Risk Factors For Athletic Pubalgia Development In Collegiate Football Student-Athletes: A Retrospective Cohort Study

Abstract ID# 21274
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Summary:
Olympic weightlifting and playing a skilled position are strongly associated with the development of athletic pubalgia in collegiate football players.

Data:
BACKGROUND Athletic pubalgia is a common injury among student-athletes. The cause of this injury is multifactorial and poorly understood and has been associated with repetitive explosive movements that cumulatively injure the groin and surrounding tissues. Therefore, the aim of this study was to evaluate the effect of Olympic weightlifting, body mass index and position type (skilled vs. non-skilled) in collegiate football players with respect to development of athletic pubalgia. HYPOTHESIS The introduction of Olympic weightlifting and playing a skilled position will significantly increase a student-athlete’s risk of developing athletic pubalgia. METHODS Football student-athletes at a single collegiate institution from January 2010 to December 2019 were included in the study. The primary outcome measure was athletic pubalgia surgery confirmed with magnetic resonance imaging. Odds of athletic pubalgia was determined using logistic regression with the dependent variable being whether or not the student-athlete received athletic pubalgia surgery. Independent variables included Olympic weightlifting exposure, skilled vs. non-skilled position and body mass index. Skilled positions were defined as quarterbacks, wide receivers, running backs, tight ends, linebackers, cornerbacks, and safeties, with these positions being subject to a high volume of running, cutting, and rapid change of direction. Non-skilled positions were defined as offensive linemen, defensive linemen, and specialists (punters, kickers, and long snappers), with these positions being subject to a low volume of running, cutting, and rapid change of direction. Olympic weightlifting exposure occurred suddenly in January of 2015 when Olympic weightlifting was implemented in the weight training regimen where it was not previously present, therefore all student-athletes on the 2015 roster and later were deemed positive exposures. Previous core muscle injury or athletic pubalgia surgery excluded student-athletes from the study. RESULTS A total of 1,154 student-athlete exposures met inclusion criteria, defined as any male football student-athlete who was listed on the active program roster and participated in football team activities from the 2010 through 2019 seasons. Of the 576 student-athletes exposed to Olympic weightlifting, 20 developed athletic pubalgia, whereas 7 student-athletes not exposed to Olympic weightlifting developed athletic pubalgia. Student-athletes exposed to Olympic weightlifting had a 2.86 (95% CI, 1.25-7.35; p = .018) times higher odds of developing athletic pubalgia as compared to those not exposed. Skilled position players had a 9.32 (95% CI, 1.71-63.96; p = .018) times higher odds of developing athletic pubalgia than non-skilled position players. Body mass index was not associated with a significant risk for developing athletic pubalgia. CONCLUSION Olympic weightlifting and playing a skilled position are strongly associated with the development of athletic pubalgia in collegiate football players. Skilled position players may benefit from modified training regimens to decrease this risk.

Category: Hip/Groin/Thigh

Ten-Year Outcomes Following Endoscopic Gluteus Medius Repair With Concomitant Hip Arthroscopy

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Summary:
This study evaluates 10-year patient-reported outcome (PRO) scores following endoscopic surgery for gluteus medius partial and full-thickness tears with concomitant hip arthroscopy for labral tears and/or femoroacetabular impingement syndrome (FAIS) patients with femoroacetabular impingement.

Data:
The purpose is to evaluate 10-year patient-reported outcome (PRO) scores following endoscopic surgery for gluteus medius partial and full-thickness tears with concomitant hip arthroscopy for labral tears and/or femoroacetabular impingement syndrome (FAIS). Methods: Prospectively collected data on patients followed for a minimum of 10 years after endoscopic gluteus medius repair with concomitant hip arthroscopy performed by a single surgeon were retrospectively analyzed. Patients with preoperative and 10-year follow-up for the following PROs were included: modified Harris Hip Score (mHHS), Nonarthritic Hip Score (NAHS), Hip Outcome Score-Sports Specific Subscale (HOS-SSS), and Visual Analog Scale (VAS) score for pain. Results: There were 13 patients eligible for inclusion, 11 (84.6%) of whom had 10-year follow up, with a mean of 127.6 months (range, 120.0-140.2 months). The group consisted of 10 females (90.9%) and one male (9.1%) with a mean age at surgery of 60.1 years (range, 46.2-74.8 years). PRO scores improved from preoperative to 10-year follow-up as follows: mHHS from 60.4 to 88.0 (p = .011), NAHS from 50.1 to 90.6 (p < .001), HOS-SSS from 37.5 to 85.1 (p < .001), and VAS from 4.8 to 1.2 (p = .006). Mean patient satisfaction rating was 8.3. Patients achieved PASS and MCID for mHHS and HOS-SSS at a rate of 81.8%. There was no significant decline in PROs or
Hamstring Muscle Injuries in Major League Soccer: An Analysis of Injury Rate, Associated Factors, and Return to Play

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Summary:
Days missed increased for hamstring injuries in MLS athletes during the 2010-2015 and 2016-2021 seasons by 35.7% (p < 0.001), with further analysis showing acute onset and match injuries lead to increased time to return to play by 27% (P = 0.023) and 89% (P = 0.0001), respectively.

