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Case study

Rotator cuff repair augmentation with Tactoset® Injectable Bone Substitute

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History

A 65-year-old, right hand dominant women presented to my office after a fall two months prior. She described constant pain over the greater tuberosity with difficulty lifting her arm.

A focused exam demonstrated point tenderness over the greater tuberosity with forward flexion and abduction limited to 90 degrees. Strength was 4-/5 and she complained of pain with any attempt at range of motion.

X-ray imaging was unremarkable for arthritis or acute fracture. MRI imaging demonstrated a full-thickness supraspinatus tear with slight retraction and an insufficiency fracture zone over the greater tuberosity.

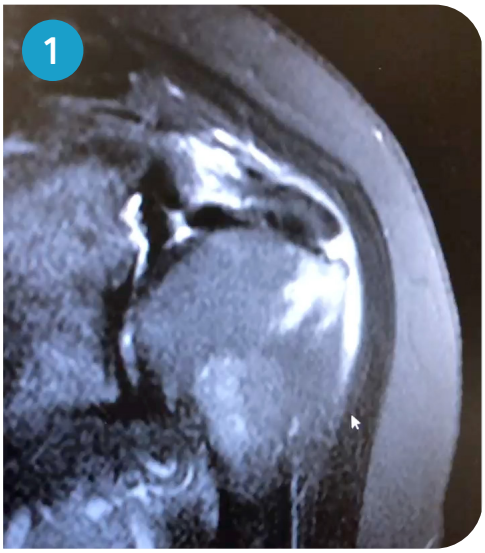

Figure 1. Preop MRI demonstrating full-thickness rotator cuff tear and insufficiency fracture in the greater tuberosity.

Given the patient's pain and functional loss, surgical intervention was recommended.

Surgical Technique

The patient was taken to the operating room. After anesthesia induction, the patient's shoulder was examined, and she was noted to have full range of motion. She was placed in the lateral decubitus position. Arthroscopic evaluation confirmed the full-thickness supraspinatus rotator cuff tear.

Prior to placing sutures for rotator cuff fixation, an 11G Tactoset cannula was placed percutaneously in the zone of the MRI-confirmed insufficiency fracture. C-arm placement confirmation was not utilized for this procedure as we had direct visualization of the cannula position.

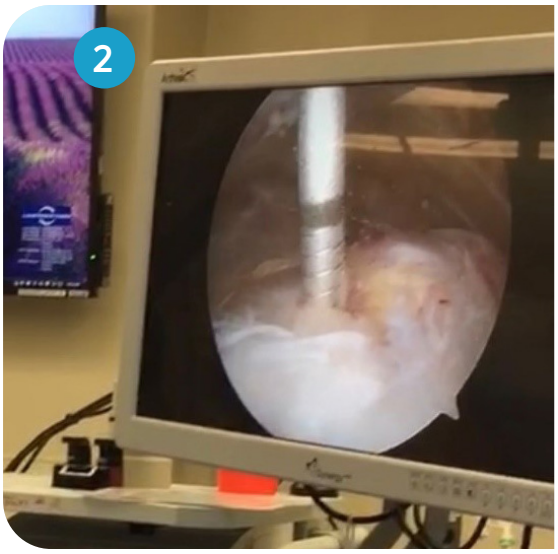

Figure 2. Arthroscopic visualization of cannula placement in the greater tuberosity for the insufficiency fracture.

The side delivery, 11G cannula was used to ensure proper Tactoset placement in the insufficiency fracture for the purposes of pain relief and to augment anchor pullout strength. Once the cannula was placed in the appropriate position, 3 cc's of Tactoset Injectable Bone Substitute was placed, and the cannula was rotated to ensure spread of Tactoset to the entire area of the insufficiency fracture. The cannula was then removed.

The diameter of the side delivery, 11G Tactoset cannula is similar to the diameter of a 4.5mm bioabsorbable rotator cuff anchor. As the Tactoset is setting in the bone, sutures are passed with standard rotator cuff suture instrumentation.

