Perception de l’action en réalité virtuelle par des patients victimes d’AVC
L. Van Dokkum a, *, D. Mottet b, H.-Y. Bonnin b, J. Metrot c, I. Relave c, I. Laffont d a UFR STAPS, M2H, université Montpellier-1, 700, avenue du Pic-Sain-Loup, 34090 Montpellier, France b Centre médical du Grau-du-Roi, CHU de Nîmes, Grau-du-Roi, France c Unité de médecine physique et de réadaptation, CHU de Clermont-Ferrand, Clermont-Ferrand, France d Unité de médecine physique et de réadaptation, CHRU de Montpellier, Montpellier, France
* Auteur correspondant.
Mots clés : Accident vasculaire cérébral ; Perception de l’action ; Indices cinématiques ; Réalité virtuelle
Objectif.– Le but de cette recherche est double : d’une part, mieux comprendre la perception d’une action par les patients après AVC, d’autre part, mieux connaître les indices cinématiques pertinents pour la reconnaissance d’une action sur un écran.
Méthode.– Nous avons demandé à un groupe de patients victimes d’AVC et à un groupe sain apparié en âge d’évaluer le niveau de réalisation de mouvements de pointage représentés sur un écran d’ordinateur. Deux représentations minimales ont été utilisées : diagramme en bâtons du membre et tronc vs. point lumineux unique représentant la main. Les mouvements présentés correspondaient à des déficits très grave, sévère, modéré, léger et sain.
Résultats.– Les patients victimes d’AVC sont capables de distinguer le niveau de d’atteinte du mouvement par l’observation d’une représentation minimale, mais avec une plus grande variabilité que les témoins. Les patients réussissent mieux avec le point terminal seul. Nous supposons que l’observation de la trajectoire du point final seul dirige leur attention sur la plus forte affordance : le geste lisse, indiqué par le nombre de pics de vitesse, et la forme de la trajectoire indiquée par l’indice de courbure.
Discussion.– Ces résultats devraient être pris en compte pour la réhabilitation post-A VC en réalité virtuelle (par exemple, pour la construction de serious games) de façon à garantir que l’avatar mis en œuvre ne fournir ni trop peu, ni trop d’informations au patient observateur.
Résumé français non communiqué.

TLS-Coping : une nouvelle échelle de coping validée et spécifique pour la SEP
M. Genty
Centre thermal Yverdon, 22, avenue des Bains, 1400 Yverdon, Suisse
Patients suffering from Multiple Sclerosis (MS) resort to a coping strategy deeply modifying their general perceived-Quality of Life (QoL). Coping and QoL assessments are essential to implement appropriate behavioral cognitive therapy (BCT) programmes. However, the currently validated CHIP (coping with Health, Injuries and Problems) scale has poor reliabilities in MS context. Our objective is to validate a short and specific coping scale (Two Lives Scale: TLS Coping) easy to use and easy to score in routine practice.

Validation d’une échelle spécifique de qualité de vie pour la SEP : Two Life Scale (TLS-QoL 10)
R. Devy a, M. Jolibois b, P. Lebert c, M. Genty d, G. Edan e a Association DNS, 45, rue beaurepaire, 49400 Saumur, France b Association AMPA, Le Havre, France c University of Louvain, Louvain, France d Centre thermal Yverdon, Yverdon-les-Bains, France e CHU de Rennes, Rennes, France

TLS-Coping : une nouvelle échelle de coping validée et spécifique pour la SEP
M. Genty
Centre thermal Yverdon, 22, avenue des Bains, 1400 Yverdon, Suisse
Patients suffering from Multiple Sclerosis (MS) resort to a coping strategy deeply modifying their general perceived-Quality of Life (QoL). Coping and QoL assessments are essential to implement appropriate behavioral cognitive therapy (BCT) programmes. However, the currently validated CHIP (coping with Health, Injuries and Problems) scale has poor reliabilities in MS context. Our objective is to validate a short and specific coping scale (Two Lives Scale: TLS Coping) easy to use and easy to score in routine practice.

Version anglaise

Interest of aquatic walking after stroke
E. Guettard a, *, S. Jandziazia, C. Lombard, N. Podevin, V. Varane, P. Dumont
CRF Sainte-Cloître, BP 60093, 19 bis, chemin de la Clinique-Sainte-Cloître, 97492 Saint-Denis cedex, Reunion
* Corresponding author.
Keywords: Gait in water; Stroke; Hemiplegia; Gait analysis

After stroke, balneotherapy may be an interesting method of rehabilitation but gait in water has not well be studied in this population. The aim of this study was to compare gait on the ground and in water after stroke. Inclusion criteria: previous stroke, ability to walk 10 min without technical assistance. Exclusion criteria: cardiorespiratory deficiency, dermatological lesion, urinary or fecal incontinence, massive cognitive disorder and orthopedic or neurologic controlateral disorder.
Sixteen patients were enrolled: mean age 44.9 years (±19), delay since stroke 53.25 months (±104), BMI 25.4, FIM 99.8 ± 16, BBS 49.5 ± 6, 6-min-test 277 ± 114 m.
The patients were filmed laterally (3 passages on 6 m on each side) successively on the ground and in the water. Videos were analyzed with the software Kinovea®.
Heart rate was comparable in the two conditions (94.3/min on the ground versus 92.5/min in the water, t=0.78, P=0.45). The speed in the water (17.58 ± 4.9 m/min) was correlated with speed on the ground (38.4 ± 16.2 m/min) and on average 2 slower times. In the water, both the length of the step and the cadence decreased, excepted for 3 patients. Length of step were correlated in water and ground but not the cadences, perhaps because of different adaptations to water resistance. Six patients presented a deficit of control of the hemiplegic limb with difficulty returning it towards the ground and 3 lost the posterior step. The step was more difficult in the water with dynamic equinus. After stroke, aquatic walk can’t be assimilated with gait with body weight support because of multiples factors (water resistance, energy, spasticity… ) with probably different adaptation to water resistance.

