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Keywords: Platelt-rich plasma; PRP; Inflammation; Side effect

Introduction.– Infiltrations of plasma rich platelets (PRP) represent a new treatment of tendinopathies. Currently, no side effects were reported in this indication.

Case report.– We report the case of a 35-year-old type 1 diabetic patient with right upper patellar tendinopathy that had persisted for more than 6 months. The patient benefited from an intratendinous infiltration of 6 mL of PRP (8.10^5 platelets/mm^3, almost no red or white blood cells) after a carefully disinfection but without local anesthesia. Typically, a standardized program of sub-maximal eccentric rehabilitation should be started 1 week after infiltration. However, the patient experienced local swelling with erythema, increased heating and pain, which appeared just underneath the patella, without biological inflammatory syndrome. In absence of septic general symptoms, no blood or wound culture were made. At 2 weeks post-infiltration, a greatly increased Doppler signal in a thicker tendon was observed by ultrasounds compared to that before infiltration, but there was no sign of infection demonstrated by either MRI or CT. However, the local inflammation did not decrease after a 3-week treatment of local cryotherapy, local and oral NSAID, and adjunct use of colchicine 1 mg. Thus, an insidious infection was suspected, even though there was no evidence of biological inflammatory syndrome or sign of infectious lesion on imagery examination. Antibiotic therapy (rifampicine 600 mg + minocycline 100 mg), was initiated for three months. Due to a lack of improvement via imaging and clinical examination, a 3-phase bone scintigraphy was performed. The results suggested the presence of a complex regional pain syndrome type 1. The patient benefited from classical physical therapy and concomitant pain killers. The evolution was favorable after 6 months of treatment.

Discussion.– Even though PRP infiltration represents a new and promising treatment for tendinopathy, more studies are needed both to verify its clinical efficacy. Moreover, implementing this innovative treatment requires caution because of potential adverse events. Thus, the balance between benefits and risks must be carefully evaluated before using this treatment, especially in patients with type 1 diabetes.

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Low back pain in golfers: Research on the influence of the starting position

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Introduction.– Low back pain has a high prevalence in golfers. The strain on the lower back during the golf swing has been studied extensively through biomechanical models. An increased primary spinal angle (angle between a line from C7 to L4 through the spine and a line perpendicular to the floor) has been suggested as a risk factor for LBP in golfers. However, this hypothesis has never been tested.

The aim of this study is:

– to compare the mean primary spinal angle in golfers with and without low back pain;

– to determine whether a cut-off primary spinal angle-value exists at which the prevalence of low back pain increases.

Subjects and methods.– Fifty-five players were evaluated based on a questionnaire on low back pain and a measurement of their primary spinal angle in the starting position.

Results.– Twenty-eight and twenty-seven players were categorized as players with and without LBP respectively. The mean primary spinal angle for players with low back pain (45.47°) was significantly higher than for players without low back pain (41.62°) ($P = 0.017$). ROC-analysis indicated a primary spinal angle of 44° as the best cut-off value. 69% of golfers with a primary spinal angle less than 44° never had low back pain, while only 26% of players with a primary spinal angle greater than or equal to 44° never had low back pain.

Discussion.– This study shows that players with low back pain had a higher mean primary spinal angle than players without low back pain, and that the prevalence of low back pain increases in players with a primary spinal angle greater than or equal to 44°, making this angle a good risk factor to examine in every golfer with low back pain.

This knowledge together with further biomechanical evaluation of other low back pain-confounders involved in the swing could possibly lead to more focused technical and muscle training, preventing or treating low back pain in golfers.

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Functional popliteal artery entrapment and exercise-related leg pain: A novel treatment by botulinum toxin. A case description

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Keywords: Functional popliteal artery entrapment; Botulinium toxin; Exercise-related leg pain

Introduction.– Exercise-related leg pain is frequent in sport pathology. Functional popliteal artery entrapment, in absence of anatomical vascular or muscular abnormality, may be the cause. Its diagnosis is difficult, requiring the performance of dynamic tests. Surgical exploration confirms the absence of anatomical abnormality, but provides uncertain results from a therapeutic point of view. We report the case of a patient presenting with exercise-related leg pain, in link with bilateral functional popliteal artery entrapment, who was proposed a treatment by botulinum toxin injection in the gastrocnemius muscles.

Observation.– Patient X, 27-years-old, presents with typical exercise-related pain in the posterior side of both legs during running. He is initially treated for bilateral tibial periostitis, without any efficacy on pain at running resumption. After a two years evolution, Patient X underwent surgery of bilateral aponeurotomy of the antero-external compartments of the legs for an exercise-related compartment syndrome. No improvement is noted, and the patient remains very limited during effort. After 6 years of evolution, the diagnosis of bilateral functional popliteal artery entrapment is made and confirmed by the different static and dynamic imaging examinations. A right, then left surgical popliteal arteriolysis is performed, and allows a partial and transient improvement of pain. In view of the persistence of pain after 9 years of evolution, Patient X consults in our department. We then perform a botulinum toxin injection in two sites, in each gastrocnenius, after having reconfirmed the diagnosis of functional popliteal entrapment. At 18 months, the results are very positive, with absence of painful recurrence despite resumption of sport practice. The disappearance of signs of arterial compression during dynamic Doppler ultrasound is also noted, as well as an improvement of the indices of systolic arterial pressure in the ankles following effort.

Conclusion.– This observation highlights the difficulty to diagnose symptomatic functional popliteal artery entrapment. In view of limited therapeutic possibilities, the injection of botulinum toxin in the gastrocnemius muscles appears to be an efficient treatment. Further investigations are needed.

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Chronical diseases and athletes: Characteristics of amyotrophic lateral sclerosis

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