Tertiary prevention in athletes’ diseases: new challenges for the clinical medicine and the public health

Sir,

It is known that tertiary prevention includes all the interventions directed to people affected by a disease with the aim to stop the progression of it and the development of complications, and to reduce the pain. So the aim of the tertiary prevention is not only to act against the disease, but also to improve the quality of life. Quality of life (QoL) is a concept used to indicate the general wellness of persons or societies, including wealth and employment elements, environment, physical and mental health, education, recreation and belonging to a social group (1-3). Generally the tertiary prevention is directed to pathologies like myocardial infarction or tumors (4). We would like to focus the attention to a group of the population often excluded by this kind of prevention: the athletes. One of the most common conditions that could affect the athletes is the patellar tendinopathy. Pain in the proximal insertion of the tendon is the most common symptom of this disease. The pain symptoms, initially perceived as mere annoyance, have insidious trend and tend to worsen, limiting the physical activity. The disease is often of considerable gravity and forces the athletes to interrupt the sport activity for long periods. In severe cases, it forces the complete abandonment of athletic life (5). Obviously this could create a lowering in their quality of life. As shown by Yazicioglu et al., the participation in sports has a significant good effect on the quality of life and on general satisfaction about life (6).

Moreover, chronic proximal patellar tendinopathy is often refractory to nonoperative treatments, including activity modification, medications, and comprehensive rehabilitation (6). So the stress due to the unavoidable surgical intervention could further worsen athletes’ psychological and physical status. Some authors tried to reduce the pain, to give them a better quality of life and to reduce the discomfort due to surgical intervention, finding alternative non invasive solutions: Nanos et. al showed that percutaneous ultrasonic tenotomy combined with the injection of Platelet Rich Plasma (PRP) can be an effective option in the treatment of patients with chronic, proximal patellar tendinopathy untreatable with appropriate non operative interventions (7).

However, we still have some doubts about the benefits which could arise from these techniques (especially PRP) for patellar tendinopathy. From January 2015 to January 2016, in our hospital we tried to investigate the real effectiveness of this treatment, evaluating through the Visual Analogue Scale (VAS) the perception of pain in 8 patients (with a mean age of 30.6 years - range 19-50) with patellar tendinopathy, treated with PRP. The VAS score was used to evaluate some movements who generally evoke pain in patients with this pathology:

- to sit down
- to going downstairs
- to extend the leg
• to lunge on the leg with a full load (total personal weight)
• to squat
• to make ten jumps on the affected leg

Only 5 of these patients completed the full cycle of three infiltrations (one every 10 days); and after 6 and 12 months they were evaluated. 3 patients did not complete the cycle and were therefore excluded from the analysis. The control group was not created due to the scarcity of funds.

The VAS scores improved after 6 months and resulted essentially the same after 12 months. The Mann Whitney test showed that there was no significant difference in the results after 6 and 12 months compared to time zero (correct p> 0.05), and this result was due to the limited number of participants in the study.

A patient with chronic tendinopathy from more than 5 years underwent surgery. A 50 year old patient suffered complications due to the non reabsorption of the infiltration. Only a 20 years old patient had the full resolution of symptoms in 4 months after treatment.

Therefore doubts still persist about the real benefits of PRP for chronic tendinopathies: all the studies in fact were conducted enrolling a too small number of patients. We invite other colleagues to continue this research, collaborating with us in designing and performing a multicenter study, in order to do further investigations and analyses on a bigger sample (with a control group). This collaboration is fundamental to improve the effectiveness of this treatment, to reduce the incidence of complications, and especially to evaluate the real effectiveness of PRP as a viable alternative to surgery or to find alternative rehabilitative or curative solutions. The tertiary prevention applied to athletes is a new challenge for public health: to give them a chance to suffer less pain and to play sport again, is an important target to improve the quality of life of this category.

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