Further reading


P039–EN

Interest of a self-care program associating transectaneous electrical nerve stimulation and mirror visual feedback in the treatment of ankle complex regional pain syndrome (CRPS-1)

J. Baglione-Streliska*, V. Schollhammerb, C. Ecoffeyc, P. Raultd, I. Bonana

a Service de médecine physique et de réadaptation, centre hospitalier universitaire, boulevard de Bulgarie, 35000 Rennes, France
b Polyclinique de l’Atlantique, Consultation de la Douleur, Nantes, France
c Service d’anesthésie et de réanimation 2, CHU, Rennes, France
d Centre d’évaluation et de traitement de la douleur, CHU, Rennes, France

*Corresponding author.

Keywords: Complex regional pain syndrome; Self-care program; Transcutaneous electrical nerve stimulation; Mirror visual feedback

Background.– Taking care of CRPS-1 is not consensual and often invasive. We assessed a multidisciplinary, not invasive protocol, based on the therapeutic education of the patient.

Objectives.– To determine the benefit of transectaneous electrical nerve stimulation (TENS) and mirror visual feedback (MVF), managed by patients themselves, in ankle CRPS-1.

Methods.– We realized a forward-looking and multicentric assessment. The patients (n=26), included on a duration of 3 months, presented a CRPS-1 of ankle, in agreement with the criteria of the IASP with a contributive bone sctintigraphy. Our main assessment criterion was built around the therapeutic objective fixed with the patient and modelled according to the Single Goal Attainment Scaling (s-GAS). Other criteria were: gate duration, Wade test, single leg stance load, VAS, clinical data.

Results.– After 6 months, 20 patients had reached the fixed objectives. Sixty-nine percent of them (n=18) found an improvement of the locomotion.

Conclusions.– Literature evoke 68% of healing of the CRPS-1 at 11 months, invasive program included. In this assessment, self-care program of patients educated to TENS and MVF, displayed 65% (n=17) of healing at 3 months and 77% (n=20) at 6 months.

Further reading


P040–EN

Construct validity of the French version of the PRWE (Patient Rated Wrist Evaluation) with the French version of the DASH (Disabilities Arm Shoulder and Hand) is good to very good in a population of patients with wrist injuries in an inpatient rehabilitation unit

E. Chrysochoua, R. Hilfikerb, O. Deriazb, F. Luthib, M. Konzelmannb,∗

a Service de réadaptation de l’appareil locomoteur, clinique romande de réadaptation suvacare, avenue du Grand-Champsec-90, 1950 Sion, Switzerland
b Service de recherche, clinique romande de réadaptation suvacare, Sion, Switzerland

* Corresponding author.

Keywords: PRWE questionnaire; Wrist; Construct validity

Objective.– The Patient Rated Wrist Evaluation is a specific questionnaire for the wrist [1]. It consists of 15 questions with a total score of 100. It was recently translated into French [2]. However, its validity has not been tested in this language. The Disabilities Arm Shoulder and Hand (DASH), with well-established psychometric properties, is considered as the reference questionnaire for the evaluation of upper extremities. The objective of this study is to measure the construct validity of the PRWE-F with the DASH-F in patients with wrist pathology.

Patients and methods.– Fifty-one patients (40 m, 11 w, mean age 42 years), 25 fractures of the radius and 26 lesions of the carpus.

Questionnaires PRWE-F and DASH-F at entry and at discharge (0 to 100). Calculation of the construct validity of the PRWE-F comparing with the DASH-F with Pearson correlation coefficients (r) at entry and at discharge. Level of significance (alpha) was set at 5%.

Results.– Correlation DASH/PRWE at entry: r=0.799 (95% CI 0.671 to 0.881), P<0.0001. Correlation DASH/PRWE at discharge: r=0.847 (95% CI: 0.745 to 0.910), P<0.0001.

Discussion.– The construct validity of the two instruments indicates that they measure the same concept. Our correlation between DASH-F and PRWE-F, going from 0.799 to 0.847, are comparable to those published in different languages (0.71 to 0.84) [3,4]. The questionnaires PRWE-F can thus be used in rehabilitation patients presenting with wrist pathologies; it is comparable to the DASH but described by MacDermid [1] to be more specific. Compared to the DASH it has the advantage of consisting of two dimensions. Its construct validity is excellent. This questionnaire should be evaluated in other populations, and it should be compared with hand questionnaires more specific than the DASH.

References


doi:10.1016/j.rehab.2011.07.343

P041–EN

Post-stroke fatigue


Hôpital Henry-Gabrielle, 20, route de Vourles, 69230 Saint-Genis-Laval, France

*Corresponding author.

Keywords: Fatigue; Stroke; MFI-20

Objective.– Post-stroke fatigue is a common symptom that can be disabling; however, it has not been a subject of extensive research. The aim of the present study was to determine the different domains of fatigue occurring after stroke and to identify possible predictor factors of post-stroke fatigue.

Patients and methods.– Thirty consecutive patients meeting inclusion criteria who were admitted for inpatient rehabilitation to a specialized unit following their first stroke were evaluated. Inclusion criteria were: the occurrence of a