

“C” sign





Features of GTPS

- Chronic intermittent pain felt around the bony prominence in the lateral aspect of the hip.
 - Caused by physical trauma in muscles, tendons, fascia, or bursae.
 - About three times more common in women than in men.
 - Up to 24% of women and about 9% of men are troubled with GTPS
 - Frequently seen together with other conditions such as low back pain, osteoarthritis of the knee
- The diagnosis of greater trochanteric pain syndrome is made on clinical grounds.
- Usually self-limiting. 66% chance of recovering within 1 year.
- Poorer outcome
 - higher initial pain intensity,
 - longer duration of pain,
 - greater movement restriction esp if lower limb arthritis present,
 - higher disability
 - older age.



- The location, radiation, nature, and onset of pain, and what aggravates or relieves it should be determined.
- Point tenderness and evidence of pain when muscles and tendons attached to the greater trochanter are put under tension should be assessed on examination.
- Core diagnostic features include lateral hip pain and point tenderness adjacent to the greater trochanter.
- Greater trochanteric pain syndrome most commonly occurs in women in their fifties, sixties, or seventies.
- In younger people it is one of the more common causes of hip pain, especially in runners.



Aetiology

- Of the four clinical signs of inflammation (pain, swelling, warmth, and redness), only pain is regularly present in people with greater trochanteric pain syndrome [[Williams and Cohen, 2009](#)].
- Radiological imaging studies rarely find evidence of bursitis (such as accumulation of fluid within a bursa) in people with greater trochanteric pain syndrome [[Alvarez-Nemegyei and Canoso, 2004](#); [Blankenbaker et al, 2008](#)]).
- Bursal distension is usually secondary to the tendinopathy
- Tears noted in 20% of patients with OA hip
- Tendinopathy noted in 20-35% of patients with low back pain in association with weakness of the deep gluteal muscles – reduced neural tone.



Aetiology

- Primarily a compartment syndrome
- Compression of Gluteus Medius by Tight ITB and lateral fascia of the thigh.
- Resting (neutral) pressure 4N - this escalates to 106N in adduction and load (at 40 degrees)
- Compression may be due to tissue tightness or “functional adduction”
- Recruitment of superficial over the deep muscular structures
- Degenerative change in Gluteus Medius Tendon



Management

- Ice pack applied for 10–20 minutes several times a day
- Weight loss if appropriate
- Short course NSAID
- Steroid injection (with or without ultrasound guidance – response rates are similar.)
- Physiotherapy to follow approach described by Dr Alison Grimaldi <http://dralisongrimaldi.com/>
 - develop adequate recruitment of the deep abductors, gluteus minimus and the deep fibres of gluteus medius;
 - Ensure compressive loading is minimised by avoidance of repetitive (steps, hills, striding etc.) or loaded hip adduction (especially postures & stretches).

Anatomy





Testing

FABER testing

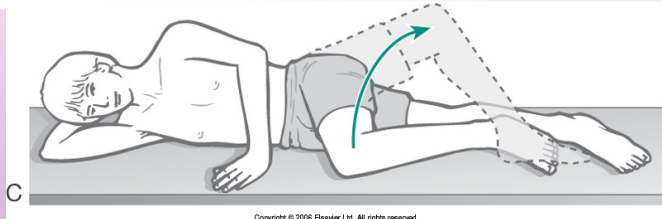
Provocation testing
– Ober's test



Crossed concept



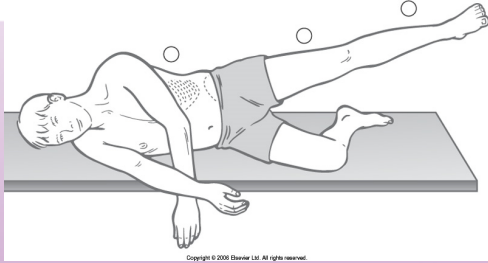
Holding tests; Gluteus Medius



C

Copyright © 2005 Elsevier Ltd. All rights reserved.

