

An Alternative Procedural Approach to Treating Calcific Tendinitis of the Hip

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BACKGROUND

- A **58-year-old female** with chronic bilateral hip pain for over 20 years, worsening in intensity on the right side recently after a motor vehicle accident, now difficult to climbs stairs and sleep on the right side of her body
- **Initial physical examination:** Positive flexion, abduction, external rotation (FABER) and flexion, adduction, internal rotation (FADIR) testing bilaterally, as well as bilateral tenderness to palpation of the greater trochanteric bursae (GTB)
- **Initial treatment:** Kenalog (40mg) / bupivacaine (7cc of 0.25%) / 2% xylocaine injections in her GTB, pregabalin, methocarbamol, and tizanidine
- **Past medical history:** Hypertension, fibromyalgia, gastroesophageal reflux disease (GERD), sleep apnea, and lumbar and thoracic degenerative disc disease
- **Past surgical history:** including appendectomy, rotator cuff repair, hysterectomy, spinal fusion, and Roux-En-Y gastroenterostomy

GREATER TROCHANTERIC BURSITIS (GTB)

- Common cause of lateral hip pain
- Caused by overuse, tissue trauma, or mechanical overload
- Often affects greater trochanter, gluteus medius/minimus, and surrounding bursae
- Conservative treatments: lifestyle modifications, NSAIDs, physical therapy

TENEX PROCEDURE

- AKA Ultrasound-Guided Percutaneous Tenotomy
- Minimally-invasive technique using high-frequency ultrasonic energy to remove calcified and degenerative tendon tissue
- Performed through a small incision under local anesthesia (more precise than open surgery and quicker recovery)
- Directly addresses the root pathology of GTPS by breaking down calcific deposits and promoting collagen remodeling

TWO-SYRINGE SALINE IRRIGATION METHOD / TENOTOMY

1. X-ray of bilateral hips: no acute osseus abnormalities
2. CT of right hip w/o contrast: chronic avulsion fracture of the abductor tendons at the greater trochanteric insertion, sclerotic bone lesion in the right acetabulum
3. MRI of right hip w/o contrast: peri-trochanteric edema, calcific tendinitis of the right gluteal insertion at the greater trochanter
4. Irrigation procedure to mimic Tenex procedure:
   a) Identify right greater trochanteric bursa using fluoroscopy.
   b) Apply topical 2% lidocaine anesthetic.
   c) Introduce a 16-gauge, 3.5” Quincke needle into the bursal space, using fluoroscopy.
   d) Irrigate the greater trochanteric bursa using a solution of 40mL of normal saline and 10mL of 2% lidocaine through the Quincke needle, using a three-way stopcock to simultaneously aspirate the space–all under continuous fluoroscopic guidance.

SOURCES

- Comparison between ultrasound and chest X-ray to confirm central venous catheter tip position - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/figure/a-Two-syringes-connected-with-a-three-way-stopcock-One-syringe-filled-with-90-normal_fig1_372039052 [accessed 22 Sept 2025]
- Speers, C. J., & Bhogal, G. S. (2017). Greater trochanteric pain syndrome: A review of diagnosis and management in general practice. British Journal of General Practice, 67(663), 479–480. https://doi.org/10.3399/bjgp17X693041
- Fick, B., Stover, D. W., Chimenti, R. L., & Hall, M. M. (2021). The Safety of Ultrasound Guided Tenotomy and Debridement for Upper and Lower Extremity Tendinopathies: A Retrospective Study. *The Iowa orthopaedic journal*, *41*(2), 82–90.
- Grimaldi, A., Mellor, R., Nasser, A., Vicenzino, B., & Hunter, D. J. (2024). Current and future advances in practice: Tendinopathies of the hip. Rheumatology Advances in Practice, 8(2), rkae022. https://doi.org/10.1093/rap/rkae022
- Cowan, R. M., Ganderton, C. L., Cook, J., Semciw, A. I., Long, D. M., & Pizzari, T. (2022). Does Menopausal Hormone Therapy, Exercise, or Both Improve Pain and Function in Postmenopausal Women With Greater Trochanteric Pain Syndrome? A 2 × 2 Factorial Randomized Clinical Trial. The American Journal of Sports Medicine, 50(2), 515–525. https://doi.org/10.1177/03635465211061142
- Erickson, J., & Jagim, A. R. (2020). Ultrasonic tenotomy and debridement for calcific tendinopathy of the shoulder: A pilot case series. Journal of Shoulder and Elbow Surgery, 29(11), 2326–2332. https://doi.org/10.1016/j.jse.2020.08.012
- Wahezi, S. E., Patel, A., Yerra, S., Naeimi, T., Sayed, D., Oakes, D., Ortiz, N., Yee, M., Yih, C., Sitapara, K., Schulz, J., Kohan, L., Rosenburg, J., Schwechter, E., Chan, F., Gonzalez, D., & Baker, C. (2023). Percutaneous Ultrasound-Guided Tenotomy of the Iliotibial Band for Trochanteric Pain Syndrome: A Longitudinal Observational Study With One-Year Durability Results. Pain Physician, 26(4), 393–401.

FIGURES

Figure 1: Two Syringes Connected by Stopcock



https://www.researchgate.net/figure/a-Two-syringes-connected-with-a-three-way-stopcock-One-syringe-filled-with-90-normal_fig1_372039052

Figure 2: MRI Without Contrast

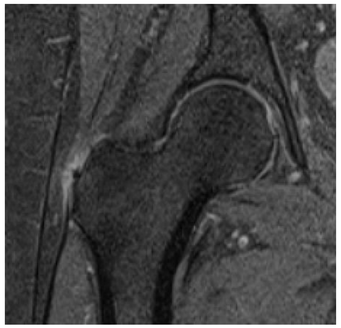


Figure 3: Fluoroscopy (Before)

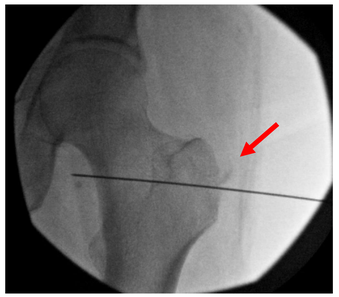
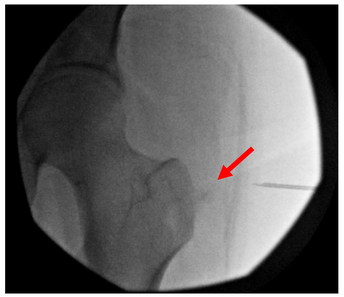


Figure 4: Fluoroscopy (After)



RESULTS / CONCLUSION

The improvised Tenex procedure resulted in aspirating two pieces of bony material measuring 2x2mm. The patient reported great satisfaction post-operatively and “90%” relief of her pain. This case highlights an effective alternative technique for treating calcific tendinitis when standard procedures like Tenex are unavailable.