

Differentiating between Greater Trochanteric Pain Syndrome and normal post-operative hip pain in patients after a Total Hip Arthroplasty

KEY CLINICAL ISSUE

As physical therapists, how can we differentiate between normal post-operative lateral hip pain following a total hip arthroplasty (THA) and GTPS to effectively treat our patients' pain?

BACKGROUND INFORMATION

Trochanteric bursitis or Greater Trochanteric Pain Syndrome (GTPS) results from repetitive movements at the hip joint. GTPS presents more frequently in women than men and there are several contributing factors. One contributing factor may be complications of a THA.

Patients who receive a THA may come into a physical therapy (PT) clinic following surgery complaining of lateral trochanteric pain; reported rates range from 4-17%. Depending on the approach, the THA can cause trauma to the gluteal tendons and/or IT band that can result in irritation of the bursae located at the greater trochanter. Research recently reported 5-year postoperative incidences of GTPS after THA of 5% with the direct lateral approach and 1.2% with the posterior approach¹. GTPS can appear as early as 2 months postoperatively or as long as 12 months. PTs need to determine if the lateral hip pain is residual pain from the operation, GTPS, or other potential pathologies.

CLINICAL RELEVANCE

Recognizing GTPS when treating a patient who received a THA is important. When recognized, GTPS may be treated with more than just oral pain medications the patient may take for postoperative pain. PT and/or corticosteroid injections may help to relieve GTPS quickly and allow the patient to be pain free sooner. THA is a common surgical procedure and GTPS is a potential complication. Making the correct diagnosis of GTPS will have an impact on the patients' outcomes of treatment.

CLINICAL BOTTOM LINE:

Pain:

- 1) Normal postoperative pain includes: pain over incision site and possible pain with starting activity (due to muscle stiffness). ●●●
- 2) GTPS pain can be distinguished from intraarticular or implant pathology by the lateral location of pain worsened with palpation, the lack of groin pain, and the absence of start-up pain.¹ ●●●

Treatment:

- 1) Conservative management of GTPS includes rest, ice massage and heat treatment, and activity modification. ●●●
- 2) Most of the research indicates the use of corticosteroid injections to treat GTPS following THA. This has been reported to be the most successful treatment when conservative management fails. ●●○

Surgical Intervention for GTPS:

Some cases of reported GTPS following THA resulted in another surgical procedure to remove the bursae when conservative treatment including corticosteroid injections and/or physical therapy failed. ●●○

Other surgical procedures exist that do not involve removing the bursae since research shows a lack of inflammation in the bursae. Distal ITB Z-plasty lengthens the ITB distally to reduce tension and therefore friction over the bursae. ●●○

Confidence Scale

●●● High

There are consistent results from good-quality studies. Further research is very unlikely to change the conclusions.

●●○ Moderate

Findings are supported, but further research could change the conclusions.

●○○ Low

There are very few studies, or existing studies are flawed.

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GAPS IN KNOWLEDGE

- ★ Hip pain following THA is common due to the nature of the procedure; however, the specific type of hip pain is poorly defined for GTPS in patients following THA.
- ★ Differential diagnosis of: gluteus medius/minimus tendinopathies, L2/L3 radiculopathy, lumbar arthritides with referred pain, and entrapment neuropathies need to be considered along with GTPS for patients who present with hip pain following THA.

FUTURE RESEARCH NEEDS

- ★ Studies are needed on the prevention of developing GTPS for patients who underwent THA.
- ★ Currently research only compares direct lateral and posterior approaches. Future studies should compare: posterolateral and anterior approaches, and the incidence of GTPS in each approach. This may provide physical therapists with a head start on preventative techniques for patients to avoid developing GTPS.
- ★ Additional studies with larger sample sizes and longer follow-up are warranted.

CONCLUSIONS

Overall, the evidence is limited as to the exact cause of GTPS following a THA. Possibilities include scar tissue formation and changes in hip joint mechanics. GTPS pain presentation is different from the expected pain patterns following THA; thus, recognition of the diagnosis of GTPS is pertinent to patient outcomes throughout physical therapy.

WHAT TO DISCUSS WITH YOUR PATIENTS

- Signs and symptoms of GTPS that are different from signs and symptoms of intraarticular or implant pathology.
- Possible causes of GTPS following GTPS and how to avoid repetitive movement that may irritate the bursae.
- Whether or not the symptoms of their GTPS can be addressed with corticosteroid injections, physical therapy, or require an additional surgical procedure.

RED FLAGS

- Signs and symptoms of hip dislocation
- Signs of an active infection within the surgical site following THA

RESOURCES FOR PATIENTS

- http://my.clevelandclinic.org/disorders/bursitis/hip_trochanteric_bursitis.aspx
- http://www.brighamandwomens.org/Patients_Visitors/pcs/rehabilitationservices/Physical%20Therapy%20Standards%20of%20Care%20and%20Protocols/Hip%20-%20Greater%20Trochanteric%20Pain%20Syndrome.pdf
- <http://orthoinfo.aaos.org/topic.cfm?topic=a00356>

References

- 1) Farmer K.W., Jones L.C., Brownson K.E., Khanuja H.S., Hungerford M.W. Trochanteric bursitis after total hip arthroplasty. Incidence and evaluation of response to treatment. *Journal of Arthroplasty*. 2010;25(2):208-212.
- 2) Dennison J, Beverland DE. An audit of trochanteric bursitis in total hip arthroplasty and recommendations for treatment. *Journal of Orthopedic Nursing*. 2002;6:5-8.
- 3) Iorio R, Healy W, Warren PD, Appleby D. Lateral trochanteric pain following primary total hip arthroplasty. *The Journal of Arthroplasty*. 2006;21(2):233-236.
- 4) Sayed-Noor AS, Pedersen E, Wretenberg P, Sjoden GO. Distal lengthening of ilio-tibial band by z-plasty for treating refractory greater trochanteric pain after total hip arthroplasty. *Arch Orthop Trauma Surg*. 2009;129(5):597-602.

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