PES ANSERINUS BURSITIS
MEDIAL KNEE PAIN

FOOT AND LEG PAIN CENTRE
Est. 1993

Pes anserinus bursitis is a poorly understood condition mimicking medial meniscal tear and knee osteoarthritis. It has been implicated in unwarranted arthroscopic investigation. [1] It is recognisable clinically and responds well to conservative treatment when proximal and distal functional deficiencies are addressed. If ignored, the pathomechanical processes may lead to osteoarthritic change. [2, 3]

The pes anserine, or “goose’s foot” (Latin), relates to the anatomical insertion of the conjoined sartorius, gracilis, and semitendinosus muscles at the superior anteromedial tibia. Often identifiable as a circular swelling located three-figure breadths distal to the anteromedial knee joint line. Symptoms include generalised medial knee aching and localised bursa tenderness when palpated. Clinical diagnosis may be reinforced with hypersensitivity of the associated muscles.

Why does it happen?

As knee flexors and internal hip rotators [4, 5] the three tendons sandwich the pes anserine bursa between the proximal medial tibia and their insertion during excess femoral adduction and internal hip rotation. As a result, symptoms may be aggravated with landing tasks such as descending stairs or tennis.

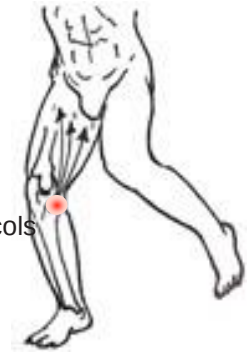
The increased incidence reported among middle-aged, overweight women is likely related to increased pelvic width [6]. Increased pelvic width places greater demand on muscles resistant to femoral adduction during weight acceptance and increases the potential for more significant dynamic valgus knee loads.

Treatments

Pes anserinus bursitis is typically a chronic presentation. Therefore, a holistic approach is essential for long term symptom resolution. Excessive valgus knee motions are influenced by structures proximal and distal to the knee.

Strengthening programs should target hip and foot stability. Programs should be specific to femoral adduction and external hip rotation, targeting gluteus medius and piriformis. Core strengthening should not be ignored as anterior pelvic tilt couples with foot pronation [7] and subsequent internal hip/ knee rotation. Midfoot and rearfoot anti pronation strengthening protocols of foot intrinsic and inverter muscles should be incorporated.

Manual therapy releasing medial hamstrings and adductors may combine techniques including deep tissue massage, dry needling trigger point therapy, and tool-assisted myofascial release. PNF (Proprioceptive nerve facilitation) stretching to lengthen medial hamstrings may be helpful.



i Sartorius, Gracilis and Semitendinosus muscles; 1,2 and 3 during right leg landing

In recalcitrant cases, foot orthosis can have a profound effect. Correctly prescribed foot orthoses may minimise an individual’s pathological foot and hip motions with improved muscle activation [8] of; gluteus medius [9], vastus medialis [10, 11], biceps femoris [10, 11], tibialis anterior [10-13], posterior tibialis [11, 13] and peroneus longus [12, 13].

References

1. Rennie, W.J. et al., Skeletal Radiology, 2005.
2. Nicholson, S., K. et al., Journal of pediatric nursing.
3. Bout-Tabaku, S. et al., Current sports medicine reports, 2010.
4. Miller, R.r. et al., Campbell’s operative orthopaedics, 1998.
5. Brukner, P. et al., Clinical sports medicine. 2017.
6. Helfenstein Jr et al., Revista brasileira de reumatologia, 2010.
7. Khamis, S. et al., Gait and Posture, 2007.
8. Barwick, A., J. et al., The foot, 2012.
9. Bird, A.R., et al., Gait and Posture, 2003.
10. Mundermann, A., et al., Gait & Posture, 2006.
11. Nawoczenski, D.A., et al., Physical therapy, 1998. 78(4): p. 404-416.
12. Tomaro, J. et al., Journal of Orthopaedic and Sports Physical Therapy, 1993.
13. Murley, G.S., et al., Clinical Biomechanics, 2010.

02 9651 3210 info@footandlegpain.com FootandLegPainCentre www.footandlegpain.com