

- rehabilitation time is increased.
- When a problem has been present for some time it begins to have an impact on other structures in the area.
  - Where there is no acute injury there is often very little swelling or bruising to see. When teammates and coaches don't see crutches or plaster questions are asked;... Is that fella injured at all?... commitment is questioned, doubt is cast and frustrations mount.
  - Time to recovery is difficult to predict, frustration and/or pressure from those around a player may lead to premature return to activity, with inevitable set-backs. Further doubts creep in... Will I ever be right?...

**PREVENTION IS BETTER THAN CURE**

Early diagnosis and treatment are obviously the best way to avoid chronic injury. But in our experience it is best to aim efforts at prevention of injury in the first place. In theory this is fine but all players (particularly those with some miles on the clock!) know that if they didn't push on in training and play with niggles and strains they would virtually never get to play, so where do we find the balance?

**RECOGNITION OF EARLY WARNING SIGNS**

A diagnosis of injury can usually be made by listening carefully to the signs (bruising, swelling, loss of power or movement) and symptoms (pain, instability, weakness) the player complains of. Medical professionals listen carefully to a players description of the problem, they then examine the area carefully and form a working diagnosis.

Exactly the same principles may be used in the prevention or early diagnosis of an injury. If the tell-tale signs of a particular injury are seen action may be taken to prevent the injury worsening and a chronic problem evolving. Player, coach and trainer education in the identification of these signs are key goals in the improvement of player performance and welfare.

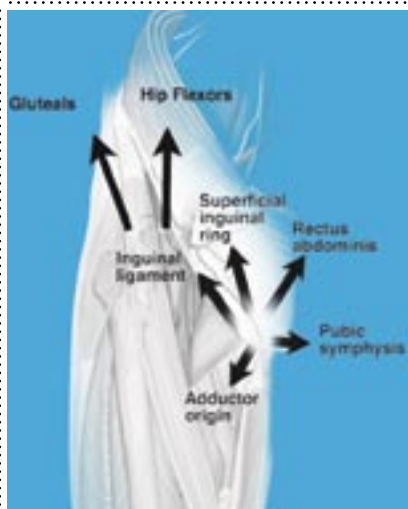
This piece will focus on one of the more persistent and serious chronic injuries seen in many GAA players; chronic groin pain. We will not discuss every cause of groin pain but instead focus on a brief discussion of the more common causes, highlighting the tell-tale signs and explaining the most modern treatments employed.

**GROIN PAIN**

Groin pain is a major cause of time lost in sports which involve explosive effort in conjunction with kicking or twisting the upper body, such as soccer, australian rules, ice hockey, and rugby.

Groin pain is an umbrella term which describes pain felt anywhere from the upper leg and lower stomach to the groin itself. It may be caused by injury or weakness of any of the muscle groups which act on the area. The forces which pull at the pubic symphysis are shown in figure 1. All muscle groups act in tandem to provide stability at the joint.

Weakness in one group leads to overload in one of it's neighbours



**Figure 1** The many forces acting upon the pubic symphysis

and as a result; further injury starts a process where a injury worsens while function is increasingly affected, a vicious cycle begins.

Because of the many causes of groin pain no one solution to the problem exists. Correct identification of the main cause of the problem remains the best way to solve this dilemma.

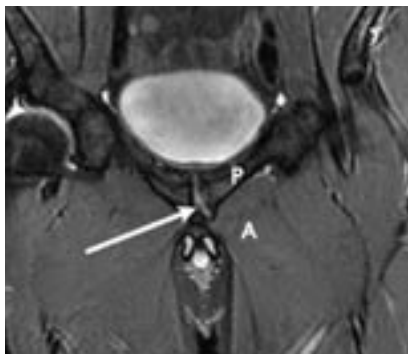
**THE PROBLEM**

Where a strain or tear of the adductor muscles is the injury the pain is often felt high up in the groin beneath the scrotum.

- The problem may start as a acute injury but fail to settle
- Pain may improve as the muscle warms up, but later on in a game or training may once more worsen.
- Speed and acceleration are affected as is kicking.
- Zig-zag or cutting manoeuvres are particularly aggravating

**THE SOLUTION**

There is no quick-fix for this problem, however, the rehab time for an adductor problem can be greatly decreased by following a structured programme aimed at stretching and strengthening not just the adductors but also the hip flexors, gluteals, abdominals and core. Advance in magnetic resonance imaging (MRI) allow us to look closely at where the tendon meets bone, small tears (symphyseal cleft figure 2) here may be suitable for injection under x-ray guidance, speeding up recovery. Where a comprehensive programme fails surgery is an option.



