The relationship of prosthesis usage, phantom pain and psychiatric symptoms in male traumatic limb amputees

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Keywords: Amputee; Prosthesis; Phantom pain; Psychiatric symptoms

Background. – Aim of this clinical trial was to evaluate the relationship of prosthesis usage, phantom pain and psychiatric symptoms in male traumatic limb amputees (LAs).

Methods. – Fifty-one LAs patients (group 1) and 53 healthy controls (group 2) were included. Phantom pain was measured visual analog scale (VAS). Psychiatric symptoms were measured using the Symptom Checklist-90-R, Beck Depression Inventory, Pittsburgh Sleep Quality Index, Rosenberg Self-Esteem Scale and State-Trait Anxiety Inventory.

Results. – The intergroup comparison showed significant differences in phobic anxiety (P = 0.003), state anxiety (P = 0.0001), trait anxiety (P = 0.001), and sleep disturbance (P = 0.002). The differences were statistically significant in group 1 compared with group 2. There were significant negative correlations between duration of amputation, duration of prosthesis usage, duration of daily prosthesis usage, and satisfaction with prosthesis questionnaire scores and psychiatric symptoms. There were no correlations between phantom pain and psychiatric measurements.

Discussion. – In our study, correlations have been found between duration of prosthesis usage, duration of daily prosthesis usage and satisfaction with prosthesis and lower psychiatric symptoms (somatization, obsessive-compulsive symptoms, interpersonal sensitivity, anger hostility, phobic anxiety and psychosomatics). Duration of prosthesis usage and satisfaction with prosthesis may be important for rehabilitation of psychiatric symptoms. There is no relationship between phantom pain and psychiatric measurements in LAs patients.

Interface pressure measurement for lumbar belt evaluation

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Keywords: Pressure mapping system; Lumbar belt; Metrology; Low back pain

Objective. – Lumbar belt is a medical device used to prevent and treat low back pain, for which the main mechanical effect is the pressure applied on the trunk. Objective is to evaluate four “FSA” sensors designed to measure this pressure.

Methods. – Two types of tests have been considered: classical tests of metrology (linearity, hysteresis, repeatability, reproducibility and drift) and specific tests to the application (curvature, surface condition and mapping system superposition) [1].

Results. – Linear regression coefficient is between 0.86 and 0.98; hysteresis between 6.29% and 9.41%. Measurements are repeatable. Location, time and operator, measurement surface condition and mapping system superposition have influence on the results. Stable measurement is obtained after 800 seconds. Measurement stays suitable on curved surface.

Discussion. – The tested sensor is acceptable. Nevertheless, take into account recommendations before using it: measurement must be performed in the same place, in a short time, with the same operator, between the same kind of surfaces; calibration must be adapted to avoid the sensor drift; overlap pressure mapping systems must be avoid.

Reference

Management of quadruple amputee in a Tunisian rehabilitation service: Results and challenges

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Keywords: Quadruple amputee; Rehabilitation; Prosthesis

Background. – Four limbs major amputation “quadruple amputation” is rare. It often occurs after electrical burns. We report the case of a four limb amputated child followed up in a PMR department.

Case report. – K.S. was victim at the age of 13 of an electric shock. It caused damage as a third degree burn of the four limbs complicated by compartment...