

## Matthew Kalies, ATS and Shawn Felton, EdD, ATC, LAT

10501 FGCU Blvd S. Fort Myers, FL 33965  
Cell: 305-304-0175

10501 FGCU Blvd S. Fort Myers, FL 33965  
Work: 239-590-7529

### Abstract

This case report is on a professional baseball outfielder who sustained an Athletic Pubalgia injury. The Athletic Pubalgia injury is commonly referred to as a “sports hernia”. However, this injury is misunderstood in the literature due to it encompassing a number of types of injuries. The most appropriate definition of an Athletic Pubalgia injury is an injury occurring to the abdominal wall with or without protrusion of abdominal contents. The athlete in this case had a grade two strain of the rectus abdominis and a grade two strain to the adductor longus muscles. The physician repaired both muscles and performed a release of the adductor longus by elongating the tissue. This case will take the reader through the post-operative rehabilitation of an athlete with an Athletic Pubalgia repair. The case will describe the etiology, surgical procedure, rehabilitation methods, and outcomes.

### Background

Athletic Pubalgia was once a diagnosis defined as a “sports hernia”, but the term has expanded to one which encompasses injuries or pain to or in the abdominal wall, groin, thigh, and pelvis (Meyers et al., 2012)(Hegedus, Stern, Reiman, Tarara, & Wright, 2012). The definition of “sports hernia” is too narrow to define Athletic Pubalgia because many cases are absent of the protrusion of abdominal contents (Copperthite, 2010). Ellsworth, Zoland, and Tyler (2014) also state that this injury can occur in the non-athletic population. Therefore, to define this term as a “sports hernia” is a misrepresentation in that non-athletes or those in the general population sustain this injury. In this case, we follow one 20 year old professional baseball outfielder that was diagnosed with an Athletic Pubalgia injury during his 2014 professional season. Initially, the athlete received conservative management of the injury which included rehabilitation, modalities, and functional return to play activities. The symptoms did diminish initially and he was able to finish playing that season. In the off season, during the month of December 2014, the athlete re-injured his groin and abdomen while performing a loaded squat. A treatment plan for the re-injured groin and abdomen was initiated and included conservative treatment, once again. However, after this re-injury, the athlete did not respond as well as before.

### Evaluation

Physical examination revealed 3/5 on the manual muscle test for adductor strength and trunk flexion. Point Tenderness was noted over the Adductor Longus origin and distal attachment of the Rectus Abdominis. Negative findings on Valsalva Maneuver. Magnetic resonance imaging (MRI) was obtained and showed a tear in the rectus abdominis and a grade 1 strain in the adductor longus. The athlete decided to proceed with a surgical repair of the Athletic Pubalgia after consulting with the Surgeon.

### Rehabilitation

Week 1:

- NSAID
- Ice every 2 hours
- Rest and Protect area

Week 2 & 3:

- Walking on Treadmill 15 minutes (RPE: 11)
- Side-Lying Hip Flexion ROM Exercise
- Side-lying Hip Extension ROM Exercise
- Supine Hip Abduction with in Pain-Free Range ROM Exercise
- Seated External Rotation ROM Exercise
- Massage of Adductor Longus Muscle Belly

Week 4:

- Walking on Tradmill 15 minutes (RPE: 11)
- Dead Bug Posterior Tilt
- Prone Hip Extensions
- Glute Bridge progressed into Sustained Hip Flexion Bridging on contralateral Leg
- Leg Lowers
- Supine Clam Shells
- Elliptical 15 Minutes
- Soft Tissue Mobilization of Scar

Week 5:

- Walking on Treadmill 20 minutes
- Dead Bug Alternating Heel Taps
- Quadraped Hip Extension with emphasis on core activation
- Single Leg Bridging with contralateral knee extension
- Supine Ball Drops Overhead
- Side-Lying Clam Shells
- Dead Bug Rotation Hand to opposite Knee (without trunk flexion)
- Elliptical 30 minutes
- Soft Tissue Mobilization of Scar
- Cross Friction Massage of Scar

Week 6:

- Theraband Monster Walks
- Theraband Side Steps
- Star Excursion
- One-leg Bridge with Medicine Ball
- Posterior Pelvic Tilt with Medicine Ball Between Legs
- Quadruped Alternate Reach
- Airex Ball Rebound off Trampoline with Hip rotation
- Treadmill 30 minutes
- Elliptical 20 minutes

### Differential Diagnosis

- Rectus Abdominis Tendinopathy
- Adductor Longus Tendinopathy
- Abdominal Hernia
- Snapping Hip Syndrome
- Stress Fracture of Pubic bone
- Referred Pain from Disk Lesion

### Treatment

The surgery was performed by a highly esteemed orthopedic surgeon expert in the repair of Athletic Pubalgia injuries. The surgery was completed on February 12<sup>th</sup>, 2015. The surgical procedure performed was a surgical repair of the rectus abdominis muscle and a tenotomy of the adductor longus muscle. The rehabilitation period was set to be a 6 to 8 week time frame.

### Outcome

As of April 2015, the athlete has not yet returned to game play. Understanding that it is important to protect the surgical repair site(s) of the Athletic Pubalgia injuries, all phases and especially early phases of rehabilitation are closely monitored for pain-free range of motion. In week five, with the incorporation of rotational movements, a setback occurred where the athlete reported an increase in pain. A day of regeneration was allowed and the signs and symptoms subsided. This offers the conclusion that the fifth week might be too early to incorporate rotation patterns when rehabilitating abdominal musculature. However, further research is needed to determine if this finding is generalizable to a broader patient population.

### References

- Ellsworth, A., Zoland, M., & Tyler, T., (2014). Athletic pubalgia and associated rehabilitation. *The International Journal of Sports Physical Therapy*, 9 (6), 774-784. Retrieved March 21, 2015, from PubMed database.
- Copperthite, K., (2010). Athletic pubalgia, part 1: anatomy and diagnosis. *Athletic Therapy Today*, 15 (5), 4-6. Retrieved March 21, 2015, from EBSCO database.
- Meyers, W., Yoo, E., Devon, O., Jain, N., Horner, M., Lauencin, C., & Zoga, A., (2012). Understanding “sports hernia” (athletic pubalgia): the anatomic and pathophysiologic basis for abdominal and groin pain in athletes. *Operative Techniques in Sports Medicine*, 20, 33-45. Retrieved March 21, 2015, from EBSCO database.
- Hegedus, E., Stern, B., Reiman, M., Tarara, D., & Wright, A., (2013). A suggested model for physical examination and conservative treatment of athletic pubalgia. *Physical Therapy in Sport*, 14, 3-16. Retrieved March 21, 2015, from EBSCO database.