Painful incarcerated hernia following a rugby union lineout

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Abstract

Discussion related to hernias in sport usually involves the diagnosis and treatment of chronic musculotendinous groin disruption. A case of acute trauma in an incarcerated inguinal hernia, occurring in a rugby union player during a lineout, is presented. The injury arose as a result of a change in the laws of the game.

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The literature on groin hernias in sportsmen is primarily concerned with chronic groin pain, its diagnosis and treatment. Diagnosis in such cases is often difficult, with a paucity of clinical signs. The pathophysiology and treatment of groin disruption, the so-called Gilmores groin¹ or sportsman's hernia², is the subject of some debate.

Acute complications of inguinal hernias in patients participating in sport are rare, although the presence of an inguinal hernia is a common finding in the general population.³ Hernias in younger men are probably a result of a congenital predisposition that may be exacerbated by work or sport due to episodes of increased intra-abdominal pressure.⁴

We report a case of an acutely painful incarcerated inguinal hernia secondary to direct injury during a contact sport.

Case report

A 35 year old professional rugby union player was playing at second row in a Welsh Premier Division match. During a lineout the player jumped into the air in order to catch the ball and was supported in that position by team mates holding his shorts (fig 1). During the lineout play the player subsequently fell to the ground. He managed to regain his feet but felt an acute pain in the groin and asked to leave the field. He was able to walk off the pitch without assistance.

Medical examination by the authors immediately after the injury disclosed tenderness around the inguinal ligament, particularly over the superficial inguinal ring and a tender swelling extending into the scrotum. No cough impulse was present and there was no abdominal tenderness. Both testes were palpable but non-tender. At subsequent medical review twenty minutes later the pain had not improved and the player was admitted to hospital.

An ultrasound scan was performed which showed gross scrotal oedema and haemorrhage and an inguinal hernia containing a loop of

small bowel. Full blood count showed a white cell count of 15.5 g/dl with neutrophilia.

Surgical exploration was performed within six hours of admission. At operation a large incarcerated indirect inguinal hernia containing omentum and a loop of small bowel was found. Significant haematoma of the spermatic cord was present. No evidence of bowel strangulation or obstruction was noted. Both testes were found to be normal. The hernial contents were released and reduced and a mesh repair was performed.

The patient made an uneventful recovery and was discharged 48 hours after the operation. He returned to league rugby five weeks later with no significant complications.

Discussion

Injury during rugby union is well recognised because of its high level of contact especially during tackling.⁵ Scrummage and lineout are essentially set piece plays to restart the game but again involve contact with both opponents and team mates.

The lineout has recently been the subject of experimental variations in the rugby union laws.⁶ Law 23B(15) states "When a line-out is taking place, any player in the line-out must NOT: (g) lift a player of his team; or (h) support any player of his team before this

Figure 1 Player held supported by his shorts during a lineout.

player has jumped for the ball; or (i) hold a supported player below the waist". Interpretation of this law by referees has permitted the supporting of lineout jumpers using their shorts (Welsh Rugby Union Director of Refereeing, personal communication), and such practice is actively encouraged internationally by coaches.

Apart from direct trauma to the groin area, the player is also placed in a more unstable position in mid air by being supported caudally.

Further reports of injury during this manoeuvre may necessitate a review of this interpretation of the law.

The cause of the painful hernia in this case may be multifactorial. It is postulated that the exertion of jumping may have increased the size of the hernia as intra-abdominal pressure rose. Direct trauma to the hernial contents during lifting occurred as the shorts were pulled into the groin and subsequent pressure from the localised haematoma is likely to have contributed.

The risk of complications in an inguinal hernia is well recognised. Surgical repair of a groin

hernia as an elective procedure carries almost zero mortality⁴ and little morbidity.⁷ In a professional sportsman little time is lost from activity after the operation.

It is our opinion that patients with inguinal hernias who participate in sport that exposes them to direct trauma or that raises intra-abdominal pressure should undergo herniorrhaphy to avoid potential serious complications.

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Bungee jumping: is it safe?

In bungee jumping participants leap off a raised launch site, most commonly a tower, crane, or hot air balloon, and fall freely until arrested by a bungee cord made up of multiple strands of tightly bound rubber. Over the past decade the activity has become increasingly popular. The popular press has reported several deaths and serious injuries related to bungee jumping. In 1994 we surveyed jumpers at a professionally run bungee jumping site, in which the participants jumped off a fixed 130 foot structure.¹ We found that almost half (42%) of the jumpers had a medical complaint after jumping. These complaints included six headaches, seven episodes of blurred vision, 21 episodes of dizziness, one episode of transient numbness of the leg, and 21 muscular pain complaints (two neck, three back, one chest, 12 ankle, and three abdominal). However, except for a person who changed his mind mid-launch and suffered multiple lacerations to the arms and legs as he tried to grab the platform, these complaints were minor and had resolved within one week of jumping. Thus we conclude that a single bungee jump under professional supervision is relatively safe.

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