

TITLE:**Causes of Painful Shoulder using High Frequency Ultrasound****AUTHOR INFORMATION:**

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ABSTRACT

INTRODUCTION:

Ultrasound of the shoulder is a fast, relatively cheap and dynamic way to examine the rheumatologic condition that results from periarticular lesions involving the rotator cuff, the biceps tendon, and the subacromio-subdeltoid bursa. The objectives of this study were to determine prospectively the frequencies of ultrasound findings in patients with shoulder pain, and to identify possible predictors of shoulder pain.

METHODS:

This prospective study was performed between December 2013 and January 2015. A 150 subjects; aged 21 to 60 years presents with painful shoulder underwent ultrasound imaging. One expert radiologist performed an ultrasonographic examination for the painful shoulders, using Hitachi HI Vision Avius ultrasound machine equipped with 10 MHz linear array transducer. Ultrasound scanning protocols met the standards established by the American Institute of Ultrasound in Medicine (AIUM) to exam the rotator cuff. The statistical package for the social sciences (SPSS) was used to analyze the results.

RESULTS:

Study results reveal that rotator cuff was the most common structure to show abnormalities in shoulder joint ultrasound. Rotator cuff disease was present in 76% of the patients. Multiple disorders in rotator cuff was present in 33% of the examined subjects. Calcific tendonitis was the most frequently diagnosed specific disorder. The tendon of supraspinatous muscle was commonly affected (44.1%) with abnormalities. Subjects of age 48 or older were most strongly related to rotator cuff disease.

DISCUSSION AND CONCLUSION:

The low cost and non-invasiveness of ultrasound justify its routine utilization for the assessment of the painful shoulder. Also, it enables physicians to rationalize treatment in nearly all patients who are aged 48 years and older with a painful shoulder. Further studies are needed to prove that early ultrasound imaging in the diagnostic work-up improves patient outcome.