REV BRAS ORTOP. 2016;xxx(xx):xxx–xxx

SOCIEDADE BRASILEIRA DE ORTOPEDIA E TRAUMATOLOGIA

RBO REVISTA BRASILEIRA DE ORTOPEDIA

www.rbo.org.br

Case report

Simultaneous bilateral patellar tendon rupture☆

Diogo Lino Moura, José Pedro Marques, Francisco Manuel Lucas, Fernando Pereira Fonseca*

Department of Orthopaedics, Coimbra Hospital and University Center, Coimbra, Portugal

ARTICLE INFO

Article history:
Received 22 March 2016
Accepted 28 March 2016
Available online xxx

Keywords:
Patellar ligament
Rupture, spontaneous
Tendon injuries
Steroids
Rehabilitation

ABSTRACT

Bilateral patellar tendon rupture is a rare entity, often associated with systemic diseases and patellar tendinopathy. The authors report a rare case of a 34-year-old man with simultaneous bilateral rupture of the patellar tendon caused by minor trauma. The patient is a retired basketball player with no past complaints of chronic knee pain and a history of steroid use. Surgical management consisted in primary end-to-end tendon repair protected temporarily with cerclage wiring, followed by a short immobilization period and intensive rehabilitation program. Five months after surgery, the patient was able to fully participate in sport activities.

Rupturas bilaterais simultâneas dos tendões patelares

Palavras-chave:
Ligamento patelar
Ruptura espontânea
Traumatismos dos tendões
Esteroides
Reabilitação

RESUMO

As rupturas bilaterais dos tendões patelares são uma entidade rara, muitas vezes associadas com doenças sistêmicas e tendinopatia patelar. Apresentamos um caso raro de um homem de 34 anos com rotura bilateral simultânea dos tendões patelares causada por trauma leve. O paciente é um jogador de basquetebol aposentado, sem queixas de dor crônica do joelho e com história de consumo de esteroides. O tratamento cirúrgico consistiu na reparação tendinosa primária de ponta a ponta, protegida temporariamente com banda de cerclage, seguida de curto tempo de imobilização e programa intensivo de reabilitação. Aos cinco meses após a cirurgia, o paciente era capaz de participar sem restrições em atividades desportivas.

☆ Work performed at the Orthopedics Department, Coimbra Hospital and University Center, Coimbra, Portugal.

* *Corresponding author.*
E-mails: dflm12345@gmail.com, dflmoura@gmail.com (D.L. Moura).

http://dx.doi.org/10.1016/j.rboe.2016.03.006

Please cite this article in press as: Moura DL, et al. Simultaneous bilateral patellar tendon rupture. Rev Bras Ortop. 2016. http://dx.doi.org/10.1016/j.rboe.2016.03.006

Introduction

Disruption of knee's extensor mechanism is not unusual and affects the patella bone more frequently.[1,2] Bilateral simultaneous ruptures of the patellar tendons are rarely seen and have only been documented in case reports.[1,3,4]

Case presentation

We present a 34-year-old black male that after a sudden running stop with both knees in slight flexion associated with a twisting movement, he experienced failure sensation and a severe sharp pain in both knees. He fell to the ground and was unable to stand and walk.

At the emergency orthopedic department the patient referred bilateral knee pain and tenderness. Both knees displayed some superficial abrasions and a mild effusion. A bilateral infrapatellar gap with cephalic migration of both patellae could be felt. Active straight leg raising test was negative for both extremities and the patient was unable to perform active extension of both knees. Neurovascular examination was unremarkable.

The presumptive clinical diagnosis of bilateral rupture of the patellar tendon was made.

The patient had been a professional basketball player from 18 to 25 years old and practiced competitive weightlifting until 30 years old. He admitted having taken a few cycles of oral and injectable steroids during the weightlifting competitive practice time. Currently, he is a bouncer and a recreational weightlifting practitioner. The patient assured not having taken steroids or any other supplements for the last three years. He reported no previous injuries to his knees and denied chronic knee pain. At the time of the trauma, the patient body type was athletic, weighing 120 kg and was 192 cm tall.

The X-rays showed cephalic patellar migration and small calcification avulsions of the inferior poles of both patellae. An isolated undisplaced spiral fracture of the left fibular neck was also identified (Fig. 1). Ultrasound confirmed total bilateral rupture of the patellar tendons. Intraoperatively we found both tendons torn in their substance near the inferior patellar poles, with some segments avulsed from the patellar insertion. Lateral and medial retinacula were disrupted bilaterally. An end-to-end primary Kessler-type tendon repair reinforced with intraosseous sutures was performed in both knees. We temporarily protected it with cerclage wiring, followed by immobilization with a leg cylinder cast. We chose a nonabsorbable monofilament loop suture that allowed a proper tendon suture tension, by its second passage through the middle of the loop (Fig. 2). The tension within stitches was carefully adjusted to avoid shortening of infrapatellar length, according to the patellae position. The ruptured retinacula were repaired with Vicryl sutures. The strength of the repair was tested by careful flexion of both knees (Fig. 3). Cerclage wiring was applied in a figure-of-eight tension band running around the superior pole of the patellae, passing in front of the tendon, fixed with a transverse screw through the tibia tubercle and tied at average 60° of knee flexion (Fig. 4).

Fig. 1 – Lateral projection knee radiographs after bilateral patellar tendon rupture, showing cephalic patellar migration ("patella alta"), avulsion fractures of inferior poles of both patellae and an isolated undisplaced spiral fracture of the left fibular neck (left side).

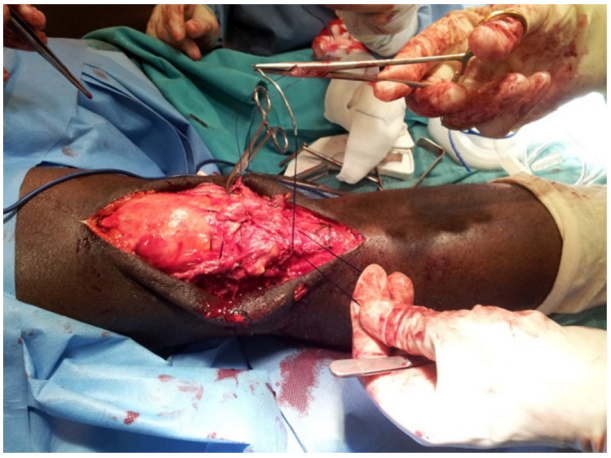

Fig. 2 – Bilateral patella tendon rupture at surgery: monofilament loop suture that allowed, by its passage in the middle of the loop, a proper tendon suture tension.

Fig. 3 – Flexion knee movement testing the sewing integrity and resistance.

Please cite this article in press as: Moura DL, et al. Simultaneous bilateral patellar tendon rupture. Rev Bras Ortop. 2016. http://dx.doi.org/10.1016/j.rboe.2016.03.006