

# ISAKOS CASE CORNER

## A Discussion on Recalcitrant Osteitis Pubis

### CASE DISCUSSION

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Treatment prior to orthopaedic referral consists of rest, core stability exercises, corticosteroid injection to the pubic symphysis, pool and bike aerobic work with complete avoidance of running. On referral he is now 5 months into this above conservative protocol and is no better. Examination reveals a 180cm, 79kg very fit elite athlete. He has good general flexibility { Forward flexion knuckles to the floor, SLR 80 degrees bilaterally). Both hips have a good range of motion (40 degrees IR at 90 degrees hip flexion, hip flexion -



**The Case.** The 24 year old professional national level footballer gives a history of niggling groin pain which started a year and a half ago and then, over the last six months becomes significant right sided adductor and pubic symphysis pain. The player manages to complete an intense preseason training but just prior to first game of the season, a ball kicking activity was followed by severe right adductor origin pain and 'general' groin weakness. Being an important player he continues into the competitive season playing with these symptoms but 5 games later the pain has spread to whole of the groin and deep posterior gluteal regions. He recalls feeling significant adductor and hip flexor weakness and can no longer play.

knees to chest). Hip impingement tests are all negative. Squeeze test using sphygmomanometer measures 120mm Hg and produces right adductor pain and retro scrotal and inguinal pain, all on the right side only. Hernia/Sportsman hernia were excluded and spinal examination proved normal.

#### Investigations:

Ultrasound inguinal region - no evidence occult inguinal hernia or conjoint ligament pathology. Plain x-rays Normal hip morphology but changes within pubic symphysis consistent with active osteitis pubis. Blood inflammatory markers are normal. XR, CT and MR scan of the pubic symphysis shown below. What is your opinion to the team physician?

WHAT WOULD YOU DO NEXT?



# EXPERT COMMENTS



**Christopher M. Larson, MD**  
Eden Prairie, Minnesota, USA

This is certainly a very challenging case from a treatment and diagnostic standpoint. There are multiple areas of pain including the right inguinal region, right adductor, pubic symphysis, as well as posterior gluteal region. Normal range of motion and negative impingement testing make symptomatic hip joint pathology unlikely. Osteitis pubis is a frequent finding in these athletes and we found that over 50% of radiographs in elite American football players reveal osteitis pubis even when asymptomatic. The key is to define the pain generators that are limiting with respect to the patients athletic activity. In addition, with the multiple areas of pain anterior, posterior, and in the testicular region it is critical to rule out any GI, GU, or neurogenic (pudendal, ilioinguinal, genitofemoral nerve, etc.) disorders in this particular case. Osteitis pubis alone does not explain all of the complaints in this case.

Despite a “sports hernia” being ruled out I would still have a high index for suspicion for athletic pubalgia and would obtain a specific athletic pubalgia MRI protocol to evaluate the rectus abdominus / adductor aponeurosis. Pain with resisted sit-ups and resisted adduction if recreating the primary complaints during athletics would further support this diagnosis and I would recommend a repair of the aponeurosis with possible partial adductor tenotomy on the right. If there was no lower abdominal component I would consider a pubic cleft injection on the right and if excellent relief would consider a fractional lengthening of the adductor longus if symptoms persisted. If the limiting pain was isolated to the pubic symphysis then an open or endoscopic symphyseal debridement / decompression could be considered but I have typically seen this in lower level athletes with a characteristic waddling gait pattern. I believe there is more going on in this particular case than simply osteitis pubis, however, and further more detailed evaluation and diagnostic injections are warranted in my opinion.



**Victor Ilizaliturri, MD**  
Mexico City, MEXICO

The case of a male elite 24-year-old athlete with chronic osteitis pubis represents a challenge. In general most of these cases must be treated initially with conservative therapy and corticosteroid injections as were indicated for the present case. In a non-athletic population, osteitis pubis is generally self-limited and conservative treatment is very successful.

For the elite athlete, recalcitrant osteitis pubis for more than one full competitive season should be considered a failure of the conservative treatment and an orthopaedic consult must be obtained.

In the case that is currently discussed symptoms have been present for a year and a half and adequate conservative treatment has not been successful after a 5-month protocol. Hip joint pathology, spine and sports hernias were investigated and discarded in this patient. Surgical treatment should be indicated.

Several surgical modalities for the treatment of osteitis pubis have been described ranging from curettage to arthrodesis of the pubic symphysis.

In published literature elite athletes seem to respond better to curettage without fusion of the pubic symphysis.

Complete resection of the pubic symphysis may result in posterior instability and pain and may prematurely end the professional career of an elite athlete. Arthrodesis of the pubic symphysis may also result in posterior instability and pain and can present complications such as non-fusion and loosening of osteosynthesis hardware. Published literature regarding surgical treatment of osteitis pubis in elite athletes is limited but seems to support the concept of minimal surgical intervention. Curettage of the pubic symphysis in my view is the most adequate treatment modality for this patient.