Assessing Hip Abduction



Incorrect activation sequence involving the QL





Radiographic examination



Ultrasound imaging





MRI – Gluteal Tendinopathy

Exercise therapy







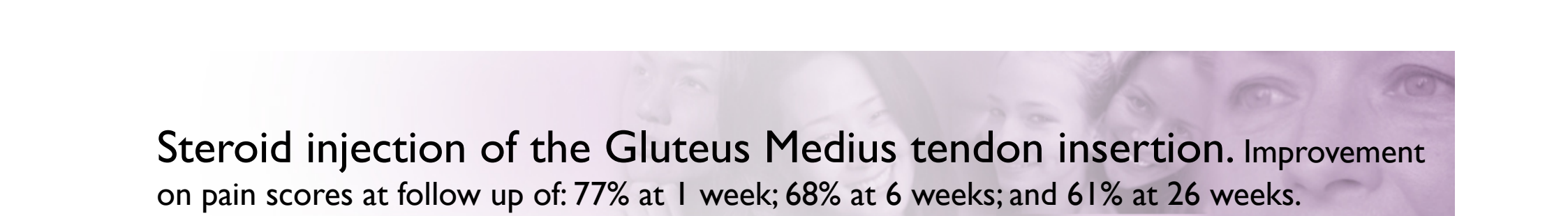
Dry “trigger point” needling



Acupuncture



There is insufficient evidence that acupuncture (dry-needling) is effective compared to injection therapy in acute low back pain. (Level I)



Steroid injection of the Gluteus Medius tendon insertion. Improvement on pain scores at follow up of: 77% at 1 week; 68% at 6 weeks; and 61% at 26 weeks.

A retrospective cohort study documented the outcomes of people newly diagnosed with greater trochanteric pain syndrome [[Lievense et al, 2005](#)]. The study, conducted in Dutch general practice, found that the chance of recovery after 5 years was about 3-fold higher in people who had been injected with a corticosteroid compared with those who had not: odds ratio 0.37 (95% CI 0.13 to 1.00).



Why waste money?

Comparison of fluoroscopically guided and blind corticosteroid injections for greater trochanteric pain syndrome: multicentre randomised controlled trial

Steven P Cohen et al, BMJ 2009;338:b1088

Conclusion

Although using fluoroscopic guidance *dramatically* increases treatment costs for greater trochanteric pain syndrome, it does *not* necessarily improve outcome

Prolotherapy



Physical therapies

“Out, out ye
wicked pin!!”.



Gluteus Medius positional release





Gluteal dysfunction PRT





Exercises NOT recommended





Problematic postures





Problematic body habitus




Self Help

- Avoid sitting with your legs crossed or with your feet wide apart and your knees together.
- Avoid sitting with your knees wide apart, your thighs should be parallel.
- Avoid low or saggy chairs. A wedge cushion may make sitting more comfortable.
- When lying in bed try sleeping on your back with a pillow under your knees or on your side with a pillow or two between your knees to keep your thighs parallel.
- When standing, don't stand with your hip pushed out to one side.
- If you run, avoid running around a track always in the same direction and avoid running on a beach or road where there is a camber (ie a sideways slope).
- Avoid stretches that bring your knee across your body as these cause more compression on the injured tendons and bursa.
- Always stand and sit with good alignment. If you work at a desk, get up and move around at least once every half hour.



Meralgia Paraesthetica





“Piriformis” Syndrome





Thoracolumbar Junction Syndrome (Maigne)





Degenerative Lumbar Spine disease





<http://dralisongrimaldi.com/>

Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society - Ann Intern Med. 2007; 147:478-491.

Acknowledgements to 

<http://cks.nice.org.uk/greater-trochanteric-pain-syndrome-trochanteric-bursitis#!supportingevidence>

Thanks to Sam Robertson previously from the Australian Water Polo team for the photographs.



The End