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Case Report

Pectoralis Major Tendon Rupture in a Rugby Player-Clinical Case

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Abstract

Pectoralis Major (PM) is a muscle-tendon unit that connects the anterior chest wall with the upper member. Indirect trauma is the most common mechanism of injury in athletes. We present a case of acute failure of PM 1 week of evolution and review the literature on the most appropriate treatment of such injuries. Full injury MP in osteotendinous junction is primarily surgical treatment, through the reinsertion of the tendon, allowing a morphological restoration of the thoracic region, and a full functional recovery of the affected upper limb.

Keywords: Pectoralis Major; Shoulder; Shoulder Injury; Tendon; Tendon Rupture; Treatment

Introduction

The Pectoralis Major (PM) is a muscle-tendon unit that connects the anterior chest wall with the upper limb. It consists of two beams, the upper part (clavicular head) and the bottom (sternal head) [1]. Complete rupture of the tendon of the PM was described for the first time by Patissier in 1822 [2-3]. The most common mechanism of injury in athletes is the indirect trauma to the shoulder positioned in extension and lateral rotation, resisting forces in the anteroposterior direction [4,5]. Although the clinical diagnosis is sovereign, magnetic resonance imaging and ultrasound examinations are important to define the location and extent of injury, both in acute and in chronic [6]. The aim of this paper is to present a case of acute failure of PM 1 week of evolution and review the literature on the most appropriate treatment of such injuries.

Case Report

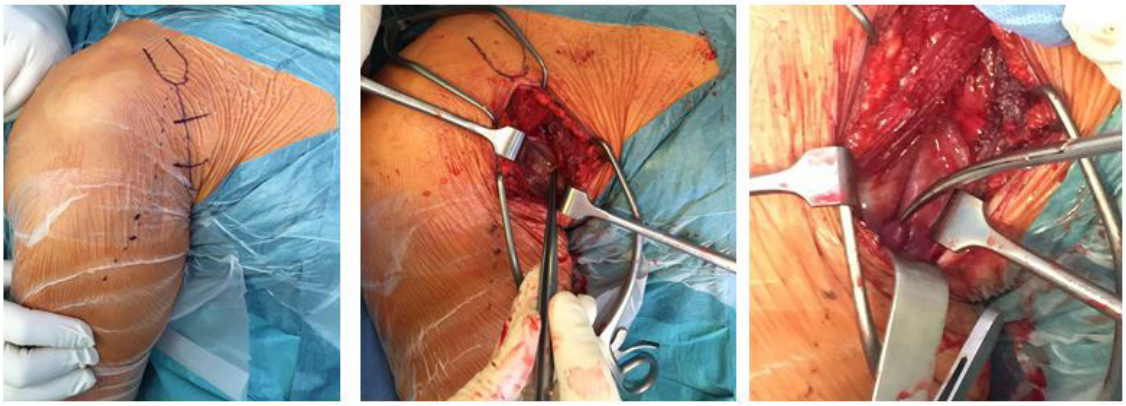
We report a case of a man, 28 years old, rugby athlete with no consumption of drugs, including anabolic steroids. He appealed to the emergency room by shoulder trauma, with one week of evolution. The objective examination revealed pain on palpation, bruising and swelling of the anterior axillary region with loss of anterior axillary prominence, inferior ipsilateral nipple and functional limitation of adduction and internal rotation (Figures 1-3).

Figures 1-3: Bruising and swelling of the anterior axillary region with loss of anterior axillary prominence and inferior ipsilateral nipple.

Ultrasound and magnetic resonance imaging (Figures 4-7).

Figures 4-7: Magnetic resonance imaging confirmed the location and extension of the lesion.

confirmed the location and extent of injury. He underwent surgical treatment with Endobutton (Arthrex Pec Buttons®, USA) (Figures 8-10).



Figures 8-10: Intraoperative Images: He underwent surgery with Endobutton (Arthrex Pec Buttons®, USA) for attachment of the tendon.

For fixing the tendon, uneventfully in the immediate or late postoperative period. In the final evaluation, at 6 months of follow-up, he presented full range of motion without pain or weakness, with return to sport, getting excellent results according to the SF-36 and DASH scores (Figures 11-15).

Figures 11-15: Postoperative Images: The patient, in the final evaluation at 6 months of follow-up, presents with full range of motion, without pain or weakness, obtaining excellent results according to the SF-36 and DASH scores.

Discussion

Complete rupture of the tendon of the PM results usually of a traumatism with at least 48% of the cases occurring with weight training. It is a rare pathology with 365 cases reported to the year 2010, 75% of which in the last 20 years [7,8]. Since the initial publications we discuss the type of treatment. Good results were presented either with conservative treatmentt, either with the surgical treatment, but in the last decades, ssurgical treatment seems to present better results than conservative treatment, particularly for patients who wish to again strength for sport or for the work. The evidence is even greater when those are athletes [9-18] The results of surgery in the acute phase (less than 3 or 6 weeks post-rupture, depending on the authors) are superior to the results of surgical treatment in the chronic phase [19-21]. There are several techniques described for reinsertion of PM, being the most frequent: the suture top-to-top, transosseous suture, screws, anchors, cortical button system, associated with each other or with the use of auto /allograft. So far, there is no evidence and sufficient information on the best technique of PM reintegratetion [8] Conservative treatment is usually reserved for elderly patients, the partial rupture or muscle tears and lower patient demand [22,23].

It was reported excellent results in about 27% of conservatively treated patients [24] Although the pectoralis major muscle is not necessary for the activities of daily living, most authors conclude that surgery is indicated in all young and active patients, regardless of the lesion chronicity [24-28] The total PM tendon rupture in athletes, as occurred in this case, presents the best results with surgical treatment compared with conservative treatment. [29-31] Full injury MP in osteotendinous junction is best treated with surgical treatment, through the reinsertion of the tendon, allowing a morphological restoration of the thoracic region, and a full functional recovery of the affected upper limb.

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