The postoperative management is important to reestablish adequate function without pain. Weight bearing should be indicated as tolerated. No strength exercises should be indicated within the first 4 weeks, after this core stability exercises and sport specific training should be gradually introduced.

1) Mulhall KJ, McKenna J, Walsh A, et al. Osteitis pubis in professional soccer players: a report of outcome with symphyseal curettage in cases refractory to conservative management. Clin J Sport Med 2002; 12: 179-81.

2) Williams PR, Thomas DP, Downes EM. Osteitis pubis and instability of the pubic symphysis. When nonoperative measures fail. Am J Sports Med 2000;28:350-5.

## A Discussion on Recalcitrant Osteitis Pubis



**Ramon Cugat, MD, PhD**  
**Barcelona, SPAIN**

A 24 year old professional football player with the deterioration showed by the radiological study indicates a chronic pathology of various years of affliction.

Signs and symptoms should be sought out: palpation of the muscle mass of both adductors (Adductor Longus), of the myotendonous junction and especially the insertion of both adductor tendons to the pelvis. Palpation is usually painful or very painful in acute phases radiating to the groin and scrotum in men and perineum in women. Palpation of both inguinal rings with the patient standing to appreciate the degree of the pain, dilation symmetry or asymmetry and rule out any hernias (with the latter usually being negative).

We also perform dynamic ultrasonography for the evaluation of the inguinal rings revealing their status, the presence of a lipoma, the degree of weakness in the abdominal wall and the presence of micro-calcifications in both Adductor Longus tendons. Plain radiographs of the pelvis should also rule out any bone tumor as the age range of the affected population fits in to that which may have bone sarcomas. Hip and spine and lower extremity symmetry should be evaluated.

All this information presented in the case with regard to the players history, examination and imagine used, ratifies the chronicity of the pathology and that conservative treatments have failed to solve the problem.

With certainty obtained our diagnosis is: chronic dynamic osteopathy of pubis preventing playing football for which the treatment should be surgical:

Our surgery technique consists of:

- Epidural anesthesia
- Incision of about 3 cm centered at the origin of the adductor longus
- Longitudinal fasciotomy of the common femoral fascia
- Tenotomy of the adductor longus at the pubic bone insertion,
- Tendon distalization, cut for its ultimate relaxation
- Femoral fascia suture
- Skin suture
- This process is performed on both sides, right and left.

### **Post operative:**

24 hours bed rest. Although once the effects of the anesthesia have worn off, isometric exercises and mobility of the ankles, knees and hips can begin, all without pain.

Physiotherapy and rehabilitation must be progressive and painless.

At no time should concentric or eccentric exercise be performed on adductors having been operated on. Stretching exercises are carried out until good balance between right and left is achieved.

Recover function and physical fitness in order to return back to the discipline of the coach at around two months.

A warm up of about 30 to 45 minutes before each workout and before every game, excluding toning exercises of the aforementioned adductor longus.

# EXPERT COMMENTS



## **David Young, MB, BS, FRACS (Ortho) Melbourne, AUSTRALIA**

The history of greater than 6 months groin pain preventing running, sports participation and groin weakness (squeeze test less than 140mm Hg when normal is greater than 180 in an elite athlete) defines this case as recalcitrant Osteitis Pubis (OP) in our clinic. Given the severe changes on radiology including CT fine slice and MRI of the pubic symphysis we would now recommend surgical intervention. In our professional players in Australian Rules Football we monitor for subclinical OP with twice weekly squeeze test screening using either a sphygmomanometer or purpose build squeeze test machine to record falling values as the season progresses. All players usually show some fall but above 180 mmHg is considered normal, 160 starting to be a concern and below 140 the player needs to stop playing and running. At this level pain has usually begun. Core stability work with enforced rest will usually return the player within a few weeks. If pain is severe

options in early stages include bisphosphonates if erosive OP is developing, radio frequency denervation for pain and relatively normal scans, anti-inflammatories if squeeze test is above 160mm Hg and pain is a main concern but above all REST for the symptomatic case with typical pain and groin weakness. Excluding compromising FAI in the hips is very important and addressing FAI in the off season is usually performed. Once rest and physical therapy has been followed for 6 months or more without improvement then surgery is considered. If the pubic symphysis is 'intact' on CT scans and MRI simple adductor relief may be considered. Conjoint tendon surgery or repair of 'occult' inguinal hernias is no longer 'fashionable'. For this case presented we would recommend pubic symphysis clearance and repair of the separating adductor enthesis as seen on the MRI by the 'dreaded' white line undermining the adductor origin on the right side. 4 months rehab before running is very important and this athlete would take 6 months to return to sport participation.

### **Outcome:**

The outcome for an athlete with very similar presentation was exactly that scenario and indeed he not only came back recovered but went on to win the MVP in the next season. Now in his third season post surgery he remains symptom free and one of the quickest players in his team Follow-up pelvic XR is presented:



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