Case study # 14 Lt shoulder

A pleasant 59 year old female presents with chronic left shoulder pain and limited range of motion. Patient is very active and an avid swimmer.

Patient came to our clinic to have an initial sonographic exam of her left shoulder to evaluate for possible treatment with Placental Tissue Matrix (PTM). She had previously visited our clinic for a chronic knee condition which was treated successfully with PTM. Given the results of her knee therapy she decided to have her left shoulder examined.

The following are the findings of the initial US exam:

DOB: 05/09/56
DOE: 08/29/16

Left Shoulder

A comprehensive imaging protocol of the left shoulder is presented. The proximal biceps tendon demonstrates calcific tendinosis, best visualized on longitudinal image.

No sonographic evidence of intra-substance or partial thickness tears. There is suspicion of thickening of the transverse humeral ligament on the short axis biceps tendon image. This may become more significant on imaging of the rotator cuff interval.

The short axis view of the subscapularis tendon demonstrates a near full thickness tear at the attachment on the lesser tuberosity with no retraction. A small cortical avulsion is noted at the margin of the tear.

The supraspinatus tendon on long axis demonstrates significant enthesopathy/tendinosis with fiber failure at the attachment on the greater tuberosity. Also no tendon retraction.

On short imaging the supraspinatus demonstrates multiple sites of intra-substance focal tears, with one extensive linear tear also evident.

The infraspinatus tendon is moderately tendinotic, but intact. The teres minor tendon is unremarkable.

Gleno-humeral joint effusion is noted with an associated labral defect/ scarring.

AC joint effusion with the classic "geyser sign" is noted. There is significant clavicular irregularity. Impingement of the joint is noted with internal rotation.

Images of the rotator cuff interval are suspicious for ligamentous/capsular pathology. This is difficult to determine because there is no distinct thickening of the combined interface nor widening of the interval.

Findings:
Biceps calcific tendinosis.
Advanced rotator cuff disease with near full thickness tears of supraspinatus and subscapularis.
Infraspinatus tendinosis.
AC joint instability/effusion.
Gleno-humeral joint effusion with labral scarring.
Suspected Rotator interval instability

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Findings were discussed with the patient and she opted to proceed with PTM (placental tissue matrix) therapy. It was determined that PX 100 w/ 6.5 CC's saline for a total volume of 7.5 CC's would provide an optimum result.

Treatment sites and volumes
Biceps: SAX probe at groove, in-plane, lateral to medial, .5cc
Subscapularis: SAX probe, in-plane, lateral to medial, fenestrate lesser tuberosity. 1.5cc
Supraspinatus: SAX , tire on the rim, in-plane, lateral to medial, . 1.5cc
Supraspinatus: LAX oblique, birds beak view, in-plane, distal to proximal, fenestrate greater tuberosity. 1.5cc
AC joint: SAX probe, out-of-plane, 1.0cc
Rotator Interval: SAX probe at interval, in-plane, lateral to medial,1.5cc

Patient returned 133 days status post product placement and reported great results. She states that she is feeing great with substantial pain reduction and improved mobility. She states no pain during swimming activities.

DOE: 12/30/16

Left Shoulder Exam: Follow up

A focused examination of the left shoulder is performed as a follow up study. The comparative images show sonographic evidence of biceps remodeling and increased fibrous echo-texture. This is also well demonstrated in long axis.

Short axis view of the subscapularis tendon reveals a nearly pristine tendon enthesis, with the conformity of the tendon, and the uniform tendon footprint.

Previously identified intra-substance defect of the supraspinatus is nearly absent on images #8,9. The posterior sweep image of the supraspinatus attachment also demonstrates similar findings, including diminishment of a bony/cortical defect.

The rotator cuff interval demonstrates generally decreased thickness which is characteristic of reduce joint effusion and/or tendinosis. This current image does not reveal abnormal space or gap between the biceps and the supraspinatus and/or subscap.

The AC joint by comparison is slightly more effused; however a static or neutral joint space is wider. Dynamic internal rotation image does demonstrate a stable joint. The two bones do not approximate.

Findings:

Sonographic evidence a positive response to biocellular treatment. Findings consistent with increased echo-density of the tendons. Also, decreased gleno-humeral effusion and/or tendinosis of the interval.

