Chronic groin pain in an athlete: an unusual presentation

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Abstract

Persistent disabling groin pain in an active sportsman is a frustrating diagnostic and management problem for both the athlete and physician. After clinical examination and investigation there remains a group of patients who have unexplained groin pain, and may undergo lengthy periods of conservative management with numerous radiological investigations. Here we highlight such a case.

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Case report

A 32 year old sportsman had a nine year history of intermittent right iliac fossa and right groin pain. His symptoms had initially developed after a rugby match in which there was no history of trauma. The pain would become worse in the evening after a match, especially after alcohol. It was relieved by lying flat and taking non-steroid anti-inflammatory drugs. In between the episodes he was asymptomatic, but as a result of the pain he was forced to stop playing rugby.

In the past, clinical examination had shown a tender fullness in the right iliac fossa and he was therefore investigated for possible Crohn's

disease. Barium studies of the large and small bowel were, however, normal. An abdominal ultrasound scan was arranged but he failed to attend.

He was seen by a rheumatologist; examination showed no abnormality and no bony tenderness was noted. Resisted movement failed to reproduce the pain. Plain pelvic and lumbar spine x rays were unremarkable, and a bone scan was reported as "normal" (fig 1). As there was no evident cause for the pain, he was referred for physiotherapy. A few months later, he presented as an emergency with an acute exacerbation. On examination, the abdomen was soft, but there was marked local tenderness in the right groin and iliac fossa, without guarding. The hernial orifices were intact. He was treated successfully with bed rest and analgesia. All initial investigations (blood tests, mid stream urine and abdominal x ray) were normal.

An intravenous urogram showed a vague area of increasing density in the right hemipelvis (fig 2), and a normal left renal tract. Ultrasound showed gross hydronephrosis with marked cortical thinning in the right pelvic kidney, and an isotope renogram

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Figure 1 Isotope bone scan showing an area of increasing activity adjacent to the bladder.

Figure 2 Intravenous urogram showing prompt excretion from the left kidney, with a nephrogram in the right hemipelvis.

diethylenetriaminepentaacetic acid (DPTA) confirmed obstruction with poor function (5%).

He has subsequently undergone a right pelvic nephrectomy with an unremarkable recovery. Histology confirmed a hydronephrosis secondary to a pelviureteric junction (PUJ) stenosis. At six weeks follow up, he was well and asymptomatic.

Discussion

Groin pain is a common problem among sportsmen and athletes;^{1,2} its management must be based on an accurate diagnosis. Acute conditions such as strains, hernias, and muscle ruptures are easily diagnosed and adequately treated. However, in many cases the pain develops gradually with uncharacteristic symp-

toms, which may be diffuse and non-specific, making the differential diagnosis very difficult.

Defects in embryological renal development may lead to ectopic or maldeveloped renal systems. The kidneys arise from the lower pole of the urogenital ridge and migrate upwards during fetal development. Failure of migration results in a pelvic ectopic kidney.³ The problems associated with pelvic kidneys usually relate to impaired urinary drainage with secondary obstruction or stone formation. They are also more susceptible to minor trauma. In the adult, presentation is typically that of pain especially after a fluid load (Brewers kidney). An ectopic kidney must be considered if an unsuspected mass is palpated in the abdomen. Diagnosis may be made by ultrasound scan, and obstruction confirmed by intravenous urogram and isotope studies.

This case highlights three important points. Firstly, pain precipitated by a fluid load (alcohol) should make one suspect PUJ obstruction. Secondly, an ultrasound scan should be high on the list of investigations for any mass. This was arranged but the patient failed to attend. Finally, it is important to review the imaging, as errors are occasionally made in reporting. Had the bone scan been reviewed, the large area of increased activity in the right hemipelvis might not have been dismissed as bladder.

In conclusion, we present an unusual cause of abdominal and groin pain in a sportsman. It demonstrates the importance of good clinical history taking and examination in order to develop a working diagnosis and plan of investigations. Not all pains in sportsmen are necessarily related to injury.

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- 2 Smolaka VN. Groin pain in soccer players. *Physician and Sportsmedicine* 1980;8:57-61.
- 3 Whitfield HN, Hendry W. Congenital disorders of the kidney. In: *Textbook of genito-urinary surgery*, 1985;1:140-1.