Shoulder Desmoid-Type Fibromatosis Missed on an Initial Work Up: Case Report

Michael Byrd*[1], William Barfield[2], Emily Darr[2]

1. Medical University of South Carolina College of Medicine. 96 Jonathan Lucas Street Suite 601, Charleston, SC 29425

2. Medical University of South Carolina Department of Orthopaedics & Physical Medicine. 96 Jonathan Lucas Street Suite 708, Charleston, SC 29425

Shoulder Desmoid-Type Fibromatosis should be included on a **differential diagnosis** for **progressive shoulder atrophy and weakness**

MUSC MEDICAL UNIVERSITY of SOUTH CAROLINA

Introduction:

- *Incidence:* Desmoid-type fibromatosis (DF) occurs in 2 to 4 per million per year in general population (1000x higher if APC gene mutated)
- *Risk Factors*: Trauma, Surgery, Pregnancy, Oral Contraceptives, Age 35-40
- *Diagnosis:* MRI + CT Guided Biopsy
- *Treatment:* "Wait-and-see" +/- tyrosine kinase inhibitor therapy

Case Presentation:

- 48 year old male with surgical history of uncomplicated right shoulder rotator cuff repair
- Presented to our clinic with 10 months of right neck spasms and winging/snapping of right scapula. No improvement with conservative therapy. Previously diagnosed with dorsal scapular nerve entrapment. Past EMG/NCS & MRI C-Spine were thought to represent C5-C6 radiculopathy. Past shoulder MRI read as no evidence of disease.

Physical Exam:

- Audible clicking/clunking of scapulothoracic joint.
- Tenderness along cervical paraspinals and anterior shoulder. Full range of motion of both shoulders and neck.
- Noticeable atrophy of pectoralis complex on right.
- Weakness of right deltoid and right biceps. Absent right biceps reflex.
- Limited EMG showed atrophy of pectoralis, infraspinatus, and supraspinatus.

Imaging:

- MRI Chest W/Wo Contrast (Figure 1):

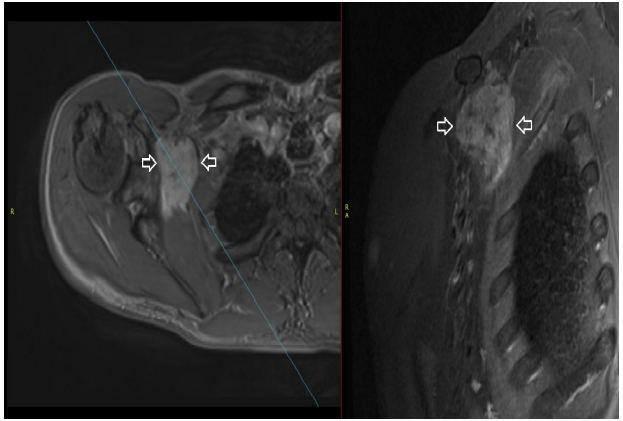

Figure 1. 5.3 x 3.8 x 5.6 cm enhancing soft tissue mass medial and contiguous with the scapula and coracoid process on T1 weighted axial (right) and coronal (left) chest imaging post contrast on Siemens 3 Tesla MRI

Management:

- CT Guided biopsy consistent with DF
- Started on Sorafenib 400 mg daily
- At 3 month follow-up MRI, the mass had reduced to 4.9 x 3.8 x 4.8cm

Discussion

- This patient had risk factors for DF including surgery and younger age
- Factors contributing to delay in diagnosis include: 1. Low incidence and variable course of DF 2. Nonspecific symptoms 3. Difficulty visualizing mass on past shoulder MRI 4. Limitation of EMG/NCS in differentiating between C5/C6 radiculopathy versus a mass