Platelet-rich plasma to treat patellar tendinopathies: a 1 year follow-up

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Background:

Jumper's knee is a frequent chronic overuse syndrome of the upper part of the patellar tendon[1]. Platelets contain lots of growth factors which could enhance the healing process of tendons[2]. Infiltration of Platelet Rich Plasma (PRP) may be considered as a recent therapeutic option for chronic tendinopathies. The aim of the current study is to evaluate the clinical status and the return to sports activities in patients with chronic upper patellar tendinopathies up to 1 year after 1 infiltration of PRP.

Methods:

Twenty patients with chronic upper patellar tendinopathy were enrolled. Assessments were made before infiltration of PRP, and 6 weeks and 3 months and 1 year after the infiltration, using a 10-point Visual Analogic Scale and algofunctional scores (IKDC and VISA-P). Moreover, they had to answer an information questionnaire concerning their life and sports activities. The PRP was obtained with an apheresis system (COM.TEC, Fresenius)[3]. Six millilitres of PRP were injected without local anaesthetic. One week after infiltration, patients started a standardised sub-maximal eccentric reeducation[4].

Results (Fig. 1):

Pain during daily activities significantly decreased with time. VAS has significantly dropped, IKDC and VISA-P significantly improved over the follow-up of 1 year. Seventy percents of patients reported a favourable evolution with decrease of pain, 15% did never report any improvement and 15% were treated surgically. Seventy percents returned to sports activities, 64,3% without any pain, and 50% of them recovered the same sport level. Younger patients seemed to be more susceptible to have an improvement of pain by the PRP infiltration.

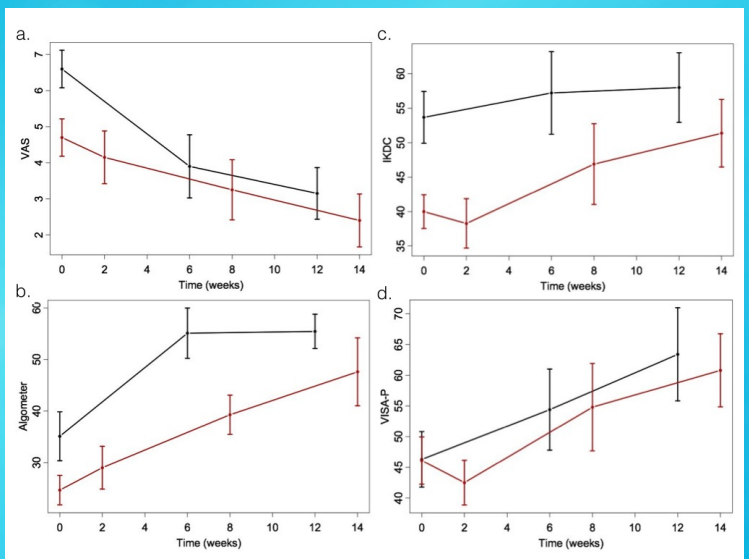

Fig. 1: Results for (a) VAS, (b) algometer, (c) IKDC, (d) VISA-P

Conclusions:

This study demonstrates that a local infiltration of PRP associated with a submaximal eccentric protocol can improve, at 1 year, symptoms of chronic jumper's knee in patients non-responsive to classical conservative treatments.

References:

1. Kaux J-F et al. **Current opinions on tendinopathie.** *J Sports Sci Med.* 2011 ; 10, 238-253.
2. Kaux J-F et al. **Platelet-rich plasma application in the management of chronic tendinopathies.** *Acta Orthop Belg.* 2013 ; 79, 10-15.
3. Kaux J-F et al. **One injection of platelet-rich plasma associated to a submaximal eccentric protocol to treat chronic jumper's knee.** *J Sports Med Phys Fitness.* In press.
4. Kaux J-F et al. **Description of a standardized rehabilitation program based on sub-maximal eccentric following a platelet-rich plasma infiltration for jumper's knee.** *MLTJ.* 2014 ; 4 : 85-89.