the undertaking to totally reimburse a patient’s medical expenses and to ensure his/her well-being. All this means involving different doctors and probably contemplating new approaches in which the Physical and Rehabilitation Medicine doctor has a central role.

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P055-e

Interaction between postural and cognitive performances in right brain damaged patients: A dual task study

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The neglect syndrome (NS) constitutes a disorder of space cognition frequently observed after cerebral vascular injury. This disorder constitutes a predictive factor of functional poor prognosis.

Objectives.– The objective of this study is to identify this syndrome and to seek possible correlations with other functional disorders and the gravity of the disability in hemiplegics stroke victims.

Methodology.– Transverse exploratory study which took place in the MPR service of the CHU of Oran during the year 2011. It concerned right-handed adult patients with a stroke. This syndrome present was considered when the patients are positive at least to one of the following tests: the test of stopping of lines of Albert, the test of stars of Halligan, the test of the bells of Gauthier and the test of Catherine Bergey. The autonomy of the patients was evaluated by indexes of Barthel and the depression through the scale of Beck.

Results.– They are 108 patients, including 49 women and 59 men. The NS was present among 36 patients (33%). The age, the sex and the type of stroke did not have an influence on the frequency at which this syndrome occurred. Whereas, the subjects having presented a state of coma were more candidates to make a NS (P < 0.001). The subjects presenting a NS had an autonomy (Barthel) limited (P < 0.001). The presence of this syndrome is correlated with the difficulties of preparing (P < 0.001), with the disturbances of the function of ambulation, the presence of disorders of the sensitivity (P < 0.001). It was also noted the pejorative character of the depression.

Discussion and conclusion.– The NS is frequent and constitutes a poor prognostic factor which delays functional recovery and makes more severe the situation of disability in hemiplegics stroke victims. It is important to admit these disorders in order to be able to propose an adapted and early therapy.

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P057-e

Multidisciplinary team for post stroke patient: To bring MPR expertise to many patients

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P056-e

Neglect syndrome in poststroke: Prospective study about 108 cases

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P058-e

Hallucinations and cortical blindness after peduncular hematoma

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Keywords: Visual hallucinations; Cortical blindness; Peduncular hematoma

Introduction.– Visual hallucinations are common across a range of neurologic or psychiatric disorders [2]. They can occur in the context of eye disease or after a lesion affecting the visual pathways associated with or without visual field defect. If they have poor localising value [1], both topological and hodological factors can account for visual hallucinations [3,4]. Their assessment and management are important to improve the quality of life of patients.

Observation.– We report the case of a 76-years-old right-handed woman presenting with visual hallucinations and cortical blindness after a right peduncular hematoma caused by a ruptured aneurysm of the terminal part of the basilar artery. She had vivid and coloured visual hallucinations during day and night and some elements of prosopagnosia. She did not criticise them but she was not scared by them. Neuropsychological examination revealed difficulties for elaborated language and executive functions whereas verbal memory was preserved. Perceptual and visual mental imagery were impaired. Visual field assessment revealed a very restrictive tubular vision for both eyes. Rehabilitation was largely experimental and consisted in helping the patient to be aware of her hallucinations and to reassure her, in training eye-hand coordination, in developing visual search strategies, in recognising drawings, reading and writing. Progressively, hallucinations became criticised by the patient and cortical blindness partly improved. Tubular vision remained unchanged 3 years after stroke.

Discussion.– Different diagnostic hypotheses have been discussed for this case, showing the complexity for linking visual hallucinations to a particular dysfunction within the visual circuitry. A better understanding of the mechanisms underlying hallucinations is critical in order to improve the clinical care of these patients [2].

References

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P059-e
Evolution of paretic shoulder kinematics after stroke: Comparison of scapular kinematics during sub-acute phase

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Keywords: Stroke; Scapula; Kinematic; Upper limb

Introduction.– Limitation of the range of motion of the shoulder is a secondary deficiency that has been previously described and related to shoulder pain in stroke patients. It may lead to a limitation of the functional use of the upper limb. The delay for such modifications is of importance to define the best rehabilitation strategies for the prevention.

