

Anterior Iliopsoas Impingement and Tendinitis After Total Hip Arthroplasty

Anterior iliopsoas impingement and tendinitis is a poorly understood

It is likely under recognized cause of groin pain and functional disability after THR. It may be the cause of painful THA in up to 4.3% of patients

The symptoms are frequently subtle.

The diagnosis may be confirmed by one or more imaging studies, including a cross-table lateral radiograph, computed tomography, magnetic resonance imaging, and ultrasonography, in combination with a confirmatory diagnostic injection.

Nonsurgical management may not resolve the problem.

Surgical treatment, consisting of release or resection of the iliopsoas tendon, alone or in combination with acetabular revision for an anterior overhanging component, usually provides permanent pain relief.

Persistent pain after primary total hip arthroplasty (THA) is uncommon. The possible causes are various, including infection, component loosening, and periprosthetic osteolysis resulting from the presence of wear debris. It is important to consider anterior impingement.

Pain resulting from anterior iliopsoas impingement and tendinitis may be related to a prominent or malpositioned acetabular component,

Although the iliopsoas tendon is considered to be extra-articular, if the anterior capsule has been divided or resected during a THA, the tendon is then intra-articular. This muscle serves as the major flexor of the hip and has a lesser role in hip external rotation.

Affected patients typically report persistent groin pain that is exacerbated by stair climbing, getting into and out of bed, rising from a seated position, and entering and exiting an automobile.

Rarely, patients describe a snapping or "clunking" sensation. The onset of these symptoms has been described from 1 to 96 months after THA

With significant bursitis, a palpable mass may be detected.

The pain may be reproduced or exacerbated by resisted seated hip flexion or straight leg raise.

Pain may also occur with passive hyperextension as well as with active external rotation and extension of the hip.

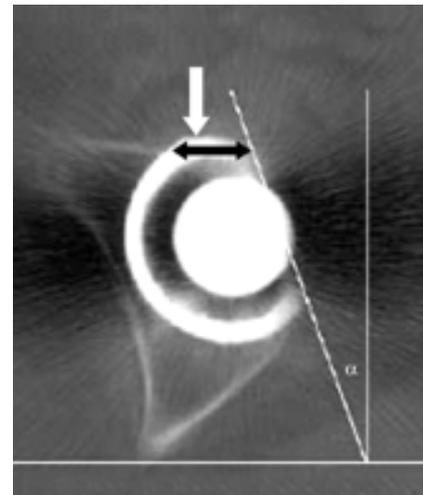
Diagnosis

1. Persistent groin pain after THA: infection, aseptic loosening, and occult periprosthetic fracture.
2. If anterior iliopsoas impingement and tendinitis are suspected, further diagnostic evaluation is recommended. This should include one or more imaging studies: plain radiography, computed tomography (CT), MRI, or ultrasonography. A diagnostic injection test is nearly always warranted.

Plain radiographs should include anteroposterior views of the pelvis and hip, as well as a cross-table (ie, "shoot-through") lateral view of the hip. The acetabular component should be evaluated for loosening, pelvic osteolysis, prominent intrapelvic screws, and retained cement as sources of mechanical irritation.



CT has been used to measure acetabular component version and to detect how much of the acetabular component is uncovered anteriorly, as well as to detect iliopsoas tendon or bursal hypertrophy. Acetabular component prominence >12 mm was seen on CT in eight cases with anterior iliopsoas impingement syndrome.



MRI is infrequently used to view a prosthetic hip joint, and an MRI scan may be difficult to evaluate because of depreciation of signal quality and periprosthetic soft tissues. However, when the authors of one study implemented new software algorithms for MRI evaluation of pelvic osteolysis and the soft tissues adjacent to prosthetic hip joints, MRI scans demonstrated fluid collection and increased signal intensity in the periprosthetic soft tissues.

Ultrasonography has been described in several studies as helpful in the diagnosis and treatment of anterior iliopsoas impingement and tendinitis. In the hands of an experienced radiologist, ultrasonography has been reported to show a greater degree of soft-tissue contrast than have either CT scans or plain radiographs.

The most frequently reported technique for the evaluation of anterior iliopsoas impingement and tendinitis is an image-guided diagnostic injection of contrast material into the iliopsoas tendon sheath.

Nonsurgical

Rest, analgesics, nonsteroidal anti-inflammatory drugs, and physical therapy.

Although the injection of a local anaesthetic and corticosteroid into the iliopsoas tendon sheath is helpful for diagnosis and temporary pain relief

Surgical

Most patients require surgical treatment to achieve successful resolution of symptoms caused by anterior iliopsoas impingement and tendinitis

Release or resection of the iliopsoas tendon is the simplest procedure

A posterior approach with a 4-cm incision from the tip of the greater trochanter to the vastus tubercle.

The femur is internally rotated. Electrocautery is used to release the quadratus femoris muscle until the lesser trochanter can be palpated.

With the leg in maximum internal rotation, the psoas tendon is palpated and released from the lesser trochanter with electrocautery, using a bent tip.

A curved 1-cm osteotome is then used to release the anterior and medial capsule from the femoral neck. Intravenous antibiotics are administered for 24 hours postoperatively, and the patient is allowed full weight bearing with one support.

Another report described the use of an anterolateral or direct lateral approach.

Acetabular revision is usually recommended when the preoperative plain radiographs or CT scan demonstrate that the anterior edge of the acetabular component protrudes in front of the anterior bony acetabular rim