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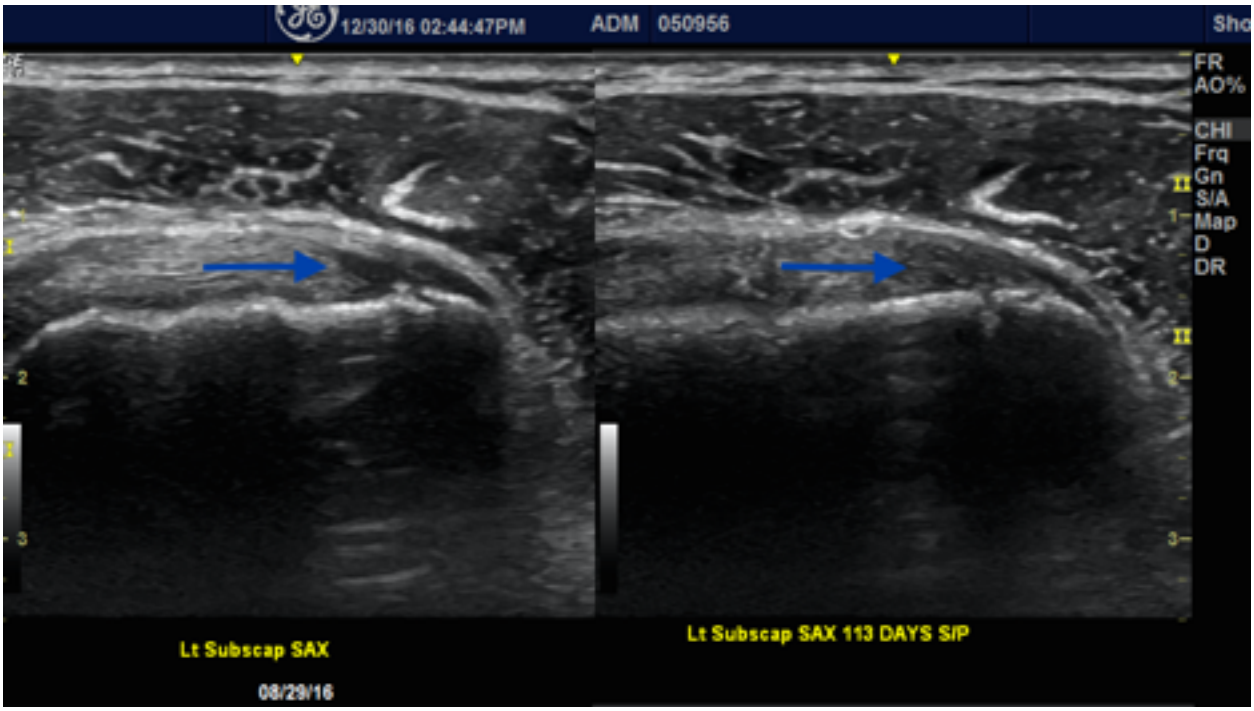
Below is a before and after short axis view of the subscapularis tendon revealing a nearly pristine tendon enthesis, with the conformity of the tendon, and the uniform tendon footprint.



Below is a before and after of the supraspinatus tendon enthesis in short axis. Previously identified intra-substance defect of the supraspinatus is nearly absent in the “after” image.

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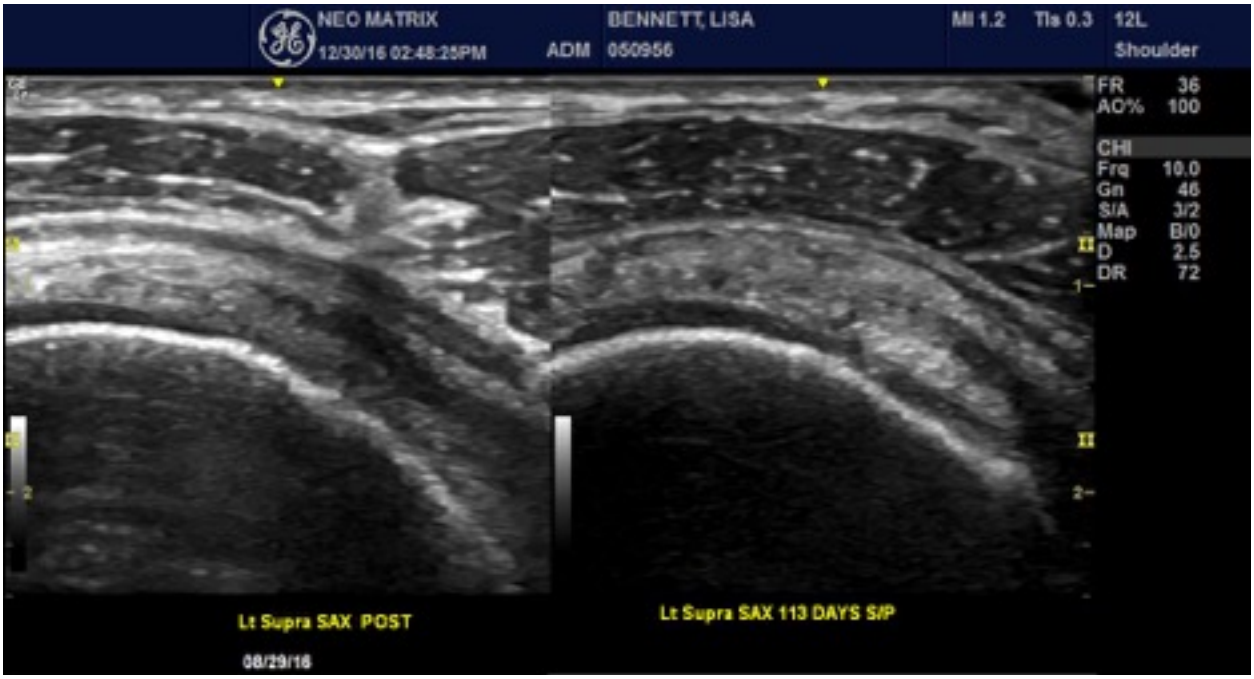

The comparative images below show sonographic evidence of biceps remodeling and increased fibrous echo-texture, in addition demonstrates resolution of previously identified calcific tendinosis.