**Figure 2** MRI of the pelvis showing a pubic symphyseal cleft (a micro-tear at the base of the adductor muscle) P=pubic bone, A= adductor

**THE PROBLEM**

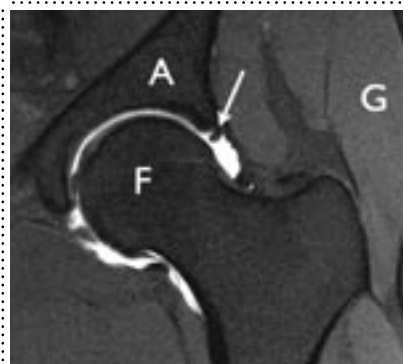
A recent case series of groin pain

showed that injury or damage to the hip joint was the cause of pain in almost half of the patients who attended to have groin pain investigated.

- Pain onset may be acute or gradual and is usually felt in the groin as well as distal thigh and knee.
- Performance is affected.
- Symptoms are often worse post-exercise, night pain may occur
- A catching/clicking sensation is common.

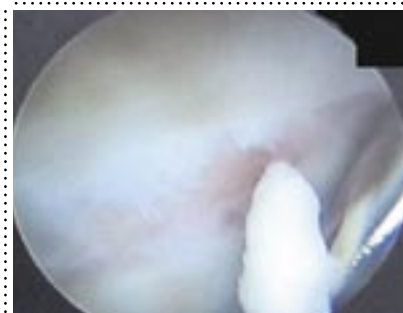
**THE SOLUTION**

High-quality magnetic resonance imaging (MRI) and arthrography (using a joint injection to improve the quality of the image) now available quickly identify even minor damage to the cartilage, bone or labrum (soft tissue lining of the joint) of the hip (figure 3).



**Figure 3** MR arthrogram of the hip the arrow shows a well defined tear of the labrum of the acetabulum, the soft tissue lining the hip joint (A= acetabulum F= femur G= gluteal muscles)

Advanced arthroscopic (key-hole) surgery, permits the treatment of some of these injuries with reduced rehabilitation time. Below is an example of this surgery as performed by Mr Kevin Mulhall, consultant orthopaedic surgeon at SSC (figure 4)



**Figure 4** Hip arthroscopy

**THE PROBLEM**

The Gilmore's groin or Sportsman's hernia is a complex of injuries in and around a lower abdominal wall.

- Pain is usually in the lower abdomen, it is usually worse after training/match and particularly the next morning.
- There is rarely an actual injury but many players remember the game it first occurred.
- Coughing and sneezing are painful.
- Turning in bed or lifting a leg are painful and may interrupt sleep.
- When present it is unlikely to resolve spontaneously

**THE SOLUTION**

A Gilmore's groin surgical repair, the insertion of a surgical mesh to strengthen the abdominal wall, is a highly successful means of treating

this problem (figure 5). Consultant surgeon Mr Gerry McEntee who has performed a large number of these operations for more than 15 years has found that careful selection of those who undergo the procedure, smaller incision size and active rehabilitation post-op has led to an improvement in rehabilitation time.

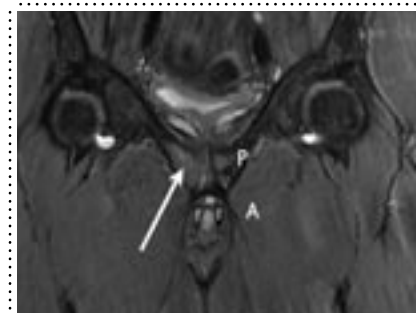


**Figure 5**

**THE PROBLEM**

Excessive strain at the pubic symphysis due to unbalanced muscle function (as per figure 1) leads to strain and swelling in the pubic bone. Osteitis pubis results in pain and prolonged loss of performance.

- Pain is usually central over the base of the penis, though it may radiate up into the abdomen, down into the groin or behind the scrotum.
- Pain is a dull, deep pain, worse after match/training.
- performance is affected from early on with this condition.



**Figure 6** MRI of the pelvis showing pubic bone swelling (osteitis pubis) P=pubic bone, A= acetabulum.

**THE SOLUTION**

As this is an overuse injury, rest and off-loading of the painful area are the key treatment components. Exercises which must be performed without pain focus on all the key groups featured in figure 1. Where pubic bone stress injury is confirmed on MRI (figure 6), innovative intravenous treatment aimed at decreasing osteoclast (a cell in the body responsible for bone turn-over) activity has shown exciting results in the treatment of this condition.

Knowledge is power, not knowing what to watch out for means preventable injuries continue to be a problem. When players and coaches know how to recognise the signs of early groin pain, help may be sought and many time-loss injuries avoided.

Other areas we will discuss in future editions of *The Player* include fitness screening and testing, functional testing in injury prevention (such as isokinetic testing and gait analysis), and a discussion of other chronic injuries such as tendinopathy (disease of tendons such as the patella, achilles, and tennis elbow). ■