
Mack, Sharlene, Wright, et al (1985) correlated the Sonographic imaging results with surgical findings and or arthrography of one hundred and thirty nine shoulders in one hundred and thirty four consecutive patients. When sonography was compared with surgical findings in ninety shoulders, the sensitivity was 91%, the specificity 98%, overall accuracy 95% for rotator cuff tear. The sonographic diagnosis was the same as the arthrography diagnosis in 91% of fifty cases.

William D Middleton, Gerald Edelstein et al (1986) described the sonographic detection of rotator cuff tears. Plain films are sensitive to advanced lesions. Arthrographic of shoulder joint is highly sensitive in detecting rotator cuff tears but it is invasive and time consuming procedure. Sonography represents a potential rapid, non invasive means of diagnosing rotator cuff tears.

William, Remus et al (1986) described pitfalls in sonography. Errors resulting from soft-tissue abnormalities were seen in patients with calcific tendinitis simulating rotator cuff tears. The major technical limitation of the
study arises from the inability to image the rotator cuff beneath the acromion.

Garra, Insana, Shawker, Russell et al (1987) “Quantitative Estimation of Liver Attenuation and Echogenicity: Normal State versus Diffuse Liver Disease” A method based on broad-band amplitude for obtaining attenuation and echogenicity estimates from homogeneous phantoms and tissues. The attenuation results are as accurate as those obtained by the spectral-difference method and show less variability. The method was applied to the livers of eighteen healthy volunteers and seventy six patients with liver disease, including twenty nine patients with chronic hepatitis and thirty patients with Gaucher’s disease.

Holder, Kursunoglu-Brahme, Flannigan et al (1988) performed ultrasound examinations in one hundred and eighty consecutive patients with clinical findings suggestive of rotator cuff tears. Surgery was done on fifty one shoulders. Sensitivity of detection of a tear was 100%, Specificity 75% and accuracy 92%.

Burk, Karasick, Kurtz, et al (1989) prospectively compared MRI, arthrography, and sonography and found sonography to be less accurate in the diagnosis of rotator cuff tears than the other two modalities in a small population.
Brandt, Cardone, Grant et al (1989) rotator cuff sonography a reassessment done by the author showed promising results in small proportion of shoulder rotator cuff diseased patients.

Brenneke and Morgan (1992) Evaluation of ultrasonography as a diagnostic technique in the assessment of rotator cuff tendon tears concluded that ultrasound was sensitive and accurate for identifying full thickness tears but less accurate for identifying partial thickness tears.

Olive Jr, Palmer et al (1992) prospectively studied seventy two patients with possible rotator cuff tears with both arthrography and sonography. Using arthrography as the standard, sonography showed 90% sensitivity, 91% specificity, 87% positive accuracy, and 93% negative accuracy.

Hollister, Mack, Patten et al (1995) the authors reported that the presence of intra articular fluid in combination with subacromial / subdeltoid fluid on ultrasound was highly specific and had a high positive predictive value for rotator cuff tears.

Von Holsbeeck, Kolowich, Eyler et al (1995) used slightly different criteria to detect partial thickness tears, looking closely at the echogenicity in the critical zone of the supraspinatus tendon in two orthogonal planes. They found sensitivity of 93%, specificity of 94%, positive predictive value of
82%, and negative predictive value of 98% compared with arthroscopic confirmation.

Field T. Blevins. Mladen Djurasovic et al (1997) this article describes current knowledge of the biology of the rotator cuff tendon. Despite the significant amount of pain and disability related to rotator cuff pathology, little information is available to guide the clinician in designing, selecting or implementing therapeutic interventions. With an improved understanding of the biology, injury, and repair of the rotator cuff tendon, biologic processes might be modulated to delay or prevent tendon pathology and to improve healing after injury or surgical repair.

Burk, Karasick, Kurtz et al (1997) described diagnosis of rotator cuff lesions. He has compared ultrasound and MRI on thirty eight joint specimens and demonstrated that supraspinatus tendon degeneration might appear hypo or hyperechoic at ultrasound. Differentiation from tendon tear may be difficult, as both tendinosis and tendon tear may appear hypoechoic and coexist within the same tendon.

