

ROLE OF SHOULDER ULTRA SOUND IN ROTATOR CUFF TEARS



NEWS LETTER
APR-2005

ONE STEP
AHEAD IN
ULTRASOUND
IMAGING...
**3D + 4D
IMAGING**

FACILITIES:-

- WHOLE BODY-ULTRASOUND
- COLOR DOPPLER
- MAMMOGRAPHY
- BMD-DEXA
- CT-SCAN
- DIGITAL X-RAY
- ECHO CARDIOGRAPHY PATHOLOGY

Add :

4, Royal Sands,
'A' wing, Near Fame
Adlab, New Link Rd,
Andheri-(W), Mumbai.
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E-mail:
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Timings:

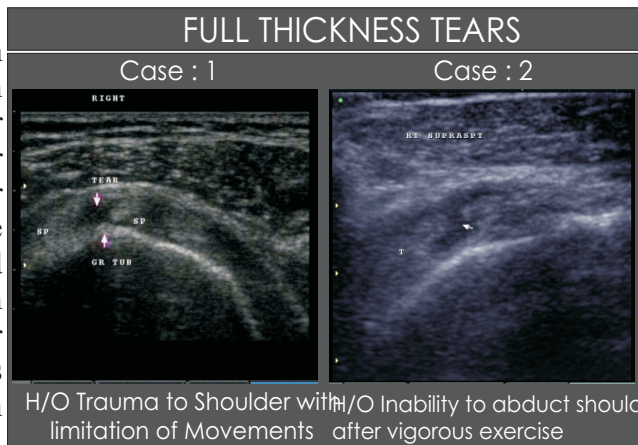
9.00 am to 8.00 pm

Sonography is a **readily available, cost-effective** technique for examining the rotator cuff, bursae, long head of the biceps tendon, periarticular soft tissues, and greater tuberosity.

Dynamic imaging is possible by ultrasound, which allows direct visualization of the tendons with shoulder motion in real time. This is the biggest advantage of real time sonography.

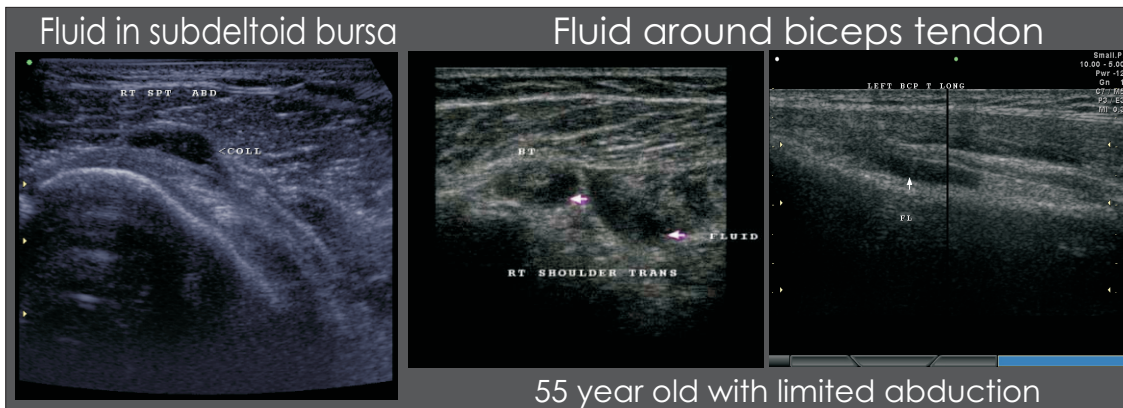
USG is a **noninvasive** imaging alternative for claustrophobic individuals or those in whom MRI is contraindicated.

Musculoskeletal sonography is an operator- dependent technique with variable sensitivity and specificity for detection of cuff tears and periarticular pathology, reflecting the level of operator experience, but most reports of large series have indicated sensitivity and specificity greater than 90% for detection of rotator cuff tear. Results are better for full-thickness than for partial-thickness tears and for massive or large tears than for small tears



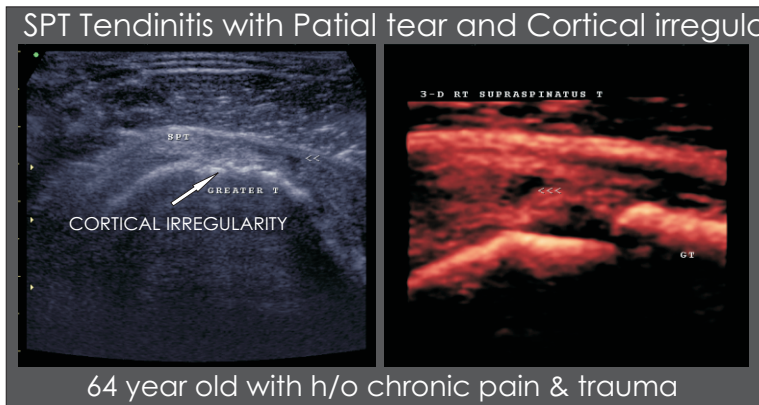
1. FULL THICKNESS TEARS:

Sonographic criteria for full-thickness rotator cuff tears include nonvisualization of the tendon, a local hypoechoic gap involving the entire thickness of the tendon.



