

**Keywords:** Diagnostic; Isokinetics

**Background.**– Isokinetics is a reliable and reproducible tool of evaluation and rehabilitation. We propose by an original observation, to show its interest and its place in the clinical examination.

**Observation.**– It is about a 32-year-old soldier, 190 cm for 117 kg, having presented brutally a sensation of deficit of muscular strength of the right upper limb, with neuropathic pains of topography C6. Considering the physical strength of the patient, the clinical examination does not allow to pronounce on a deficit of muscular strength, even by comparison, unlike an isokinetic test of the elbow flexors/extensors, which objectifies a deficit of strength of flexors of about 60% in concentric to the right compared with left. Finally, the EMG then a MRI will find a postero-side slipped disc C5–C6 right conflicting on right C6 and the patient will be operated.

**Discussion.**– This example illustrates the possibility of the use of the isokinetics in diagnosis as help to assert a partial muscular deficit of strength and to direct the therapeutic care as well as the follow-up of the recovery.

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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.

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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 Tegner-Lysholm knee scale before and after the rehabilitation programme on each patient.

**Results.**– After rehabilitation programme each patient achieved a higher score on Tegner-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 than 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 lesions group.

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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, metatarsal 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.

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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.