P255-e
Reliability of isokinetic measurements of the hip muscles strength
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Keywords: Reliability; Measurement; Hip; Muscles; Strength

Objective. – To evaluate the reliability of the isokinetic measurement of the hip muscles strength in the 3 cardinal planes, with different positions (sitting, lying and standing), a large spectrum of velocities and during concentric and eccentric movement.

Methods. – Sixty healthy subjects, aged 18 to 35 years, dispatched within 3 groups of 20 subjects (lying flexion-extension/abduction-adduction; standing flexion-extension/abduction-adduction; sitting medial-lateral rotation) have been evaluated twice at 1 week interval. The tested velocities on a Biodex S4 Pro dynamometer were 30, 60, 90, 120, 180 and 240 °/s for concentric mode, 30 and 60 °/s for eccentric contraction.

Results. – The overall reliability, evaluated with the Intraclass Coefficient Correlation (ICC), has been estimated excellent for lying flexion-extension and abduction-adduction, good to excellent for standing position and rotation movements. However, the reliability varied depending on the velocities and the concentric or eccentric mode.

Discussion. – The assessment of the reliability of the isokinetic measurement of the hip muscles strength with different conditions (position, velocity, concentric or eccentric contraction) enables us to choose for each protocol the conditions allowing the best reliability.

http://dx.doi.org/10.1016/j.rehab.2014.03.1001

P256-e
Functional improvement after arthroscopic meniscectomy in patients with degenerative versus traumatic meniscal lesions
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Keywords: Degenerative meniscal lesions; Traumatic meniscal lesions; Meniscectomy

Objective. – The aim of the study was to compare the functional improvements after rehabilitation programme on two groups of patients with degenerative meniscal lesions and traumatic meniscal lesions after arthroscopy.

Methods. – We studied two groups of patients, each group with 30 patients with similar social and demographic characteristics. The first group consisted of patients with traumatic meniscal lesions and the other one with degenerative meniscal lesions. After arthroscopic meniscectomy the patients were included in an individualized rehabilitation programme in order to improve their functional capacity by improving knee mobility and muscular force. We applied Tagner-Lysholm knee scale before and after the rehabilitation programme on each patient.

Results. – After rehabilitation programme each patient achieved a higher score on Tagner-Lysholm scale but the group of patients with degenerative meniscal lesions had less improvements compared with the other group especially in limp, instability, swelling, stair-climbing and squatting items.

Discussion. – The functional improvements of patients from second group are less then those from the first group, differences between the two groups are probably due to additional lesions of cartilage and other soft tissue which are present in degenerative meniscal lesion group.

http://dx.doi.org/10.1016/j.rehab.2014.03.1003

P257-e
The role of plantar pressure evaluation in rehabilitation of patients with Achilles tendon ruptures
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Keywords: Achilles rupture; Plantar pressure; Gait parameters; Kinetic therapy

Objective. – The objective of our study was to demonstrate the role of plantar pressure in establishing functional treatment of patients with surgically repaired Achilles tendon ruptures.

Methods. – We evaluated 10 cases of surgically repaired Achilles tendon ruptures using Zebris FDM system, a plantar pressure device running on capacitive forces sensors. It allowed us to analyze plantar pressure and also gait parameters. The assessment was made after cast removal and then after 1, 3 and 6 months of rehabilitation treatment.

Results. – The first evaluation was the base in establishing the rehabilitation treatment. We used an adapted, individualized kinetic therapy based on improving the gait parameters. After 3 months, the step length of the affected leg and the swing period increased and the step time decreased significantly. At the end of the 6 months of rehabilitation, there was a significant decrease of step time and enhancement of the walking speed and cadence. Regarding the plantar pressure, there was a better load of the lateral border, metatarsals heads and hallux.

Conclusions. – Zebris FDM system has an important role in establishing and managing rehabilitation treatment because it allowed us to work on specific improvements regarding gait parameters using an adapted kinetic therapy.

http://dx.doi.org/10.1016/j.rehab.2014.03.1004

P258-e
Isokinetic rehabilitation: Experience of physical medicine and rehabilitation university hospital Casablanca
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Keywords: Rehabilitation; Isokinetic

Background. – The isokinetic provides a reference method for evaluation of muscle strength and a valuable aid to rehabilitation.

Objective. – To report the experience of service MPR Casablanca on isokinetic rehabilitation.

Patients and methods. – This is a retrospective study over 6 months, about 13 patients for 17 joints reeducated by isokinetic.
Results.– Twelve of our patients were male; the mean age was 33.53 years. The knee was rehabilitated in 76% of cases, the shoulder in 18% of cases and elbow in 6% cases. Ligament in 33% of cases, meniscal syndrome in 28% of cases, hemiplegia in 17% of cases, tendinitis of the shoulder and knee cartilage lesions in 11% of cases. The average number of sessions was 13. We had made isokinetic evaluation before and after sessions of rehabilitation. Each patient underwent a muscle-building program concentric, eccentric with proprioception exercises adapted. There was a clinical improvement in our patients as well as various parameters isokinetic evaluation.