Louis J Soslowsky (1997) this article addresses current knowledge of rotator cuff mechanics through a review of rotator cuff structure and anatomy, coracoacromial arch structure and biomechanics and biomechanical models of the rotator cuff.
Swen, Jacobs, Nerve et al (1998) Sonography performed by the rheumatologist as useful as arthrography by the radiologist for the assessment of full thickness rotator cuff tears and also compared ultrasonography with arthrography in one study and with MRI in another, with verifications of findings at surgery in both. For diagnosis of full thickness rotator cuff tears, the author reported a sensitivity of 86% and specificity of 88% for sonography, compared with 77% and 92% for arthrography.

In another study of full thickness rotator cuff tears in twenty one patients, Swen, Jacobs, Nerve et al (1998) found a sensitivity of 81% and specificity of 94% for sonography, compared with 81% and 88% for MRI. Sonography was equivalent to both arthrography and MRI in the evaluation of full thickness tears.

Roberts, Galloway, Honaker et al (1998) performed shoulder sonography at initial clinic visits in twenty four patients and compared it with MRI. Sonography had a sensitivity and specificity of 50% and 100%, respectively, for diagnosing full thickness tears and of 50% and 80%, respectively, for partial thickness tears. They reported cost savings with ultrasound and a decreased need for additional studies.
Teefey, Hasen, Middleton et al (2000) Ultrasonography of the rotator cuff, a comparison of Ultrasonographic and arthroscopic findings in one hundred consecutive cases, the authors found ultrasound to be highly accurate for both detecting full thickness tears and characterizing their extent but less sensitive for detecting partial thickness tears.

Roberts, Walker, Seligson et al (2001) Diagnostic capabilities of shoulder ultrasonography in the detection of complete and partial rotator cuff tears. In a prospective study of twenty four patients scheduled for shoulder arthroscopy, the author reported a learning curve and improved accuracy with experience. By the second study, preoperative ultrasound sensitivity and specificity had risen to 80% and 100% respectively, for full thickness tears and to71% and 100%, respectively, for partial thickness tears.

Prakash, Bhanu, Ramakrishnan, Suresh, S et al (2002) Fetal lung maturity analysis using ultrasound image features. Analyzing the maturity of the fetal lung using ultrasound images. A region of interest of 64X64 pixels was used for extracting the features. For classifying the images into those from mature (reduced pulmonary risk) and immature (possible pulmonary risk) lung. Features derived from the histogram of the images.

Klaus Strobel, Marco Zanetti, Ladislav Nagy et al (2004) the author compared the tissue harmonic imaging of the shoulder with conventional
ultrasonography in patients suspected of having rotator cuff lesions. Joint and tendon surface visibility improved with tissue harmonic imaging as compared with the visibility achieved with conventional ultrasound.

William Middleton, William Payne, Sharlene et al (2004) sonography and MRI of the shoulder comparison of patient satisfaction. MRI and sonography are used to evaluate patients with painful shoulders. Study conducted to compare patient perceptions and satisfaction with both tests. In conclusion most patients with shoulder pain prefer sonography to MRI.

Josh B (2005) described full thickness and partial thickness supraspinatus tendon tears value of ultrasound primary and secondary signs in the diagnosis of a surgically identifiable supraspinatus tendon tear. Secondary ultrasound signs, such as greater tuberosity cortical irregularity and joint fluid are most valuable in the diagnosis of supraspinatus tendon tear.

Sharlene A. Teefey, David Rubin et al (2005) analysed the cause of errors in the detection and measurement of rotator cuff tears and he concluded that detection errors were due to limitation inherent with test or misses. Limitation inherent with the patient and misinterpretation of the findings were rare.
Pernille Kofoed, Nielsen Bente, R JensenTron et al. Quantitative ultrasound tissue characterization in shoulder and thigh muscles – a new approach BMC Musculoskeletal Disorders (2006) The echogenicity patterns of ultrasound scans contain information of tissue composition in muscles. Valuable tool for quantitative assessment of skeletal muscle thickness, and high positive correlations have been found between muscle thickness and muscle volume and strength.

Sachin khullar (2007) ultrasound in diagnosing shoulder injuries. Ultrasound and MRI in shoulder pathology are regarded as complementary modalities. For imaging the rotator cuff, ultrasound is claimed to be extremely accurate – as accurate as MRI. Ultrasound should be used for rotator cuff lesions or dynamic impingement.

Nitin G chaubal (2007) Ultrasonography of shoulder (rotator cuff) – shoulder joint can be very easily assessed because of anatomical reasons. Ultrasound has contributed to high accuracy in the diagnosis of rotator cuff pathology. Ultrasound is preferred to MRI in several institutions.