Iliopsoas Tendinitis after Hip Arthroscopy

Farshad Adib
William Hennrikus, Adam Nasreddine
Mininder Kocher, Yi-Meng Yen
Farshad Adib, William Hennrikus, Adam Nasreddine: I have no financial relationships to disclose.

Yi-Meng Yen: I have financial relationships with the following companies: Salary: Agios Pharmaceuticals. Consulting: Smith & Nephew; Orthopediatrics; Arthrex, Inc

Mininder S Kocher: I have financial relationships with the following companies: Royalty: Biomet, Saunders/Mosby-Elsevier. Consulting: Best Doctors, Biomet, Gerson Lehrman Group, OrthoPediatics, Smith & Nephew.
The iliopsoas muscle, composed of the psoas major and iliacus muscles

Origin: Psoas: T12 to L5 the vertebral bodies, transverse processes, and intervertebral disks
Iliacus: superior two thirds of the iliac fossa, ala of the sacrum, and anterior sacroiliac ligaments

Iliopsoas tendinitis (IPT): inflammation of the tendon

With hip flexion IP tendon shifts laterally and with extension it shifts medially in relation to center of femoral head.
No data on prevalence of IPT after hip arthroscopy exists. Hip arthroscopy involves creating portals that are intra-muscular, and therefore may affect the incidence of IPT.

The standard 3-portal technique involves using an anterolateral portal located at the anterior border of the greater trochanter, a posterolateral portal at the posterior border of the greater trochanter and the anterior portal, located directly distal to the anterior superior iliac spine.
The two portal-technique uses the same anterolateral portal, but uses a mid-anterior portal located more distal and more lateral to the anterior portal.

The presumed advantage of the mid-anterior portal moves the location of the hip cannulas farther from the iliopsoas.
The purpose of this study is to identify the incidence rate of IPS among adolescents and young adults following hip arthroscopy and to evaluate the potential risk factors.

Methods: Patients between 10 to 57 years old who underwent hip arthroscopy from 2005 to 2012 with minimum follow up of 3 months were included.

Exclusion criteria: Previous surgery, Iliopsoas tendon release at the time of surgery
All the surgeries were done by two experienced hip arthroscopists with more than 150 hip arthroscopies per year.

Surgeon #1 uses the standard 3 portal technique with the standard anterior portal, while surgeon #2 uses the 2 portal technique with insertion of the mid-anterior portal.

The incidence rate of IPT after hip arthroscopy for each surgeon was calculated by review of electronic medical records.

Stinchfield test, Resisted SLR, Ludloff test, Psoas stretch test
Results:

- Upon IRB approval, 306 patients (104 male and 202 female) were included in the study.
- Mean age at the time of surgery was 21.9 years.
- One hundred fifty-two patients underwent hip arthroscopy by Surgeon #1; 154 patients underwent hip arthroscopy by Surgeon #2.
- Seventy-eight patients (%25) had IPS after the hip arthroscopy. IPT rate was %18 and %29 in males and females, respectively. (p-value=0.039).
All the patients were treated by physical therapy and 44 patients (%14) needed steroid injection for the treatment of IPS.

Thirty-four females (%17) and ten males (%10) needed the steroid injection. The mean time of injection was 25.4 weeks after the surgery.

IPT rate was %25 and %26 for surgeon1 and 2 respectively (p-value=0.90).

%27 of patients with pre-operative IPT symptoms and %25 patients without pre-operative symptoms had IPT after the surgery.

Nine patients (%2.9) underwent surgery due to IPT.
Discussion

- Iliopsoas tendinitis is a common complication after hip arthroscopy
- Gluteus medius muscle weakness is accompanied by iliopsoas muscle tendinitis and believe that these clinical entities may be functionally linked.
- Different anterior portal placement (standard anterior vs mid-anterior) does not seem to affect the incidence rate of IPS
- The original diagnosis, BMI, type of sports, race and side of surgery does not affect the incidence rate of IPS
Conclusion

- Iliopsoas tendinitis is an under-diagnosed, under-reported complication after hip arthroscopy that can restrict the rehabilitation course.

- IPT was more common in female patients (%29 vs %18) and need for steroid injection was also more (%17% vs %10).

- Different anterior portal placement and having pre-operative IPS symptoms did not seem to affect the incidence rate of IPT.
Conclusion

- This incidence of IPT after hip arthroscopy (%25) is quite considerable. Majority of IPS patients responds to non-operative treatment (%89).
- Clinicians should keep this diagnosis on their mind to prevent any misdiagnosis and unnecessary revision surgeries.
Thank you

References: