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Ischial Bursitis

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Introduction

Ischial bursitis, also known as ischiogluteal bursitis or "weaver's bottom," is a condition where the bursa that lies between the ischial tuberosity and the gluteus maximus muscle becomes inflamed. This bursa is present physiologically in order to reduce the amount of frictional force generated between the gluteal muscle and the ischial tuberosity that otherwise might become damaged or irritated by this contact. This inflammation of the bursa is most commonly caused by prolonged pressure on the ischium, as occurs in sitting for extended periods of time or from the repeated movement of the Gluteus Maximus muscle in such activities as bicycling. These activities cause an inflammatory reaction that results in swelling and tenderness over the lower buttock and upper posterior thigh. Many other differential diagnoses have common presentations such as sciatica and tendonitis of hamstring muscles.

Etiology

The origin of ischial bursitis can be seen in the original name of the condition, "weaver's bottom." This condition was first seen in workers that sat for long periods of time on hard surfaces. Another colloquial name for this condition is "tailor's bottom." Ischial bursitis may occur in various conditions, much like many other bursal inflammations. Autoimmune diseases such as rheumatoid arthritis, systemic lupus erythematosus, and scleroderma among others have been shown to cause bursitis. This inflammation may be caused by uremia seen in conditions such as gout and chronic kidney disease. Ischial bursa is a deep bursa, meaning it is less susceptible to the contiguous spread of infectious organisms. Although rare, infectious etiologies of ischial bursitis include septicemia and septic arthritis. Direct inoculation of the bursa by bacteria would be very rare due to its location in the body.

Epidemiology

Ischial bursitis is a relatively uncommon clinical condition. Although the diagnosis is often unrecognized, it may be seen in patients of all ages. Bursitis as a whole accounts for less than one percent of total primary care visits. This condition is most common in persons with sedentary careers with constant irritation of the ischial bursa due to prolonged periods of time sitting on hard surfaces which gives this condition its colloquial name "weaver's bottom." Weaving as a profession has been around since approximately 6000 BCE, and people have been suffering from this condition for as many years.

Pathophysiology

Bursa comes in a variety of forms: adventitious, subcutaneous, submuscular, and synovial. Ischial bursa is synovial, meaning it is composed of a fatty connective tissue capsule filled with synovial fluid. When infection or irritation occurs, cells of the synovia proliferate, resulting in increased production of synovial fluid. Inflammatory mediators such as cyclooxygenase, cytokines, and metalloproteases mediate this process. The result is a thick fluid-filled cavity with high amounts of fibrin, resulting in the formation of granulation tissue. Over time, this tissue will gradually interfere with the normal motion and activity of the surrounding tissues whether they are muscle, bone, or tendon.

History and Physical

Patients will present with gluteal pain and/or upper posterior thigh pain following prolonged sitting or exercise. The patient will most commonly complain of a low grade, pinpoint, aching pain that is worsened by sitting down or stretching the gluteus maximus muscle. Patients may complain of problems sleeping because of the pain.

Patients also may have reduced mobility and swelling associated with this condition. On physical exam, tenderness over the buttock may be noted. Patients may have pain with passive flexion at the hip joint. The patient also may have an inability to extend the hip. The patient may feel pain with stretching. There may be overlying erythema, although less this is commonly associated with ischial bursitis. If erythema is a major part of the presentation, this may point to other etiologies such as cellulitis or septic joint.

Evaluation

On evaluation, most cases can be diagnosed and treated clinically without the need for further testing. Most cases of ischial bursitis are self-limiting and will resolve with time. Blood work should only be ordered if an infection or autoimmune condition is suspected. In the case of bursitis, lab values will most likely be within normal range. If other conditions are suspected, such as septic joint, a joint aspiration is indicated, and antibiotic treatment should be initiated. MRI is sensitive for bursitis but is expensive and unnecessary most of the time when diagnosing and treating ischial bursitis. This test is only indicated if there are other possible differentials such as tumors. Ultrasound, similarly, is unnecessary unless aspiration is indicated, then it is useful to guide the procedure ensuring aspiration is performed in the appropriate place.

Treatment / Management

Initially, the common nature of this condition should indicate minor, low-cost interventions such as NSAIDs and rest. If the condition persists, therapeutic mixed steroid and anesthetic injections may be considered. Only if the condition continues to be resistant or other etiologies are indicated by the workup for this patient presentation should more invasive and/or expensive test be used. Treatment of ischial bursitis is relatively symptom driven. Primary treatment is lifestyle modification by stopping the activity that caused bursitis in the first place, whether it was a physical activity or sitting for long periods of time on hard surfaces. Nonsteroidal anti-inflammatory drugs such as naproxen work well to decrease inflammation, and a regiment of daily intake for two weeks may be followed to prevent further inflammation. Naproxen also may help reduce pain associated with this condition. Cold compresses may help in the short term to minimize pain from swelling. If the pain is unbearable or unrelenting, an intrabursal corticosteroid injection with lidocaine may be administered. The lidocaine will help by providing immediate relief from the pain by blocking the sodium channels in the surrounding tissue, inhibiting the transmission of the pain signal. The corticosteroid will provide prolonged anti-inflammatory protection by inhibiting the inflammatory mediators. Patients will most likely be symptom-free within days to weeks without treatment. The rate of recovery is highly depending on the severity of patient symptoms and modality of treatment chosen. Recurrence is likely without lifestyle change.

Differential Diagnosis

Many conditions present similarly and will need to be ruled out to determine the final diagnosis of ischial bursitis. X-ray imaging of the hip and lumbar spine may help to rule out referred pain from these regions from degenerative joint disease, arthritis, or other conditions. A physical exam will help to differentiate ischial bursitis from muscle-related causes for the pain, whether it is a tear of the muscle body or other conditions.

Questions

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