**Discussion**

The aim of this study is to evaluate the benefits of a rehabilitation program in terms of balance, gait and muscle strength in a population of patients with fascioscapulohumeral muscular dystrophy.

**Patients, material and methods.** It is a retrospective analysis of a cross-section of patients with FSHD. The patients received a rehabilitation program in the outpatient unit (Rothschild hospital, Paris, France) between 2010 and 2013. Each patient benefited of 20 sessions alternating two and three half-day per week, with physiotherapy (muscle building, balance with unstable platform, endurance), hydrotherapy and occupation therapy. A clinical and instrumental evaluation was systematically proposed before and after the program. Balance was clinically assessed using three scales (BBS, FRT, and TUG) and instrumentally evaluated using a stabilometer. Gait parameters were analyzed with the Locometre®, the muscle strength was quantified on an isokinetic dynamometer at the speed of 60°/s.

**Results**

Twenty-four patients (nine women and 15 men aged 21 to 70 years) were included in this study. After the rehabilitation program, there was a significant increase of the balance compared to evaluations using clinical tests: BBS (51.7 to 54.3 P < 0.001), TUG (9.58 to 7.91 s P < 0.001), an improvement of the spontaneous gait speed (3.14 to 3.43 km/h P = 0.015) and of the muscle strength (Q min +29.7%, HM min +28.8% and HM max +6%, P < 0.05).

No gain was observed for the stabilometric parameters, the fast gait speed and the quadriceps of the stronger limb.

**Discussion.**

Intensive rehabilitation in patients suffering from fascioscapulohumeral muscular dystrophy improves their balance abilities, muscle strength and spontaneous gait speed. The long-term vision of this study would be to evaluate the maintenance on middle run of the achieved capabilities and the efficacy of the rehabilitation on the frequency of falls.

**CO57-007-e**

**Space-time and kinematic gait analysis in patients in Steinert patients**

**Aim.** To analyse the gait of patients suffering from myotonic dystrophy (Steinert) from a space-time and kinematic point of view.

**Materials.** The gait analysis was carried out by using a video camera recorder (Sony®), an optoelectronic system allowing 3D movement reconstruction (Vicon® + Worstation® + Bodybuilder®) and a Clinical Gait Analysis Software (Polygon®).

**Patients.** Six patients (three women and three men) suffering from type-1 myotonic dystrophy followed in the tertiary neuromuscular diseases center Reims University center (Champagne Ardenne, France) and six healthy women (three women and three men).

**Methods.** All participants were asked to walk over 6 m at a spontaneous speed meanwhile both space-time (speed, frequency, step length) and kinematic (3D of hip, knee and ankle) parameters were recorded for further computations and analyses. Both patients gait kinematics and space-time parameters were compared to these of the healthy population.

**Results.** As regards space-time parameters, the step frequency was higher and the step length and speed were lower in patients compared to healthy population which served as a standard reference (P < 0.05). As regards kinematic data, a decrease of the pelvis forward tilting for both inclination and rotation (P < 0.05); an increase in hip extension and abduction, an increase in ankle flexion/extension and increase in foot rotation were reported.

**Discussion.** The space-time observations highlight results that are more likely to be related to falling risks. Kinematic analysis clearly showed muscular insufficiencies which are responsible of abnormal locomotion, that is; either an increased hip abduction/adduction angles highlighting hip stabilization insufficiency, or an increased hip extension highlighting a deteriorated posterior step [1,2].

**References**


**Communications affichées**

**Version française**

**P156-f**

**Utilisation de la toxine botulinique dans la prévention d’une déformation en varus du pied dans le cadre de la maladie de Charcot-Marie-Tooth : effets sur les paramètres de marche, à propos d’un cas**

**Keywords:** Rehabilitation; Fascioscapulohumeral muscular dystrophy; Gait; Balance

**Objectives.**

No gain was observed for the stabilometric parameters, the fast gait speed and strength (Q min +29.7%, HM min +28.8% and HM max +6%, (17.9 to 24.7 cm–2).

**Discussion.**

The space-time observations highlight results that are more likely to be related to falling risks. Kinematic analysis clearly showed muscular insufficiencies which are responsible of abnormal locomotion, that is; either an increased hip abduction/adduction angles highlighting hip stabilization insufficiency, or an increased hip extension highlighting a deteriorated posterior step [1,2].

**References**


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**CO57-006-e**

**Intravenous immunoglobulin treatment for post-polio syndrome: Results of a pilot study**

**Aim.** To determine the safety and efficiency of intravenous immunoglobulin in post-polio syndrome, by the mean of an open clinical trial.

**Patients.** A total of eleven patients, six men and five women, mean age 61 years (range 43–72 years), with established post-polio syndrome diagnosis according to Halstead and Rossi, were included in the study between July 2009 and December 2012.

**Methods.** All participants were asked to walk over 6 m at a spontaneous speed meanwhile both space-time (speed, frequency, step length) and kinematic (3D of hip, knee and ankle) parameters were recorded for further computations and analyses. Both patients gait kinematics and space-time parameters were compared to these of the healthy population.

**Results.** As regards space-time parameters, the step frequency was higher and the step length and speed were lower in patients compared to healthy population which served as a standard reference (P < 0.05). As regards kinematic data, a decrease of the pelvis forward tilting for both inclination and rotation (P < 0.05); an increase in hip extension and abduction, an increase in ankle flexion/extension and increase in foot rotation were reported.

**Discussion.** The space-time observations highlight results that are more likely to be related to falling risks. Kinematic analysis clearly showed muscular insufficiencies which are responsible of abnormal locomotion, that is; either an increased hip abduction/adduction angles highlighting hip stabilization insufficiency, or an increased hip extension highlighting a deteriorated posterior step [1,2].

**References**


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