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.

http://dx.doi.org/10.1016/j.rehab.2014.03.972

CO39-008-e

Routine follow-up protocol evaluation after ACL reconstruction including the 3D gait kinematic and postural control analysis
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Keywords: Anterior cruciate ligament reconstruction; Knee; Postural control; KNEE-KG TM

Background.– The isokinetic muscular strength and anterior knee laxity assessment are the only exams recommended after an anterior cruciate ligament (ACL) reconstruction.

Objectives.– We assessed the interest in postural control and gait kinematic parameters evaluation after such a surgery.

Methods.– A prospective preliminary matched study was carried out to analyse the anterior knee laxity (KNEELAX 3TM), quadriiceps and hamstrings strength (BIODEX SYSTEM 3TM), postural control (SATEILTM) and gait kinematic parameters (3D analysis, KNEE-KGTM) in 18 patients after hamstring tendon ACL reconstruction.

Results.– In the ACL reconstructed group, the quadriiceps and hamstrings strength was significantly decreased at low speed (P = 0.03), a postural alteration was found in some stances including the non-operated side and the gait kinematic parameters were altered in sagittal (non-operated knees) and frontal planes (operated knees).

Discussion.– The knee laxity, muscular strength and postural control evaluation appears interesting before and after 3, 6 and 12 months from ACL reconstruction. The gait kinematic assessment using the KNEE-KGTM appears not practical enough for routine use and the analysis of the results on clinical practice was tricky.

http://dx.doi.org/10.1016/j.rehab.2014.03.973

CO45-001-e

Platelet-rich plasma (PRP) in sports medicine: A systematic review
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Keywords: Platelet-rich plasma; PRP; Tendinopathy; Sport medicine

Platelet-rich plasma (PRP) is a therapy, which was used since 20 years in stomatology but which is quite new in osteo-articular pathologies and especially in sports medicine and which is carrier of hope to improve clinical outcomes. The action is based on the injection of an autologue concentration of platelets, which, thanks to the release of growths factors contained in the platelets, will stimulate healing process. However, evidence for the efficiency of PRP is still not clearly proved and it might be depending on the indication (chronic tendinopathy, chondral lesions, muscular strain ...). Even in chronic tendinopathy, the efficiency might be different depending on the localization and the way of healing. So we present a literature review about PRP’s efficiency in several indications: lateral epicondyliitis, achilles and patellar tendinopathy, gonarthrosis and muscular strains.

http://dx.doi.org/10.1016/j.rehab.2014.03.974

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 epicondyliitis 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 epicondyliitis. These two combined effects have extended the use of botulinum toxin in several pathologies such as plantar fasciitis 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.

http://dx.doi.org/10.1016/j.rehab.2014.03.975

CO45-003-e

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 quadriceps 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 quadriceps at slow speed would be intrinsic risk factors of PT among volleyball players.

http://dx.doi.org/10.1016/j.rehab.2014.03.976