Purpose.– The main objective of this study is to characterize scapular kinematics modifications from the first month to sixth month post stroke.

Methods.– Ten patients and ten matched control subjects were included in a consecutive series. The clinical status of stroke patients was assessed at 1, 3 and 6 months post stroke with Fugl Meyer scale (upper limb part) and the scapular motion was measured during passive elevation (flexion and abduction from 0° to maximal amplitude) of the upper limb by a Vicon motion analysis system.

Results.– Significant differences between the three assessments have been observed in both movements for patients for the external and lateral rotation of the scapula. Comparison between subjects and controls revealed significant differences at all stages for both movements of external and lateral rotation but not for posterior tilt of the scapula. The Fugl Meyer assessment improved significantly from a mean value of 20.9 at M1 to 46.6 and was not correlated to the scapula limitation.

Conclusions.– Restriction of scapular mobility appears in the first weeks after stroke. Despite significant differences observed after months, this impairment seems limited regarding the important difference in mobility observed between normal and hemiplegic subjects. Specific rehabilitation program oriented to improve scapula mobility may change the motor deficiencies observed in stroke subjects.

Further reading

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P060-e
Comparison of two accelerometers in walking and non-walking individuals with stroke in medicine and rehabilitation service

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Keywords: Accelerometry; Stroke; Physical medicine

Objective.– Accelerometry appears to be a reliable method for measuring physical activity in stroke walking patients [1]. However, the monitoring of activity in non-walking patient is not approached. We therefore propose to compare two accelerometers in a stroke population, walking and non-walking in hospital.

Patients.– Forty-eight patients (14 walking 34 non-walking; 64.6 ± 19.3 years; Barthel Index: 55.7 ± 24.6) with stroke (period post-stroke: 46 ± 31.4 D) in medicine and rehabilitation service at Jean Rebeyrol hospital in Limoges.

Patient and methods.– Each patient wore two accelerometers (Movilis, Srett. Worn on hip; SenseWear Armband, Bodymedia. worn on non-paretic arm) during two consecutive days from 9 am to 16 30 pm, corresponding to the time of classic rehabilitation. The information collected by the sensors were, for Armband, energy expenditure (kcal) and the number of steps, and for the movilis, energy expenditure (Kcal) and walking time (min).

Results.– In the walking population, energy expenditure recorded by both sensors were significantly correlated (r = 0.673, P < 0.001). In contrast, for patients in wheelchairs, there was no correlation (r = 0.179, P = 0.246). Similarly, on walking patients, a correlation between the number of steps recorded by the Armband and the time of walk of Movi lis (r = 0.787, P < 0.01) was observed. However, for patients in wheelchairs who walked in physiotherapy, no correlation was observed (r = -0.68, P = 0.66).

Discussion.– In walking patients post-stroke, the results of the two accelerometers on energy expenditure and walking activity are well correlated. Nevertheless, the fact that we did not find any correlation in wheelchair-patients shows that accelerometers are perhaps not suitable for this population. This could be explained by the difference in the placement of the accelerometers.

Reference

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P061-e
Transcranial direct current stimulation improves function for stroke patients with pure motor neglect: A case report

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Keywords: Stroke; Stimulation; tDCS; Motor neglect; Rehabilitation

Method.– The case report concerns a 58-years-old aphasic woman, right-handed, with a left MCA M1 stroke that occurred one year before. She presented a right motor neglect (105 C), a left hemihypesthesia (24.6% C) and a left homonymous hemianopia (21 C).

A tDCS protocol that enhanced the motor cortex of the right hand was used. The stimulation was performed through a rubber gel applied on the skin of the right hand (anode) and the right prefrontal cortex (cathode). The montage was applied bilaterally to enhance motor cortex activation of the right hand.

Results.– Six weeks after the beginning of the stimulation, the patient showed an improvement in neglect (100 C, left arm). The patient also presented a localisation of visual neglect (110 C), whereas the spatial attention was preserved.

Conclusion.– The transcranial direct current stimulation is an effective method for improving motor neglect in stroke patients.