

ATHLETIC PUBALGIA SURGERY

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Related Policy
<ul style="list-style-type: none"> Femoroacetabular Impingement Syndrome Treatment

INSTRUCTIONS FOR USE

This Clinical Policy provides assistance in interpreting Oxford benefit plans. Unless otherwise stated, Oxford policies do not apply to Medicare Advantage members. Oxford reserves the right, in its sole discretion, to modify its policies as necessary. This Clinical Policy is provided for informational purposes. It does not constitute medical advice. The term Oxford includes Oxford Health Plans, LLC and all of its subsidiaries as appropriate for these policies.

When deciding coverage, the member specific benefit plan document must be referenced. The terms of the member specific benefit plan document [e.g., Certificate of Coverage (COC), Schedule of Benefits (SOB), and/or Summary Plan Description (SPD)] may differ greatly from the standard benefit plan upon which this Clinical Policy is based. In the event of a conflict, the member specific benefit plan document supersedes this Clinical Policy. All reviewers must first identify member eligibility, any federal or state regulatory requirements, and the member specific benefit plan coverage prior to use of this Clinical Policy. Other Policies may apply.

UnitedHealthcare may also use tools developed by third parties, such as the MCG™ Care Guidelines, to assist us in administering health benefits. The MCG™ Care Guidelines are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.

APPLICABLE LINES OF BUSINESS/PRODUCTS

This policy applies to Oxford Commercial plan membership.

BENEFIT CONSIDERATIONS

Before using this policy, please check the member specific benefit plan document and any federal or state mandates, if applicable.

Essential Health Benefits for Individual and Small Group

For plan years beginning on or after January 1, 2014, the Affordable Care Act of 2010 (ACA) requires fully insured non-grandfathered individual and small group plans (inside and outside of Exchanges) to provide coverage for ten categories of Essential Health Benefits (“EHBs”). Large group plans (both self-funded and fully insured), and small group ASO plans, are not subject to the requirement to offer coverage for EHBs. However, if such plans choose to provide coverage for benefits which are deemed EHBs, the ACA requires all dollar limits on those benefits to be removed on all Grandfathered and Non-Grandfathered plans. The determination of which benefits constitute EHBs is made on a state by state basis. As such, when using this policy, it is important to refer to the member specific benefit plan document to determine benefit coverage.

NON-COVERAGE RATIONALE

Surgical repair is unproven and not medically necessary for treating athletic pubalgia.

Several studies have shown that groin pain and function are improved after surgical repair for athletic pubalgia. However, most of these studies were uncontrolled, used small sample sizes, and did not provide comparisons of the surgical methods used to treat athletic pubalgia. Large prospective randomized studies of individuals with athletic pubalgia with more detailed patient outcome measurements are needed to determine optimal treatment.

APPLICABLE CODES

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies may apply.

CPT Code	Description
49659	Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy
49999	Unlisted procedure, abdomen, peritoneum and omentum

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DESCRIPTION OF SERVICES

Athletic pubalgia, also known as Gilmore's groin, sports/sportsman's hernia, or occult hernia is a condition limited almost exclusively to professional or other high-performance athletes. It is characterized by pain around the abdomen, groin, hip or thigh. The pain frequently originates from a muscle or tendon injury in the inguinal area near the attachment of the rectus abdominis to the pubis and in the adjacent internal oblique muscles near the region of the abdominal wall. Pain and weakness in this area are most commonly seen with direct inguinal hernias; however, in this case, the pain presents without any evidence of herniation or other medical diagnosis. Athletic pubalgia predominantly affects men and is most common among athletes whose sport of choice requires frequent twisting and turning, such as soccer, football and hockey.

The precise etiology of athletic pubalgia is not known, but is most commonly believed to result from weakness of the abdominal or inguinal wall, associated with tearing of muscles and/or ligaments within the pelvis. A wide variety of anatomical abnormalities that may account for the pain are observed on surgical exploration. There are no objective findings on physical examination or a definitive diagnostic test for athletic pubalgia.

Conservative treatments such as rest, anti-inflammatory drugs, and physical therapy may fail to relieve the pain. While a variety of surgical techniques have been used, opinions about the value of surgery differ greatly and there is a lack of consensus supporting any one particular procedure. Most procedures currently being described are minor variations of standard hernia repair. Pelvic floor surgery is another surgical method that has been considered to treat athletic pubalgia. This surgery involves reattachment of the rectus abdominis muscle either unilaterally or bilaterally and often concurrently with an ipsilateral adductor release, rather than protection of the inguinal floor near the internal ring. Given the potentially long recovery time, reportedly from 10 weeks to 6 months after open surgery, laparoscopic interventions have also been investigated.