Data:
Purpose: To examine (1) the rate and time to return to play (RTP) after hamstring muscle injury, (2) investigate the rate of reinjury after RTP, and (3) investigate conditions that are associated with increased severity of injury or increased time to RTP. Method: MLS Injury Surveillance database was queried for all athletes with hamstring injuries from 2010-2021 were included and categorized by severity. A hamstring injury was defined as an incident that required medical attention and involved the biceps femoris, semimembranosus, or semitendinosus. Demographic characteristics and injury characteristics (setting of injury, activity during onset, severity, management, RTS, and reinjury) were collected and used for descriptive analysis. Results: A total of 2865 injuries were recorded between 2010 and 2021, from 1227 individual players. The average injured player age was 26.2 +/- 4.4 years, with an isolated biceps femoris injury (75.2%), occurring during a match (47.3%). The median time missed per injury was 11.0 days, with 28.2% of injuries resulting in no days missed, 52.7% were classified mild to moderate (4-28 days), and 19.2% severe (29-744 days). Average number of games missed, and practices missed per injury, were 1.3 +/- 2.3 and 4.0 +/- 7.5, respectively. Mean days missed increased significantly from 17.6 days for a hamstring injury occurring during 2010-2015 to 23.9 days for an injury occurring during 2016-2021 (p < 0.001). Overall hamstring re-injury rate was 52.4% (643), following a previously recorded index hamstring injury. Reinjury rate between 2010-2015 and 2016-2021 did not change significantly (50.2% vs. 51.6%, p = 0.4506). Factors associated with prolonged return to sport included acute injury onset (27.8 vs 21.9, p = 0.023), and match injury (24.9 vs 13.2, p < 0.001). Position, field type, weather conditions, and in-game time of injury were not statistically significant. Conclusions: Between 2010 and 2021, hamstring injuries were one of the most common causes of missed time in MLS athletes. Acute onset and match injuries increased time to RTP by 27% (P = 0.023) and 89% (P < 0.0001), respectively. Furthermore, days missed increased for injuries during the 2010-2015 and 2016-2021 seasons by 35.7% (p < 0.001). The current findings emphasize the need for continued prevention and post-injury rehabilitation protocols and expectations. A reinjury rate as high as 50% likely contributed to longer rehabilitation timelines before RTP, however, future study is warranted given that reinjury rates did not decrease.

Category: Hip/Groin/Thigh

The Outcomes Of Proximal Femoral Derotation Osteotomy Performed Concurrently With Ipsilateral Hip Arthroscopy

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Summary:
The outcomes of PFDO stabilised with IM nail were superior to the plate and osteotomy groups. Conclusion: The outcomes of PFDO stabilised with IM nail were superior to the plate and osteotomy groups.

Category: Hip/Groin/Thigh

Long-Term Outcomes of Arthroscopic Labral Repair Versus Labral Debridement: Which Precludes Patients from Total Hip Arthroplasty Conversion?

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Summary:
Patients who underwent labral repair were less likely to convert to THA when compared to patients who underwent labral debridement despite adjusting for differences in baseline demographics and preexisting pathology. Data: Background: Arthroscopic treatment for labral tears includes debridement and repair. Currently, long-term studies have failed to demonstrate a difference in conversion to total hip arthroplasty (THA). The purpose of this study was to investigate two different labral treatments, debridement and repair, with an adjusted analysis to evaluate the long-term conversion to THA. Methods: This is a retrospective cohort study of patients undergoing hip arthroscopy by a single surgeon between April 2007 and October 2014. Postoperative follow-up information included conversion to THA, patient-reported outcome measures and patient satisfaction. Results: Of the 204 hips included in the study, 99 (48.5%) and 105 (51.5%) underwent labral repair and debridement, respectively. Twenty-eight (13.7%) of the 204 patients underwent conversion to THA within 10 years following hip arthroscopy [labral repair: 5 (5.1%) vs. labral debridement: 23 (21.9%)]. Labral repair remained associated with significantly lower risk of conversion to THA compared to debridement (hazard ratio [HR] = 0.24, 95% CI 0.07-0.74, p = 0.01). Additional factors associated with risk of conversion to THA included increasing age at time of arthroscopy (HR = 1.06 per year, 95% CI 1.02-1.11, p = 0.002) and Tonnis grade (HR = 2.39, CI 1.14-5.41, p = 0.026). Abrasion chondroplasty, acetabuloplasty, BMI, Osteotomy grade, and radiographic FAI were not found to be significantly associated with risk of THA. There was no significant difference between groups for patient satisfaction [87 (87.9%) v 89 (84.8%), p=0.63]. Similarly, for patients who did not convert to THA, there was no difference in mean patient-reported outcome measures at final follow-up for mHHS, HOS-ADL, HOS-Sport, iHOT-33, NAHS, or LEFS. Conclusion: Patients who underwent labral repair were less likely to convert to THA when compared to patients who underwent labral debridement despite adjusting for differences in baseline demographics and preexisting pathology. Additional factors associated with a lower rate of hip survival were older age and osteoarthritis at the time of hip arthroscopy. ACKNOWLEDGEMENTS: Conine Family Foundation for Joint Preservation

Category: Hip/Groin/Thigh

Conversion? Debridement: Which Precludes Patients from Total Hip Arthroplasty Long-Term Outcomes of Arthroscopic Labral Repair Versus Labral

Category: Hip/Groin/Thigh

The Effects of Concomitant Hip Arthroscopy and Labral Treatment (debridement or repair). One patient, who had arthroscopic findings of acetabular and femoral outerbridge grade 4 lesions, subsequently underwent total hip arthroplasty; however, the GM was assessed during the THA, and it was verified that the repair was intact. There were no clinical failures, secondary operations, or complications. Conclusions: Endoscopic repair of gluteus medius tears is a safe procedure with favorable and durable long-term outcomes at minimum 10-year follow-up. Level of Evidence: Level IV, therapeutic case series

Category: Hip/Groin/Thigh

Abstracts Journal of ISAKOS 8 (2023) S17-S28

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