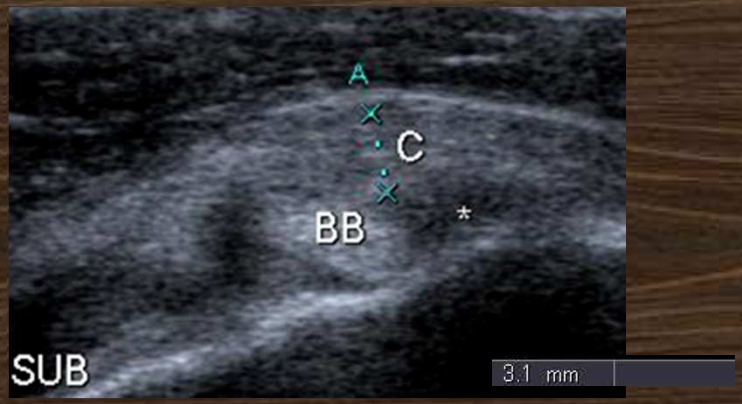

A
SUP
INF
H





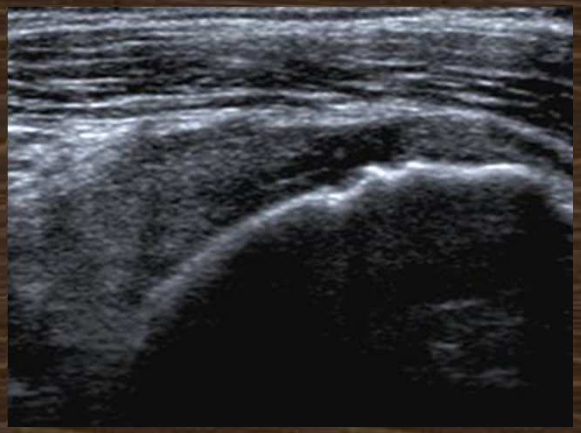

Acq Tm: 17:35:4
MI:(1.5)
18L7
MI:(1.5)
18L7

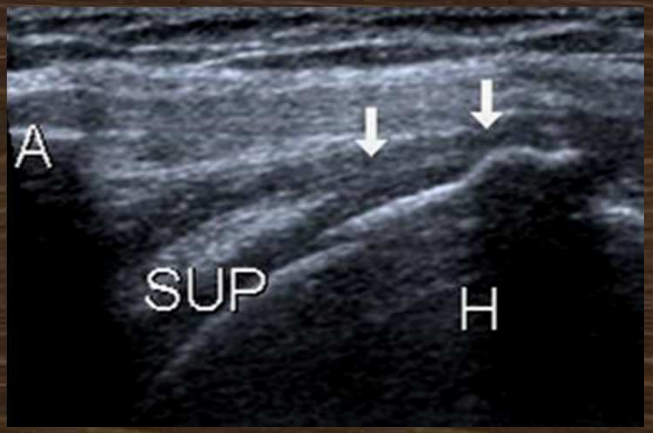

BB

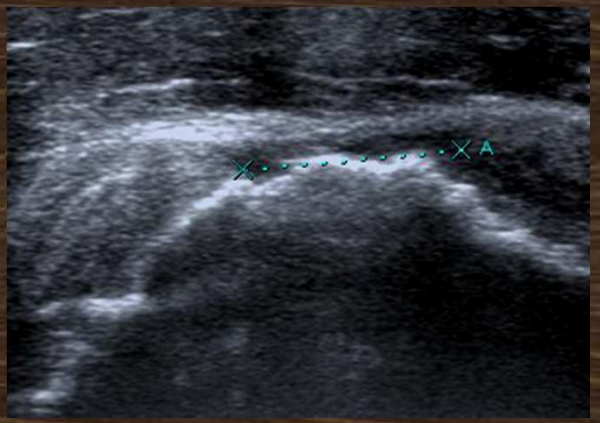

A
C
BB
SUB
3.1 mm

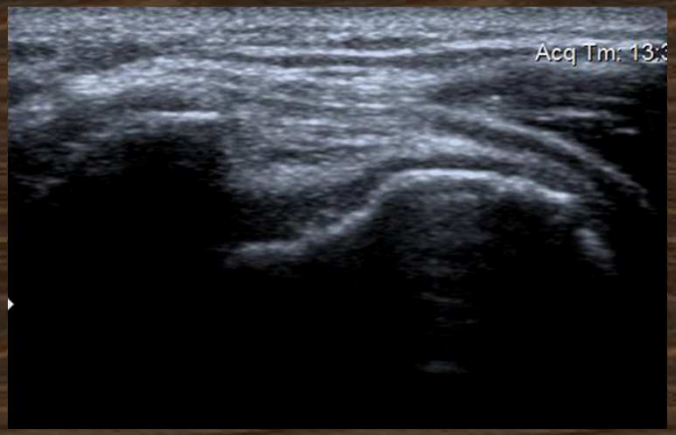
typický degenerativní obraz:

