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Keywords: Rehabilitation; Fascioscapulohumeral muscular dystrophy; Gait; Balance
Objectives.– 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 method.– 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 balance improvement validated by clinical tests: BBS (51.7 to 54.3 $P = 0.001$), FRT (17.9 to 24.7 cm $P < 0.0001$), TUG (9.58 to 7.91 s $P < 0.0001$), 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.

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

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Keywords: Post-polio syndrome; Intravenous immunoglobulin
Objective.– To determinate the safety and efficiency of intravenous immunoglobulin treatment 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 patients received intravenous immunoglobulin, tegeline 0,4 mg/kg per day, during five consecutive days every month for three to four months. Pain measured by visual analogue scale, muscle strength measured by manual testing and by quadriceps and hamstrings peak-torque using Con-Trex dynamometer, and walking performance analyzed by means of 6-minute-walk-test and 10-meters-walk speed, were noted before and after treatment.
Results.– Eight patients (73%) improved significantly all parameters, two patients (18%) felt an improvement without modification of clinical tests, and two (18%) had no change at all. The latter were the only patients who presented without any pain. One of them reported side effects with headaches, nausea and transient cutaneous eruption.
Discussion.– These data show that intravenous immunoglobulin seems to be a safe and efficient treatment of post-polio syndrome, especially when pain is one of the major symptoms [1]. Since a placebo effect cannot be excluded, a larger controlled randomized double blinded study is needed to confirm these preliminary results.
Reference
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Space-time and kinematic gait analysis in patients in Steinert patients

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Keywords: Myotonic dystrophia; Gait; Locomotion
Aim.– To analyse the gait of patients suffering from myotonic dystrophia (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® + Bodybuider®) 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
[1] Galli. et al. J Neurol Sci 2012;314:83–7.
[2] Missaoui. et al. Ann Phys Rehab Med 2010;53:387–98.

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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