2. PARTIAL-THICKNESS TEARS:

Appear as a focal hypoechoic or heterogenous region that does not involve the entire thickness of the tendon.



ADVANTAGES OF SHOULDER ULTRASOUND

- ★ RAPID
- ★ LOW-COST
- ★ ACCURATE
- ★ DYNAMIC
- ★ NON-
INVASIVE

3. IMPINGEMENT:

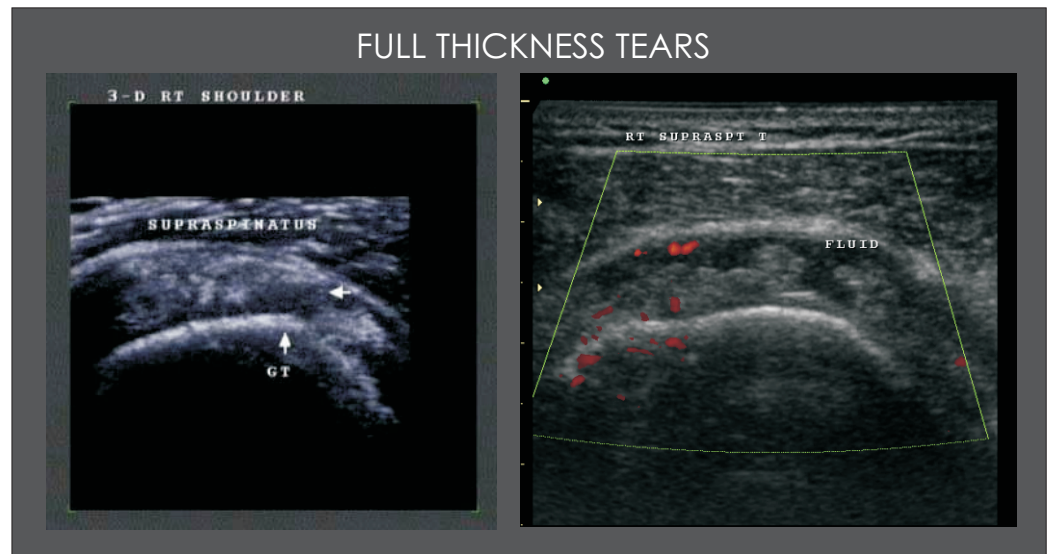
Even though sonography cannot evaluate the deep aspect of the acromioclavicular joint and thus cannot evaluate indentation of the supraspinatus, it can dynamically assess the supra spinatus and overlying bursa during arm abduction by demonstrating entrapment of these soft tissue structures between the acromion and greater tuberosity in the case of impingement.

CONCLUSION:

Ultrasound has been shown to be a rapid, low-cost, accurate technique in the detection and grading of pathology involving the tendons of the rotator cuff. A negative sonogram obtained by experienced sonologist has been correlated with a good prognosis and a short duration of symptoms.

Accurate, confident choices can be made between conservation option, arthroscopy, and limited and extensive open surgical techniques. This, in turn, enables a preoperative assessment of the patient's prognosis and by allowing accurate presurgical planning, minimizes patient morbidity.

Finally, despite the many uses for ultrasound in the shoulder, it should be pointed out that any complete evaluation of a shoulder complaint should include initial adequate of a radiographs that will often provide substantial information about bone and soft tissue pathology, on occasion making it unnecessary to pursue more advanced imaging studies.



References:

1. Brandt TD, et al : Rotator cuff sonography: A reassessment.
Radiology 173:323-327, 1989.
2. Brenneke SL, Morgan CJ: Evaluation of ultrasonography as a diagnostic technique in the assessment of rotator cuff tendon tears.
Am J Sports Med 20(3):287-289, 1992.
3. Bretzke CA, et al : Ultrasonography of the rotator cuff : Normal and pathologic anatomy.
Invest Radiol 20:311-315, 1985.
4. Crass JR, Craig EV, Feinberg SB: Ultrasonography of Rotator cuff tears: A review of 500 diagnostic studies.
J Clin Ultrasound 16:313-327, 1988.