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Comminuted avulsion fracture of the inferior patellar pole combined with patellar-tendon rupture in an elite football player: A case report

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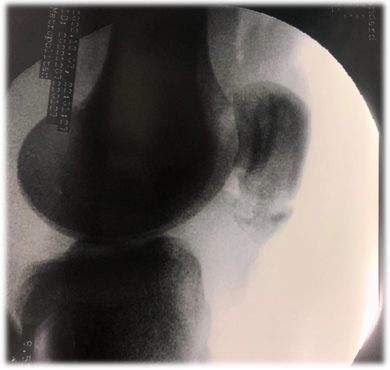
Introduction

Patellar fractures account for 1% of all skeletal fractures. Patella plays an important role in the extensor mechanism of the knee, as it functions like a lever arm for the quadriceps muscle and is critically important in preserving the required strength for elite athletes. Displaced comminuted patellar fractures are often presented along with patellar-tendon rupture requiring surgical treatment usually with two or more fixation techniques to achieve appropriate stability and fracture union. Although there are several kinds of fixation techniques that can be performed, when an elite athlete sustains this type of injury, treatment remains a challenge for the orthopedic surgeon.

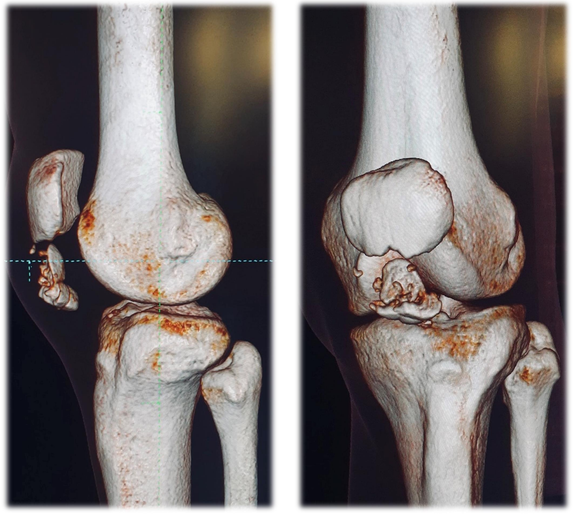
Purpose of the study

The purpose of this study is to present another type of fixation technique in a comminuted avulsion fracture of the patella in combination with patellar-tendon rupture in elite-athletes.



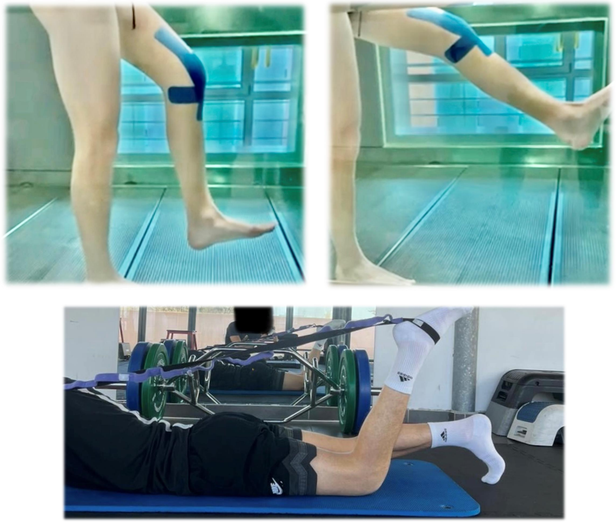
Case report

We present a young Super League 2 football player who sustained a comminuted avulsion fracture in the inferior pole of the patella combined with patellar-tendon rupture on his left knee joint. We proceeded in internal fixation of the fracture without using any type of metal implants, as rope, K-wires, or anchors aiming to avoid reoperation for implant removal and being able to perform an MRI-scan. We performed fracture reconstruction and patellar-tendon stabilization by bone tunnels using non-absorbable No2 fiber wires in combination with two cerclage fiber tapes.



Conclusion

This type of fixation technique offers an opportunity to full recover and returning to play without decline in the athletic performance in elite athletes sustaining comminuted patellar fractures combined with patellar-tendon rupture.



Results

By proceeding in this fixation technique we avoided both the complication of patella baja as also the removal of the comminuted bone fragments, as we had to manage with a young elite football player. The injured player demonstrated excellent clinical, radiological and functional results returning to play without any change in his overall athletic performance.