Long-Term Outcomes of Iliopsoas Fractional Lengthening in Hip Arthroscopy: A Matched Study

Quesada-Jimenez R, Schab AR, Sikligar D, Kahana-Rojkind A, O'Brien EJ, Domb BG

Roger Quesada-Jimenez, M.D.
Fellow, American Hip Institute Research Foundation

AMERICAN HIP INSTITUTE

Disclosures

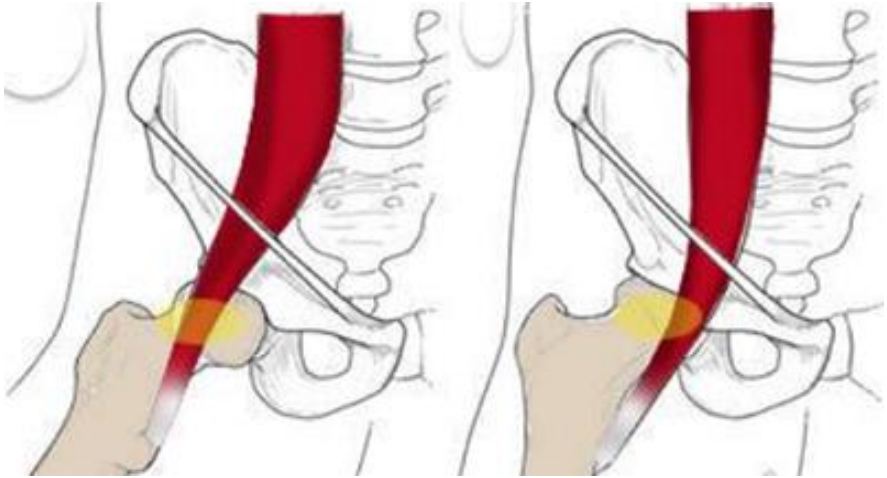
I (and/or my co-authors) have something to disclose.

Detailed disclosure information is available via:

AAOS Orthopaedic Disclosure Program on the AAOS website at
http://www.aaos.org/disclosure

Background

- Iliopsoas impingement is a recognized source of hip pain and snapping in pre-arthritic hip disorders.
- For patients unresponsive to conservative treatment, iliopsoas fractional lengthening (IFL) offers a surgical option to relieve patients' symptoms and is often performed alongside hip arthroscopy to address intra-articular pathology and osseous abnormalities associated with femoroacetabular impingement (FAI).



Purpose

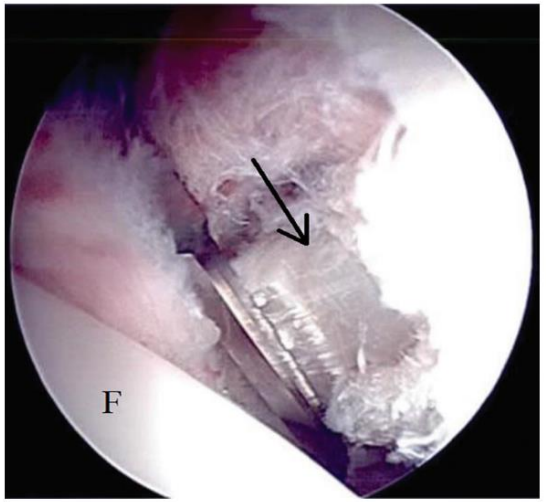
- To report minimum 10-year outcomes and rates of painful snapping resolution for patients who underwent concomitant iliopsoas fractional lengthening (IFL) and hip arthroscopy compared to a propensity-matched control group of patients who did not undergo IFL during hip arthroscopy.

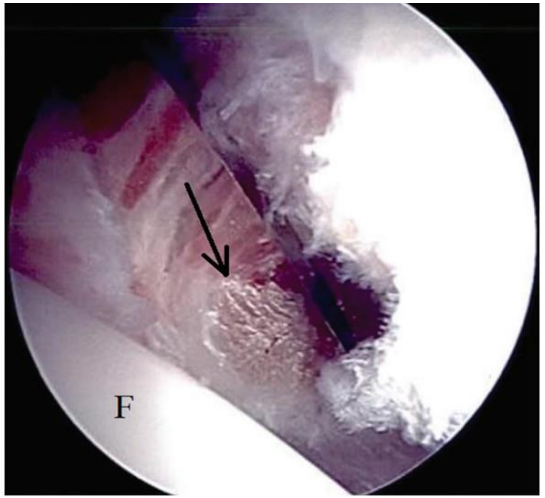
Methods

- Data was prospectively collected and retrospectively reviewed for all patients who underwent hip arthroscopy as treatment for FAI and labral tears between 2008 and 2014.
- **Inclusion Criteria**: Patients who had IFL performed with hip arthroscopy and ten-year minimum follow-up
- **Exclusion Criteria**: Patients who had previous ipsilateral hip surgical history, preoperative Tonnis osteoarthritis grade > 1, or workers compensation claims.
- PROs, rates of meeting clinically relevant thresholds, secondary procedures, and survivorship were compared between the IFL and the control groups.

Results

- A total of 402 hips were included in the study, with 201 hips each group.
- The study group showed significant improvements in all PROs, with a 97.5% resolution rate of painful internal snapping.
- The IFL group had lower preoperative scores for NAHS and HOS-SSS ($p < 0.05$), but both groups had similar postoperative scores for all PROs ($p > 0.05$).
- Both groups met MCID and PASS for mHHS, NAHS, and HOS-SSS at similar rates ($p > 0.05$).





Results Continued

- Rates of revision surgery were similar between the groups ($p > 0.05$), yet the IFL group had a lower rate of 10-year survivorship than the control group (OR 2.61, 95% CI [1.39 to 4.86], $p < 0.01$).

Conclusion

- Patients who underwent IFL and hip arthroscopy demonstrated improvement in painful internal snapping and PROs at 10-year minimum follow-up.
- When compared to a control group of patients who did not undergo IFL, the groups had similar outcomes, but the IFL hips had lower survivorship rates.

References

1) Maldonado DR, Lall AC, Battaglia MR, Laseter JR, Chen JW, Domb BG. Arthroscopic Iliopsoas Fractional Lengthening. *JBJS Essent Surg Tech*. 2018;8(4):e30. doi:10.2106/JBJS.ST.18.00020
2) El Bitar YF, Stake CE, Dunne KF, Botser IB, Domb BG. Arthroscopic Iliopsoas Fractional Lengthening for Internal Snapping of the Hip: Clinical Outcomes With a Minimum 2-Year Follow-up. *Am J Sports Med*. 2014;42(7):1696-1703. doi:10.1177/0363546514531037
3) Perets I, Hartigan DE, Chaharbakhshi EO, Ashberg L, Mu B, Domb BG. Clinical Outcomes and Return to Sport in Competitive Athletes Undergoing Arthroscopic Iliopsoas Fractional Lengthening Compared With a Matched Control Group Without Iliopsoas Fractional Lengthening. *Arthrosc J Arthrosc Relat Surg Off Publ Arthrosc Assoc N Am Int Arthrosc Assoc*. 2018;34(2):456-463. doi:10.1016/j.arthro.2017.08.292
4) Jimenez AE, George T, Lee MS, et al. Competitive Athletes with Femoroacetabular Impingement and Painful Internal Snapping Treated Arthroscopically with Intrabursal Iliopsoas Fractional Lengthening: High Rate of Return to Sport and Favorable Midterm Functional Outcomes. *Am J Sports Med*. 2022;50(6):1591-1602. doi:10.1177/03635465221079844