Standard of Care: Pes Anserine Bursitis

ICD 9 Codes: 726.61

Case Type / Diagnosis:

The pes anserine bursa lies behind the medial hamstring, which is composed of the tendons of the sartorius, gracilis and semitendinosus (SGT) muscles. Because these 3 tendons splay out on the anterior aspect of the tibia and give the appearance of the foot of a goose, pes anserine bursitis is also known as goosefoot bursitis.[1] These muscles provide for medial stabilization of the knee by acting as a restraint to excessive valgus opening. They also provide a counter-rotary torque function to the knee joint. The pes anserine has an eccentric role during the screw-home mechanism that dampens the effect of excessively forceful lateral rotation that may accompany terminal knee extension.[2]
Pes anserine bursitis presents as pain, tenderness and swelling over the anteromedial aspect of the knee, 4 to 5 cm below the joint line.[3] Pain increases with knee flexion, exercise and/or stair climbing. Inflammation of this bursa is common in overweight, middle-aged women, and may be associated with osteoarthritis of the knee. It also occurs in athletes engaged in activities such as running, basketball, and racquet sports.[3]

Other risk factors include: [1]

- Incorrect training techniques, or changes in terrain and/or distanced run
- Lack of flexibility in hamstring muscles
- Lack of knee extension
- Patellar malalignment

Indications for Treatment:

- Knee Pain
- Knee edema
- Decreased active and /or passive ROM of lower extremities
- Biomechanical dysfunction lower extremities
- Muscle imbalances
- Impaired muscle performance (focal weakness or general conditioning)
- Impaired function

Contraindications:

- Patients with active signs/symptoms of infection (fever, chills, prolonged and obvious redness or swelling at hip joint).

Precautions for Treatment:

- OA-presence of osteophytes must be taken into account when establishing goals and treatment plan
- RA-patient may be at greater risk of infection; cyst formation may appear on radiograph, and the cyst may communicate with bursa
- DM-increased risk of infection
- Refer to modality practice standards for other contraindications and precautions

Examination:

Medical History:

- Previous repetitive strain/overuse injuries involving lower extremities
- Trauma to lower extremities
- Systemic disease process (eg. RA, DM, connective tissue disorders)
- Osteoarthritis

History of Present Illness:

- Location of pain and pain level
- Inciting events or precipitating activities
- Signs/symptoms of infection
- Symptom modifiers (medications, rest, ice)
- Functional limitations

Social History:

- Nature of work-especially noting if patient is at risk due to faulty lower extremity biomechanics or postural strain (prolonged standing)
- Recreational activities-type, frequency/duration, terrain, footwear
- Home environment-stairs, ADL's
- Support system-motivation, ability to follow up with recommendations and physical therapy plan of care

Medications:

- NSAIDS, injection of corticosteroid into bursa

Test Results:

- Review results of any recent lower extremity imaging (radiographs, CT scan, MRI). Prevalence of 2.5% on MRI in symptomatic adults. [4]

Examination:
This section is intended to capture the most commonly used assessment tools for this case type/diagnosis. It is not intended to be either inclusive or exclusive of assessment tools.

Pain: typical presentation is pain localized to the anteromedial aspect of the knee, 4 to 5 cm below the joint line, often exacerbated by knee flexion. [3]

Palpation: tenderness over the affected bursa, with swelling, erythema and warmth

ROM: active and passive ROM of hip, knee and ankle joints, joint play, patellar mobility and tracking

Strength: lower extremity manual muscle testing (if condition is chronic, the affected limb may show disuse atrophy and weakness)

Sensation: light touch

Posture/alignment: hip posture: IR/ER of hip; knee posture: varus/valgus, hyperextension, flexion contracture; foot posture: pes planus/cavus, hallux valgus; note if any weight-bearing avoidance or intolerance on affected extremity

Special Tests: thomas test, hamstring flexibility, leg length measurement, McMurray's, ligamentous stability tests, Faber and Scour tests

Functional Outcomes: Lower Extremity Scale (LEFS)

Differential Diagnosis[3,4]**:**

- Stress fracture
- Degenerative joint disease
- Meniscal injury
- Collateral ligament injury
- Atypical medial meniscal cysts
- Juxtarticular bone cysts
- Semimembranosus bursitis
- Tibial collateral ligament bursitis
- Saphenous nerve entrapment [5]

Gait: Analysis gait during stance and swing phases of cycle

- Stride length
- Dynamic standing balance
- Stair climbing
- Assistive devices
- Footwear

Assessment:

Problem List:

likely to include but not limited to:

- Pain
- Decreased ROM
- Decreased muscle strength
- Gait deviations
- Decreased function
- Postural dysfunction/impaired lower extremity biomechanics
- Knowledge deficit: condition, self-management, home program, prevention

Prognosis: Good to excellent with compliance to prescribed medical and rehabilitation management

Goals:

1) Decreased pain
2) Increased ROM
3) Increased muscle strength
4) Improved gait quality and efficiency
5) Maximize return to pre-injury activities
6) Improved lower extremity biomechanics
7) Independent self-management of symptoms; independence with home exercise program; independence with prevention of re-injury/re-occurrence

Treatment Planning / Interventions

Established Pathway	___ Yes, see attached.	_X_ No
Established Protocol	___ Yes, see attached.	_X_ No

Interventions most commonly used for this case type/diagnosis.
This section is intended to capture the most commonly used interventions for this case type/diagnosis. It is not intended to be either inclusive or exclusive of appropriate interventions.

1. NSAIDs
2. Corticosteriod injection
3. Therapeutic exercises to increase lower extremity muscle strength and flexibility, to decrease friction on the bursa and improve joint mechanics
4. Modalities such as ice, ultrasound and high-voltage electrical stimulation to decrease inflammation and pain
5. Gait training for efficient and effective pattern (consider DME as appropriate)
6. Orthotic consultation
7. Instruction in home exercise program

Frequency & Duration: 1-2x/week for 4-6 weeks

Patient / family education:

1. Home exercise program
2. Sports specific training
3. Pain and edema management

Recommendations and referrals to other providers:

1. Orthopedist
2. Orthotist
3. Rheumatologist
4. Physiatrist
5. PCP

Re-evaluation

Standard Time Frame- every 30 days and/or prior to visit with physician

Other Possible Triggers for re-evaluation are:

1. Significant change in the signs and symptoms, fall or acute trauma
2. Failure to progress per established short-term goals
3. Complications or worsening of associated conditions

Discharge Planning

Commonly expected outcomes at discharge:

1. Resolution of pain
2. Increased AROM and strength
3. Increased lower extremity muscle flexibility
4. Return to pre-injury function and sports activities

Patient's discharge instructions:

1. Progressed home exercise program
2. Sports specific training
3. Injury prevention

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