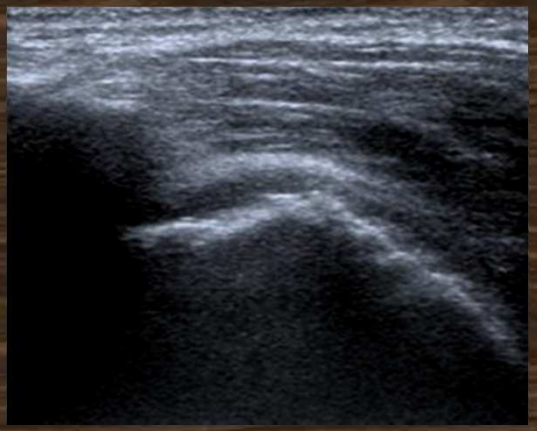
- starší pacient, manuálně pracující, sportovec
- trauma 0 nebo minimální
- splývající nerovnosti: malé eroze, entezofyty
- RM nehomogenní, kalcifikace, - „ -, hyperemie
- ztenčení (rozšíření) šlachy RM a bicipitu
- defekty v RM: parc. ruptury a abrupce
- totální abrupce - chybění šlach zevních rotátorů
- tekutinová náplň v kloubu a SA burze
- osteofyty a tekutina v AC kloubu