Discussion/conclusion.– Isokinetic is a powerful assessment and rehabilitation of various diseases tool.

Further reading
http://dx.doi.org/10.1016/j.rehab.2014.03.1005

P259-e

Acupuncture outpatient clinic’s first year of operation: Acceptance of the medical staff and patients
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Keywords: Acupuncture; Pain

Objective.– We present the wide acceptance of the acupuncture outpatient clinic of the department of rehabilitation medicine in KAT hospital in Athens. Methods.– In the current study we present the results of the first year of operation, from June 1st 2012 to May 31st 2013. The patients and the therapeutic protocols were chosen according to the indications of WHO. In the study period, 86 patients were selected and received 541 treatments of medical acupuncture. Results.– The increasing number of patients that were addressed to the medical acupuncture clinic was a result of recommendation of doctors or previous patients. Additionally, many patients have decided to have a second course of treatment.

Discussion.– The increasing number of new patients in this specific outpatient clinic proves the wide acceptance of medical acupuncture as complementary therapy in the management of pain.

Further reading
http://dx.doi.org/10.1016/j.rehab.2014.03.1006

P260-e

Early return in sports activity after bone bruise in the ankle by using a custom made orthotic
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Keywords: Orthotic insoles; Bone bruise; Baropodography

Background.– Bone bruise in the ankle is a sports injury that occurs in sports when multiple ligaments are injured after an ankle sprain.

Observation.– A 24-year-old world level high jump athlete complains for severe swelling and of the right ankle joint after landing from a jump. Clinical examination revealed ankle pain, with the athlete being unable to bear weight on his injured foot. Radiographic examination of the ankle joint did not detect any fracture. The athlete was prescribed painkillers and physiotherapies while the ankle was immobilized with a brace. Baropodography was performed and custom-made orthotic insoles were prepared for him after a 15 days brace immobilization. Proprioceptive exercises were instructed while wearing the insoles.

He was performing baropodographic evaluation every 12 weeks and new insoles were manufactured according to the results.

Results.– The pain was absent after 18 days wearing the orthotic insoles. He was able to return for training 7 weeks after the injury.

Conclusion.– Custom made orthotic insoles can help eliminate the period of immobilization of the ankle joint after a bone bruise. They can help also in the prevention of new injuries by changing the biomechanics of the foot.

http://dx.doi.org/10.1016/j.rehab.2014.03.1007

P261-e

Sural nerve injury after repair of a ruptured Achilles tendon: Case report and literature review
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Keywords: Achilles tendon; Surgery; Peroneal nerve injury

Background.– The rupture of the Achilles tendon has been known to increase incidence in 18 cases/100,000 per year depending on the series. In athletes, surgical repair is essential. After reviewed the literature from 1985 to 2013, no sural nerve’s injury post-surgery has been found. The objective of this event is to highlight the importance of paraclinical hierarchy to diagnose new post-surgical complications.

Observation.– A 36-years-old athlete consults after a ruptured Achilles tendon surgically treated by percutaneous tenosynostosis, for paresthesia of the outer edge of the foot. Clinical examination revealed an elective pain under the scar, an electromyogram exam found an axonal Sural nerve damage and ultrasound found a fascicular sural nerve interruption to the point of emergence of lateral cable.

Discussion.– This case shows a possible new lesion in the Achilles tendon surgery and in this context of post-surgical pain sequel, the clinician is often found to be inadequate and the provision of diagnostic tests is crucial block.

http://dx.doi.org/10.1016/j.rehab.2014.03.1008

P262-e

Value of the in vitro contracture test in exertional heat stroke investigation
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Keywords: Exertional heat stroke; Malignant hyperthermia; In vitro contracture test

Background.– Exertional heat stroke (EHS) is an encephalopathy occurring in a hyperthermic environment during intense and prolonged exercise, which can be fatal without appropriated treatment. One etiological hypothesis is based on a common pathophysiological link between malignant hyperthermia (MH) and EHS. This led to the search for MH susceptibility (MHS) by In Vitro Contracture Test (IVCT) in all French military subjects who experienced EHS in order to identify those who are at high risk of recurrence.

Objective.– To determine whether the HMS patients had a higher rate of recurrence than HMN patients.

Methods.– Retrospective cohort study based on the French military soldiers explored between January 2008 and December 2010. Patients were contacted by telephone for a semi-structured interview and by letter if no answer was retrieved.

Results.– Of the 213 patients contacted, 145 responses were obtained, representing 68%. HMS status was not associated with different anamnestic, clinical or biological features, a higher rate of recurrence or a more severe clinical pattern.