CLINICAL EVIDENCE

A systematic review was conducted by de Sa et al. (2016) to identify the most common causes of groin pain in athletes requiring surgery. A total of 73 articles and 4655 patients were included in the study. The intra-articular and extra-articular causes of groin pain in athletes requiring surgery were equal. The top five causes for pain were: femoroacetabular impingement (FAI) (32%), athletic pubalgia (24%), adductor-related pathology (12%), inguinal pathology (10%) and labral pathology (5%), with 35% of this labral pathology specifically attributed to FAI. The authors concluded that given the complex anatomy, equal intra-articular and extra-articular contribution, and potential for overlap of clinical entities causing groin pain leading to surgery in athletes, further studies are required to determine how to best treat this patient population.

Serner et al. (2015) performed a systematic review of the literature on the efficacy of conservative and surgical treatment options for groin pain in athletes. Nine medical databases were searched in May 2014. Inclusion criteria were treatment studies in athletes with groin pain; randomized controlled trials (RCTs), controlled clinical trials or case series; outcome measures describing number of recovered athletes, patient satisfaction, pain scores or functional outcome scores. A total of 72 studies were included for quality analysis with a mean follow-up time of 27.7 months. The conservative treatment studies included passive physical therapy modalities and/or exercise therapy, or injection

therapy (corticosteroids or dextrose). The surgical studies examined open hernia repair, laparoscopic hernia repair and adductor tenotomy. The control group intervention consisted of passive physical therapy modality or exercise therapy, local corticosteroid injection, and surgical adductor repair. The treatment success was defined in terms of the percentage of recovered athletes, percentage of excellent or good patient satisfaction, improvement in pain scores, improvement in functional outcome scores or percentage of athletes returning to play. A mean of 90.6% of the patients returned to play in the intervention groups and the mean reported time to return to play was 11.3 weeks. The mean treatment success in the control groups was 48.7%. A mean of 45.8% of the patients returned to play and the mean time to return to play was 25.6 weeks. The authors state there is moderate evidence that, for adductor-related groin pain, active exercises compared with passive treatments improve success, multimodal treatment with a manual therapy technique shortens the time to return to sports compared with active exercises and adductor tenotomy improves treatment success over time. There is moderate evidence that for athletes with sportsman's hernia, surgery results in better treatment success than conservative treatment. Only four studies were identified as high quality and there were a high number of disagreements between the authors in the quality assessment.

A systematic review was performed by King et al. (2015) of peer review studies which looked at athletic groin pain (AGP) surgery and rehabilitation and their influence on return to play (RTP) rates and/or return to play times. The purpose of this review was to compare the RTP rates and return to play times between surgical and rehabilitation interventions in the treatment of AGP. There were 3332 patients included in 57 studies. The patients were subdivided into three diagnostic groups; the pubic group with diagnosis and interventions related to the pubic symphysis and adjacent bone, the adductor tendons group, and the abdominal group. Surgery interventions included repair via laparoscopy or open incision, tenotomy of adductor longus, debridement of the pubic symphysis, or arthrodesis. Rehabilitation included massage and mobilization, electrotherapy, flexibility, resistance and strength training. Meta-analysis revealed the pubic surgery group had a RTP rate of 86% and returned to play in 23.1 weeks, abdominal group RTP rate of 96% and returned to play in 7.2 weeks, and the adductor group RTP was 84% and returned to play in 18.3 weeks. The pubic rehabilitation group had a RTP rate of 91% and returned to play in 10.5 weeks, the abdominal group had a RTP rate of 83% and returned to play in 7.9 weeks and the adductor group RTP was 81% and returned to play in 16.9 weeks. The authors concluded that this review challenges the belief that surgery offers a superior RTP rate and time across all categories. The review suggested better outcomes with rehabilitation for pubic-related groin pain with no difference between the adductor and abdominal groups. Overall the quality of the evidence available in the surgical and rehabilitation interventions in AGP is low and subject numbers are small. Appropriately designed randomized controlled trials should be conducted comparing rehabilitation and surgical intervention.

Rossidis et al. conducted a retrospective review of competitive athlete patients with athletic pubalgia from 2007 to 2013. Athletic pubalgia is a syndrome of chronic lower abdomen and groin pain that occurs in athletes. It is the direct result of stress and microtears of the rectus abdominis inserting on the pubis from the antagonizing adductor longus muscles, and weakness of the posterior transversalis fascia and bulging of the inguinal floor. A cohort of 54 patients was examined. Mean age was 22.4 years. Most patients were football players (n = 23), triathlon (n = 11), track and field (n = 6), soccer players (n = 5), baseball players (n = 4), swimmers (n = 3), golfer (n = 1), and tennis player (n = 1). Fifty one were males and three were females. All patients failed medical therapy with physiotherapy prior to surgery. 76 % of patients had an MRI performed with 26 % having a right rectus abdominis stripping injury with concomitant strain at the adductor longus musculotendinous junction. 7 % of patients had mild nonspecific edema in the distal bilateral rectus abdominis muscles without evidence of a tear. Twenty patients had no findings on their preoperative MRI, and only one patient was noted to have an inguinal hernia on MRI. All patients underwent laparoscopic totally extraperitoneal inguinal hernia repair with synthetic mesh and ipsilateral adductor longus tenotomy. All patients were able to return to full sports-related activity in 24 days (range 21-28 days). One patient experienced urinary retention and another sustained an adductor brevis hematoma 3 months after completion of rehabilitation and surgical intervention. The author concluded that athletic pubalgia is a disease with a multifactorial etiology that can be treated surgically by a laparoscopic totally extraperitoneal hernia repair with synthetic mesh accompanied with an ipsilateral adductor longus tenotomy allowing patients to return to sports-related activity early with minimal complications. The significance of this study is limited by small sample size and short follow-up period.