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The sutures loaded into a lateral row anchor and the anchor were placed in the hole created by the Tactoset cannula. The anchor was then secured with usual insertion techniques. If there is a concern regarding Tactoset curing time and the ability to pass sutures, an alternative strategy would be to place sutures prior to the placement of the Tactoset cannula and material.

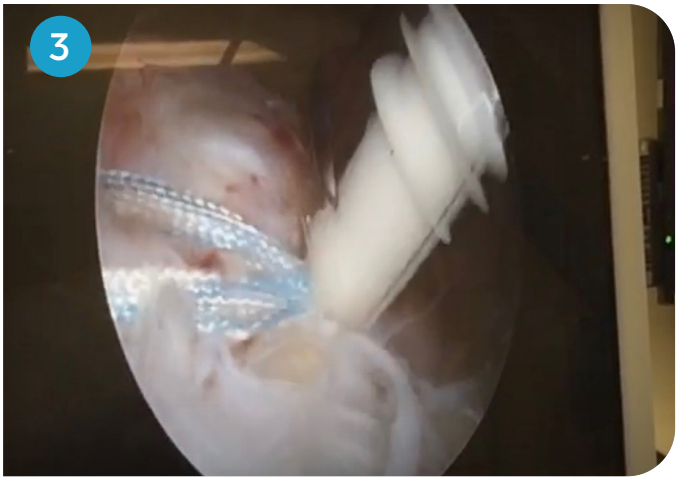

Figure 3. Rotator cuff repair anchor and sutures placed in the tunnel created by the Tactoset cannula.

Post-Op

The patient's post-operative course was uncomplicated. Due to the strength of the repair construct at the time of surgery, early range of motion was recommended. The patient was placed in a standard sling with instructions for early active range of motion with no lifting or strengthening.

Upon a 10 day follow-up, the patient had near full range of motion and her preoperative pain was resolved. She required no postoperative opioids. Her postoperative X-ray confirmed placement of the Tactoset adjacent to the anchor.

Discussion

This case illustrates several points when considering Tactoset for rotator cuff repair augmentation.

Insufficiency fractures in the shoulder after trauma are a significant source of pain. Historically, these patients will have atypical, constant shoulder pain compared to patients with chronic rotator cuff tears.

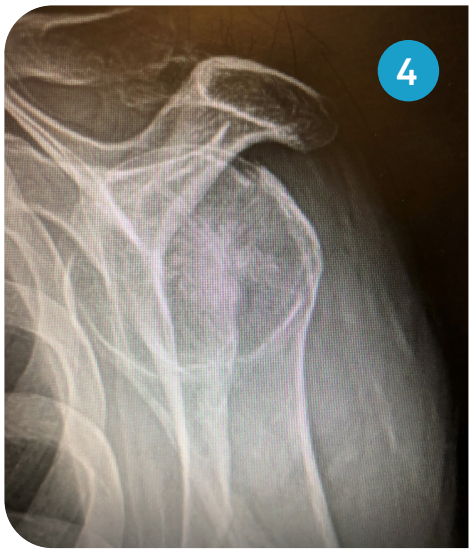

Figure 4. Post-op radiograph demonstrating spread of Tactoset adjacent to anchor tunnel.

In addition, insufficiency fractures linked to acute rotator cuff tears can be associated with bone weakness with the potential for early failure due to a lack of bone fixation. The latest indication for Tactoset is that it can augment hardware and support bone fragments during the surgical procedure. The cured paste acts only as a temporary support media and is not intended to provide structural support during the healing process.

By adding Tactoset to the zone of the insufficiency fracture there is a palpable and audible increase in the sense of strength of anchor placement.

Tactoset offers a benefit to patients by potentially generating improved patient end point outcomes and improved anchor pullout strength which in turn will hopefully improve patient reported outcomes and healing rates of rotator cuff repairs.

For complete product information, please visit **https://www.anikaifu.com**

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