

## Unusual presentation of more common disease/injury

## When a groin lump is more than a simple groin lump

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## Summary

Groin lump secondary to avulsion fracture of the adductor muscles of the middle thigh in the absence of any hernia is rare. The authors discuss a case of a young footballer who presented with a painful groin swelling. Surgical exploration revealed that the cause of the lump was an avulsion fracture of the adductor muscles.

## BACKGROUND

Avulsion fracture of the adductor muscles of the middle thigh is a rare phenomenon.<sup>1</sup> We report a case of a footballer with such a fracture presenting as a groin lump as a result of physical exertion.

## CASE PRESENTATION

A 23-year-old male footballer developed a painful swelling in his right groin during sports practice. It occurred while sprinting and appeared in his right, medial groin. On examination, the lump was 2 cm in diameter, tender to touch and irreducible. There was no cough impulse and the thigh was fixed in external rotation. Adduction of the thigh was especially painful and he found it difficult to weight-bear. Abdominal examination was negative and both abdominal x-ray and blood tests were within normal limits. A diagnosis of an incarcerated groin hernia was made and he was referred to the surgical team on-call.

## DIFFERENTIAL DIAGNOSIS

This includes inguinal and obturator herniae, saphena varix, enlarged lymph gland and psoas abscess.

## TREATMENT

The patient was kept nil by mouth and resuscitated with intravenous fluids. Urgent exploration of the groin was via a high inguinal approach. Haemorrhagic contusions were noted in both the subcutaneous fat layer and inside the inguinal canal but no evidence of either a direct or an indirect inguinal hernia was found. Further exploration revealed a blood clot-filled cavity, below the inguinal canal and extending to the medial superior thigh, within which a 1-cm bone fragment was found attached to the adductor muscles. After taking orthopaedic advice, the fragment was excised and the wound closed.

## OUTCOME AND FOLLOW-UP

The patient recovered well and was discharged home 24 h later with oral analgesia and instructions to avoid heavy lifting for the next 2 weeks.

## DISCUSSION

Diagnosis of groin lumps can be challenging to physicians of every grade. Detailed attention should be paid to the history and the exact characteristics of the lump during clinical examination. The physical appearance of the lump, its reducibility, presence of cough impulse and neurological examination will all aid in differentiating a hernia. A vascular examination is mandatory if saphena varix, femoral aneurysm or pseudo-aneurysm is suspected. Fever, night sweats and weight loss suggest lymphoma whereas the presence of infection alone would be more suggestive of a pelvic collection.

Adductor avulsion fractures presenting as groin lumps are rare. The adductors consist of the medial thigh muscles and are attached proximally to the anteroinferior exterior of the bony pelvis and distally to the linea aspera of the femur.<sup>2</sup> As yet, we can find no reference to this in the literature. Adductor strain and resultant groin pain is one of the commonest conditions in athletes.<sup>3</sup> In football players, groin injuries occur in 11–17 per 100 athletes, of which 61% are due to adductor muscle strain.<sup>4</sup> Painful adduction of the thigh against resistance and tenderness on palpating the muscle are pathognomonic of this condition.<sup>5 6</sup>

## Learning points

- ▶ Diagnosis of groin lumps in athletes can be complicated by the complex musculoskeletal anatomy.
- ▶ Adductor strain is very common in athletes with various presentations.
- ▶ When forming a differential, one must think beyond the surgical sieve and not forget that a groin consists of muscle and bone as well.

Competing interests None.

Patient consent Obtained.

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Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Malietzis G, Tang CB, Makris G, Graja T. When a groin lump is more than a simple groin lump. *BMJ Case Reports* 2011;10.1136/bcr.12.2010.3607, date of publication

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