Caudill et al. (2008) found that surgery seemed to be more effective than conservative treatment, and laparoscopic techniques generally enabled a quicker recovery time than open repair. However, in addition to better descriptions of surgical anatomy and procedures and conservative and post-surgical rehabilitation, well-designed research studies are needed, which include more detailed serial patient outcome measurements in addition to basing success solely on return to sports activity timing. This information is necessary to better understand sports hernia pathogenesis, verify superior surgical approaches, develop evidence-based screening and prevention strategies, and more effectively direct both conservative and post-surgical rehabilitation.

Swan et al. (2007) performed an overview of the anatomy and pathoanatomy and a systematic review of the literature to gain insight into the disease and its treatment. Most studies are Level IV. The anatomy involved, diagnostic criteria, and treatment modalities are inconsistently described in the medical, surgical and orthopaedic

literature. There is no evidence-based consensus available to guide decision-making. Open and laparoscopic repairs produce excellent results, but the latter allows earlier return to play.

The aim of laparoscopic and open surgical procedures for treatment of athletic groin pain is to release tension or provide support to the musculature. Laparoscopic approaches include totally extraperitoneal (TEP) and transabdominal preperitoneal (TAPP) repair for mesh placement, whereas open surgical techniques include both suture and mesh repair. A 2016 Hayes Technology Report found that based on a low-quality body of evidence; there is insufficient evidence to determine whether a particular laparoscopic or open surgical technique is superior to another. More rigorous studies are needed to establish the relative benefits and harms of different laparoscopic and open surgical procedures for this patient population (Hayes, 2016).

U.S. FOOD AND DRUG ADMINISTRATION (FDA)

Laparoscopic surgery is a procedure and therefore not subject to FDA regulation. There are a number of surgical meshes approved for use in pelvic surgery, although none used in the reviewed studies were approved specifically for athletic pubalgia. See the following website for additional information (use product code FTM). Available at: <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm>. (Accessed March 15, 2017)

REFERENCES

The foregoing Oxford policy has been adapted from an existing UnitedHealthcare national policy that was researched, developed and approved by UnitedHealthcare Medical Technology Assessment Committee. [2017T0341N]

American Academy of Orthopaedic Surgeons (AAOS). Sports hernia (athletic pubalgia). Last reviewed September 2010.

Caudill P, Nyland J, Smith C, et al. Sports hernias: a systematic literature review. Br J Sports Med. 2008 Dec;42(12):954-64.

de Sa D, Hölmich P, Phillips M, et al. Athletic groin pain: a systematic review of surgical diagnoses, investigations and treatment. Br J Sports Med. 2016 Oct;50(19):1181-6.

ECRI Institute. Hotline Service. Techniques for diagnosing and treating pubalgia (sports hernia). April 2013. Updated June 16, 2016. Archived.

Hayes, Inc. Hayes Medical Technology Directory Report. Laparoscopic and Open Surgical Repairs for Treatment of Athletic Groin Pain. Lansdale, PA: Hayes, Inc.; April, 2016.

King, E, Ward J, Small, L et al. Athletic Groin Pain: A Systematic Review and Meta-analysis of Surgical Versus Physical Therapy Rehabilitation Outcomes. Br J Sports Med. 2015;49(22):1447-1451.

Rossidis G, Perry A, Abbas H. Laparoscopic hernia repair with adductor tenotomy for athletic pubalgia: an established procedure for an obscure entity. Surg Endosc. 2015 Feb;29(2):381-6.

Serner, Andreas, van Eijck, Casper, Beumer, Berend, et al. Study quality on groin injury management remains low: a systematic review on treatment of groin pain in athletes. Br J Sports Med. 2015 Jun;49(12):813.

Swan KG Jr, Wolcott M. The athletic hernia: a systematic review. Clin Orthop Relat Res. 2007 Feb;455:78-87.

POLICY HISTORY/REVISION INFORMATION

Date	Action/Description
07/01/2017	<ul style="list-style-type: none">Updated supporting information to reflect the most current clinical evidence and references; no change to non-coverage rationale or list of applicable codesArchived previous policy version SURGERY 044.13 T2