**Results.**– The first season: 9 out of 21 players showed abnormal isokinetic test, 7 players were injured (164 days of lay-off) (AT). The second season, 7 out of 21 isokinetic tests were abnormal, 7 players suffered injuries (92 days of lay-off).

Before the study, the average days of work-stoppage amounted to 225 days: higher frequency of injuries on the group with normal isokinetic assessment (41\% vs. 25\%).

**Conclusions.**– These results are encouraging to propose a systematic guideline for all players to prevent them from injuries since players with normal tests but without prevention underwent more injuries.

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**CO45-002-e**

**Interest of botulinum toxin in tendinopathies: Review of literature**

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**Keywords:** Tendinopathy; Botulinum toxin; Review of literature

Botulinum toxin is traditionally used for the treatment of focal spasticity or dystonia. Moré et al are the first to use botulinum toxin in musculoskeletal pathology for treating lateral epicondylitis in 1997. In the treatment of this tendinopathy, the muscle relaxant properties of botulinum toxin are used to rest the tendon and allow healing of entheses. Botulinum toxin is particularly useful in enthesopathy to reduce traction of the enthesis on the bone. We now know that the toxin has also analgesic effect by inhibiting release of neurotransmitters such as substance P or calcitonin gene related peptide. Other publications have confirmed the interest of botulinum toxin in this indication. Meta-analyses support the use of botulinum toxin in lateral epicondylitis. These two combined effects have extended the use of botulinum toxin in several pathologies such as plantar fascitis or poas tendinopathy. The relaxant effect of botulinum toxin, although transient, can be disabling by the paralysis of the injected muscle and limit its use only to certain tendinopathies.

To conclude, botulinum toxin can be a useful treatment option for certain tendinopathies, if we target the muscle to inject, we predetermine the dose and we use a specific method of injection.

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**Intrinsic risk factors of patellar tendinopathy among volleyball players – a prospective study about 29 cases**

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**Keywords:** Intrinsic risk factors; Patellar tendinopathy; Prevention; Volleyball

**Background.**– Patellar tendinopathy (PT) is a common and disabling disease among athletes, especially in sports with jumps such as volleyball.

**Objective.**– The aim of this study was to determine intrinsic risk factors of PT among volleyball players.

**Methods.**– This prospective study was conducted from August 2012 to April 2013. It included a clinical examination, ultrasound, muscle isokinetic assessment and tests of jumps beginning of the season and then only a clinical examination at the end of the season. Subjects who developed PT were compared to healthy subjects.

**Results.**– PT group athletes (6) were older (17.2 ± 0.4 years vs. 16.2 ± 0.9 years, \(P = 0.02\) and had a stiff of hamstrings higher (popliteal angle of 24° ± 12 vs. 14° ± 9°, \(P = 0.04\)) than healthy subjects (16). They had an eccentric quadriiceps peak torque at slow speed (30°/s) lower than healthy subjects (2.7 ± 0.2 Nm/kg vs. 3.2 ± 0.5 Nm/kg, \(P = 0.05\)).

**Conclusion.**– Age, stiffness of hamstrings and an eccentric strength deficit of quadriiceps at slow speed would be intrinsic risk factors of PT among volleyball players.

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