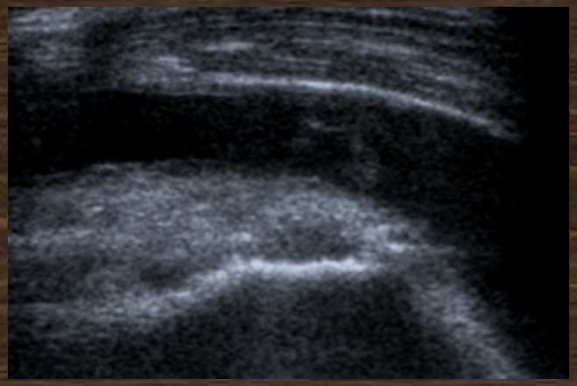


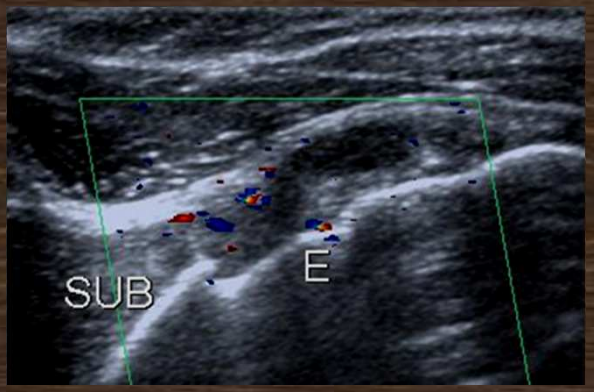

A
SUP
H

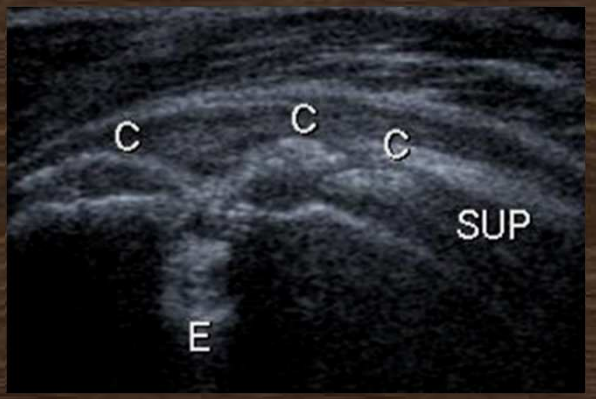



Acq Tm: 13:3



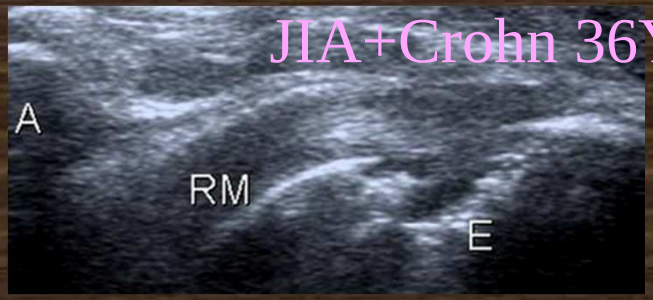


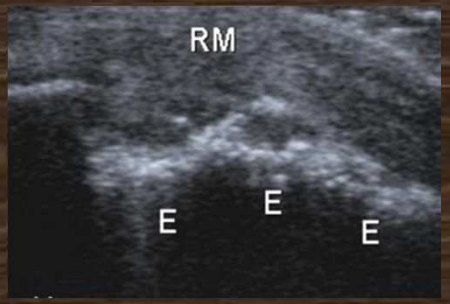

SUB
E


C
C
C
SUP
E

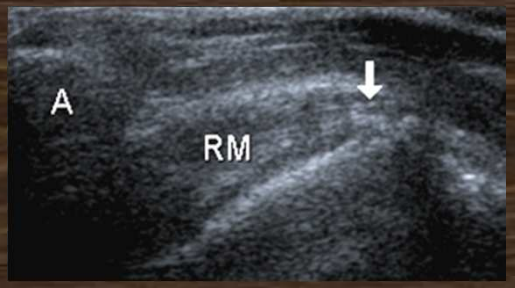
typický zánětlivý obraz:

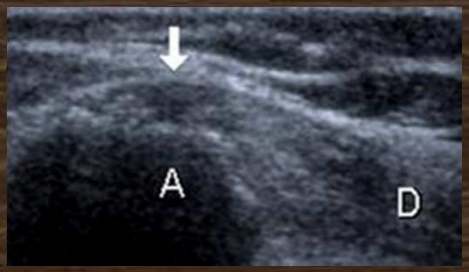
- pac. mladší a středního věku
- polytopní obtíže
- na (hladké) hlavici velké eroze v místě úponů RM i mimo
- entezofyty
- tekutina a (hyperemická) synoviální výstelka v GH a AC kloubu, burze, podél šlachy bicipitu
- hyperemie úponů RM (v erozích), m.deltoideus
- RM s defekty, difusně ztenčená až chybí

