Lateral Hip Pain

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Gluteal Tendinopathy

(This is a summary of Grimaldi & Fearon, 2015).
Gluteal tendinopathy (GT) results in pain over the greater trochanter that may extend down the lateral thigh. It is most commonly reported in people over the age of 40, with women being up to 4 times more likely to experience this condition. Common complaints are difficulty lying on the affected side at night, pain with standing, walking, climbing up and down stairs, and sitting.

Pathoanatomy: GT is often likened to shoulder rotator cuff disease with its contiguous bone, tendon, and bursal anatomy and associated pathologies. Thickening or thinning of, and tears in the gluteus medius and minimus tendons have been observed, and changes in bursal structure have been documented on ultrasound and magnetic resonance (MRI). While this condition has traditionally been referred to as trochanteric bursitis, gluteus medius and/or minimus tendinopathy is now accepted as the most prevalent pathology in those symptomatic of pain and tenderness over the greater trochanter. In an ultrasound study of 75 individuals, only 8 had bursal enlargement, with the predominant pathology being gluteus medius tendinopathy, and in more severe cases tendon tears, occurring most commonly in the deep and anterior portions of the tendon. In another large imaging study of 877 individuals, only 20% exhibited bursal thickening on ultrasound. When present, bursal pathology most commonly occurs in the trochanteric or sub-gluteus maximus bursa, but has also been occasionally identified in the sub-gluteus medius or minimus bursae.

Risk Factors: The main factors are being female and over the age of 40 years. Associated low back pain is also common, with increased duration of low back pain associated with increased incidence of lateral hip pain. The relationship between these 2 conditions may relate to possible gluteal dysfunction associated with back or sacroiliac joint pain, or increased stress through the back as a result of poor lateral stability of the pelvis. Treating tendon related pain has been shown to improve the function of those with low back pain. High BMI is another commonly reported risk factor.

The morphology of the female pelvis has been hypothesised as a possible risk factor for the development of gluteal tendinopathy, with coxa vara and greater trochanteric offset both potentially predisposing to greater compressive loading of the gluteal tendons In an all-female prospective study, no bony differences were found in a number of radiographic indices of pelvic width and trochanteric offset between those with gluteal tendon related pain, and asymptomatic age and sex matched controls, and participants with osteoarthritis only. These findings conflict with a large but less controlled retrospective study by Viradia et al who reported that males and females with GT and had a greater trochanteric offset. An association with leg length discrepancy has not been demonstrated.

Imaging: In general the diagnosis of GT is a clinical one, as signs of local soft tissue pathology at the greater trochanter on ultrasound & MRI are common even in those without lateral hip pain. Imaging should

be reserved for cases where the diagnosis is unclear, other lesions need to be excluded, it is a long-standing condition, the pain is unremitting, or is not responding to appropriate management.

Differential diagnosis: Possibilities include bony metastases, fractured NOF, hip joint pathology (OA, FAI, avascular necrosis), lumbar spine referral, inflammatory arthropathies, ischiofemoral impingement, quadratus femoris tear, or piriformis / related sciatic nerve entrapment syndromes.

Pathomechanics: Similar to those proposed for other insertional tendinopathies – increased overload, or decreased (stress/ load shielding), tensile load applied longitudinally along tendon, excess transverse load applied across the tendon (compression mostly at or near the bony insertion) & most often a combination. One study found the gluteus medius in females had a smaller insertion on the femur across which to dissipate tensile load and a shorter moment arm, resulting in the possibility of higher tensile loads.

Physiotherapy Management:

Load management is the cornerstone of treatment of all insertional tendinopathies, with the aim to minimise positions or activities that involve sustained or repetitive compression of the tendon, particularly when compressive forces are applied in combination with high tensile loads. For the greater trochanter this means avoiding hip adducted positions such as standing and 'hanging on one hip', standing with legs crossed, sitting with knees crossed or together, and excessive stair climbing. At night, lying on or away from the affected side with the hip adducted can lead to excessive compression.

Stretching this region can increase compression. Massage and dry needling may be used in place of stretches, although strong ITB releases may be provocative as the ITB is often tender. Femero-pelvic control may require optimisation particularly in the frontal plane.

Exercise: Sustained isometric muscle contractions are now commonly employed clinically for management of tendon pain due to the known analgesic effects. Low intensity effort focused on trochanter abductor recruitment and therefore loading these tendons in a non-pain provocative manner, is recommended. The intensity of exercise is slowly increased.

For athletes (in particular), focused attention on reducing hip adduction during walking & running, with real-time kinematic feedback, was found to significantly reduce hip adduction and contralateral pelvic drop during running, suggesting movement retraining needs to be specific to the task.

Movement control may also involve control of hip adduction during everyday body weight tasks such as moving between sitting and standing, performing a half-squat, standing on one leg and ascending stairs. As pain eases, higher loads at faster speeds and during more complex actions such as running, landing and change of direction can be retrained.

It is also important to manage modifiable risk factors and co-morbidities, and to improve function of the thoraco-lumbar spine, hip, knee, and ankle.

Reference: Grimaldi, A & Fearon, A (2015) Gluteal tendinopathy: pathomechanics and implications for assessment & Mx. JOSPT Sept, Ahead of print.

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