Iliopsoas Symposium: Outcomes and Complications of Iliopsoas Tenotomies

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Neither I nor any family members have any relevant financial relationships to be discussed, directly or indirectly, referred to or illustrated, with or without recognition within the presentation.

THREE TECHNIQUES

- Arthroscopic iliopsoas tenotomies currently are performed at the level of the labrum, the femoral neck (transcapsular level) and the lesser trochanter.

- The site of tenotomy should be based on the pathology being treated. A release at the labral level is now being advocated to treat iliopsoas snapping and impingement.
CENTRAL IMPINGEMENT

Domb first described labral injuries from psoas tendon impingement; they reported that labral level tenotomies relieved the hip pain of 25 patients with this problem.

I’ve had similar results in 30 patients with labral injuries from psoas tendon impingement; their scores improved 46 points and averaged 89 points after a central release.

CENTRAL RELEASE FOR SNAPPING

One prior study (Contreras 2010) reported that a central psoas tendon release relieved painful snapping of the tendon in 7 cases. The two-year MHHS improved 32 points and averaged 88 points.

Arthroscopic treatment of the snapping iliopsoas tendon through the central compartment of the hip

A PILOT STUDY

A central iliopsoas tenotomy initially relieved painful snapping of the tendon in our five patients with that problem, but the painful snapping recurred in three patients within one year of surgery.
ISSUE: RECURRENT SNAPPING

- We have previously documented (Blomberg 2011) that cutting the iliopsoas tendon at the lesser trochanteric level (1) or the transcapsular level (2) leaves 40% of the muscle-tendon unit intact.

- In contrast, cutting the tendon at the labrum (3) preserves 60% of the MTU, and may result in similar high rates of recurrent snapping (~ 21%) reported with open proximal tendon releases.

SUMMARY RESULTS CENTRAL IMPINGEMENT

- There are no clinical findings diagnostic of central impingement, but anterior (3 o’clock) labral tears are indicative of this problem.

- Diagnosis is made at arthroscopy when an anterior (3 o’clock) labral injury is found directly adjacent to the iliopsoas tendon.

- An iliopsoas tenotomy is an effective adjunct to the treatment of the labral tears caused by impingement of the tendon.

- In patients with snapping tendons, results of a central tendon release are less predictable and recurrent snapping may occur.
From a data base of 880 hip arthroscopies, I’ve identified 30 patients who had psoas tenotomies at the lesser trochanter to treat a painful snapping tendon and “3 o’clock” labral injuries due to impingement.

Preop MHHS averaged 43 points, 6 and 12 month scores averaged 88 and 90 points, respectively, and at average of 17 months, none had recurrent snapping, and all 14 athletes returned to full participation.

A painful, snapping iliopsoas tendon is best treated by tenotomies performed at either the neck or lesser trochanteric levels; Ilizaliturri reported comparable results for tenotomies performed at either site.

Shu and Safran (2011) reported a case of a failed psoas release due to not visualizing a bi-fid tendon and recommend a capsulotomy of at least 10 mm when performing a release in the peripheral compartment.
ISSUE: LEVEL OF TENOTOMY

- I prefer to release the tendon at the lesser trochanter because I can better visualize bi-fid tendons and leave the muscle attachments in place. Our long-term results have confirmed the efficacy of this site.

At 24 months, MHHS averaged 92 points (range 59-100 points). The patient with 59 points had recurrent snapping, a second arthroscopic release; her score one year after the second release was 93 points.

ISSUE: HIP FLEXOR WEAKNESS

- In a prior study, Anderson documented that iliopsoas tenotomies done at the lesser trochanter did not result in chronic weakness. One and two-year MHHS averaged 96 points (range 92-100 points).

Competitive athletes were back to their preop sports in ≤ 9 months: One returned to Division 1-A soccer at 4 months; one woman was back running 4 miles/day in 4 months; None had hip flexor weakness.
In a recent MRI study, Faulkner (2012) documented the presence and severity of the iliopsoas muscle atrophy found in 20 patients 1-5 years after lesser trochanteric arthroscopic psoas tenotomies.

Sixteen (80%) had atrophy of both muscles, 8 had grade 4 atrophy of one or both muscles, and these 8 had lower MHHS scores (79 points) than those with minimal (Grade 1) atrophy (89 points).

They had lower scores for distance walked, and presence and severity of a limp. Average age of those with grade 4 atrophy (41 years) was significantly higher than those with minimal atrophy (26 years).
ISSUE: HETEROTOPIC BONE

Heterotopic bone formation is a reported complication of both open and endoscopic iliopsoas releases. Byrd had 3 cases of HO after psoas releases. Bedi had a 4.7% incidence of HO in 616 hip scopes.

Massive Heterotopic Ossification Complicating Iliopsoas Tendon Lengthening: A Case Report
Patrick McCulloch and Charles Bush-Joseph

Endoscopic Management of the Snapping Iliopsoas Tendon
Byrd JWT, Polkowski G, Jones KS
*Arthros Assoc North Am.* Annual Meeting 2009

ISSUE: HETEROTOPIC BONE

Bedi, et al. found that a 4-day course of Indocin 75 mg QD, followed by a 30-day course of Naprosyn 500 mg BID reduced the incidence of HO from 8.3% (Naprosyn alone) to 1.8%, and recommended it postop.

The Incidence of Heterotopic Ossification After Hip Arthroscopy
Bedi A, Zbeda RM, Bueno VF, Downie B, Dolan M, Kelly BT.

Brooker Grade 4: Bony Bridging

I have fortunately found that a 14-day course of Ibuprofen 800 mg TID is equally effective. To date, I have not had a case of HO after 150 arthroscopic tenotomies performed at the lesser trochanter.
We have found similar results; one-year MHHS scores of our 30 HFA and 50 LFA patients averaged 79 and 85 points and the LFA patients had greater improvement (47 vs. 32 points) in their one-year scores.

A recent study (Fabricant 2012) found that excessive femoral anteversion (>25°) was associated with significantly lower MHHS scores (77 vs 86 points) compared to normal anteversion patients.
Selected References


12. Faulkner NA, Blankenbaker DG, DeSmet AA, Keene JS. Significance of MRI findings of iliopsoas atrophy after arthroscopic tenotomies. (Submitted for presentation *International Society of Hip Arthroscopy Annual Meeting, Boston MA. September 2012*).