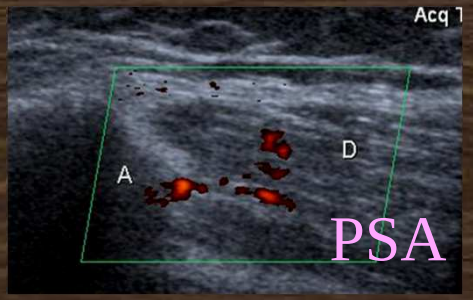

JIA+Crohn 36Y
A
RM
E

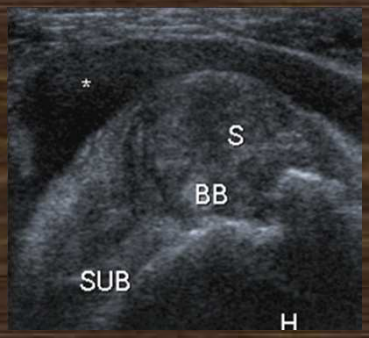

RM
E
E
E


septická artritis

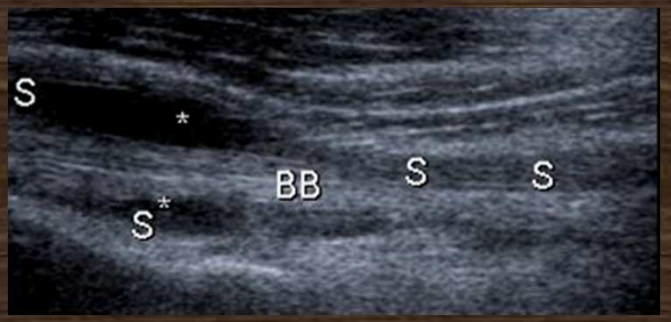

A
RM

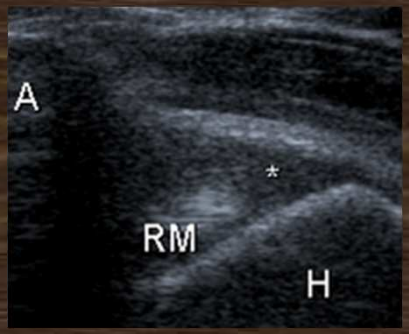

A
D

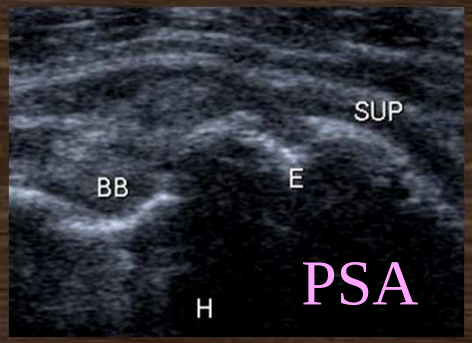

Acq
D
A
PSA


*
S
BB
SUB
H

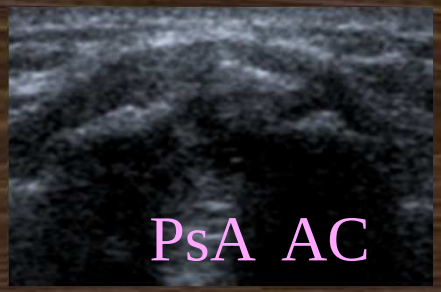

septická artritis
BB
*


S
*
BB
S
S
S
*


A
*
RM
H

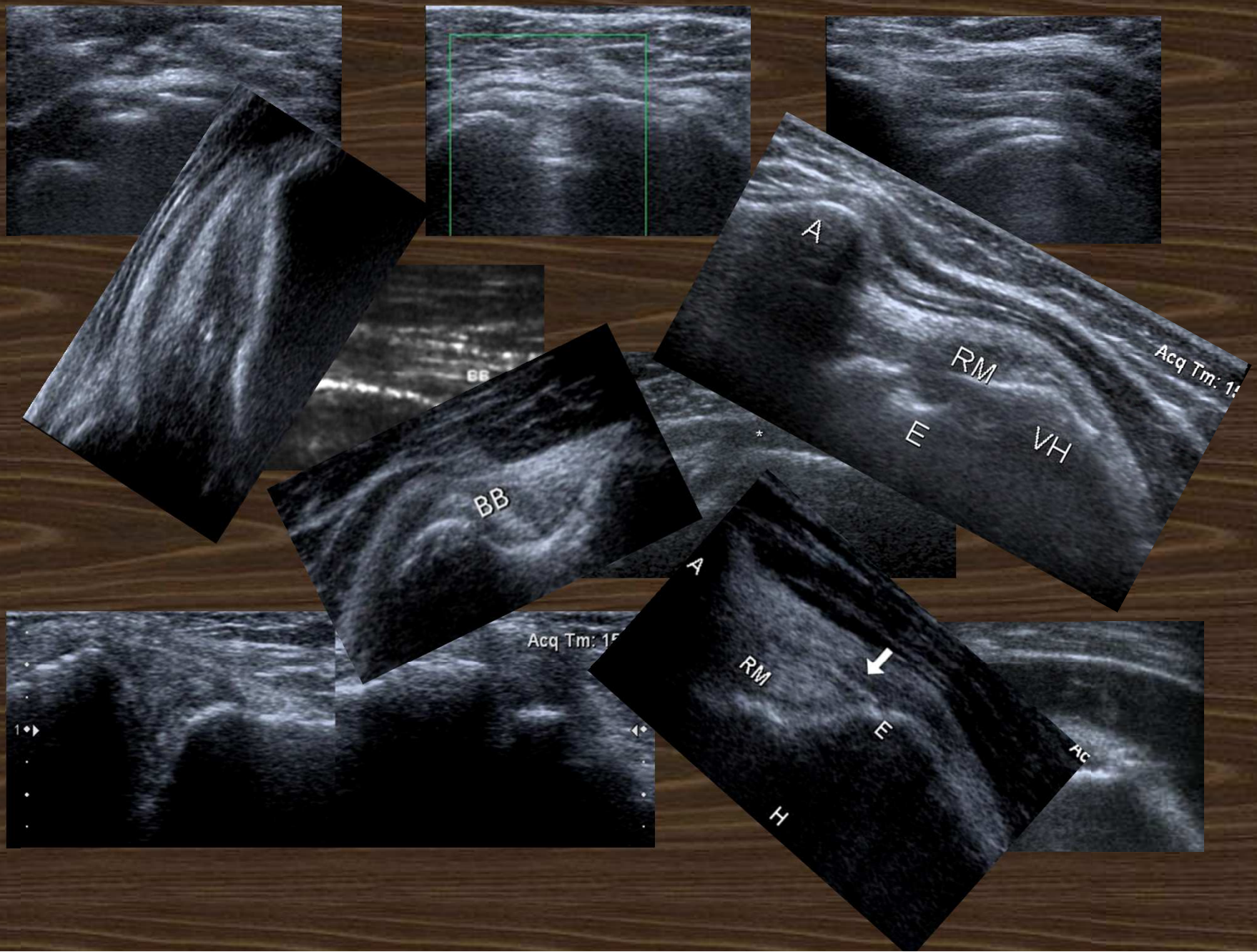

SUP
BB
E
H
PSA


difusní laese
A
2.8 mm


PsA AC

typický etiologicky nerozhodnutelný obraz:

- pac. 60 letý, 20 let se léčí pro RA / prodělal mírné trauma, předtím manuálně pracoval
- eroze, entezofyty
- tek. v kloubu a mírně v SA burse
- chybí šlacha m.supraspinatus, ostatní šlachy výrazně ztenčeny
- bez hyperemie
- tekutina a nerovné okraje AC kloubu


A
RM
E
VH
BB
Acq Tm:
A
RM
E
H

Závěr:

- anatomie
- anizotropie šlach
- dynamické vyšetření
- barevné dopplerovské vyš.
- hluboké struktury kloubu
- ↓ specificita x věk, anamnéza