Conclusion.— This study raises many questions regarding indications for particular assistive devices and software as well as the appropriate ergonomic design of a dynamic keyboard and the number and position of words which should be predicted. The development of the CVK is continuing and future studies will aim to address these questions in larger numbers of patients.

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Therapy protocol constraint chronic hemiplegic patients: Retrospective study
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Keywords: Constraint-induced therapy; Stroke; Hemiplegia

Introduction.— The motor and functional recovery of hemiplegia rupture occurs in the first 3 to 6 months after stroke. Only 15% of patients recover the use of their paretic limb. The constraint-induced therapy (ICT) has proven its effectiveness [1], raising great hopes, but is now showing its limits.

Objective.— To study the effectiveness of a protocol of ICT applied to stroke patients at a chronic stage.

Methods.— Sixteen patients (age: 50.3 ± 13.5 years; time after stroke: 6 to 216 months (35 ± /50); sex ratio: 12 H/F 4; hemiplegic side: nine rights/seven left; hand dominant 10/6 not) have made ICT 4 weeks (6 h/day, 5 days/week) in hospital. Daily activities were performed with the constraint of a mitten protection on the healthy hand. Patients were evaluated before (t0), the resulting (t1) and 9 months later (t2) the ICT with dynamometers (grasp, key pinch), the test of nine pins, the Box and Block Test (B & BT), the Fugl-Meyer Motor Assessment on Toulouse (BMT).

Results.— Progress at t1 are significant for the strength of the grasp of the key pinch, the test of nine ankles, B & BT, the Fugl-Meyer, the BMT. Nine months later, significant progress persist for the strength of key pinch, the test pins 9 and BMT.

Conclusion.— Our protocol of ICT is accompanied by progress in terms of analytical strength, manual skills and reintegration of the paretic hand in the acts of everyday life. This type of rehabilitation protocol could usefully be implemented during maintenance visits for hemiplegic well recovered. What happens when motor recovery is insufficient to enter into a Memorandum of ICT? We are currently testing the value of a Memorandum of transcranial magnetic stimulation in patients with stroke hemiplegic upper extremity traction limited and does not meet the usual criteria of ICT.

Reference

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Comparing pre- post-treatment effects of constraint induced movement therapy (CIMT) in a patient after stroke: A qualitative analysis of performance in instrumental activities of daily living using the situational assessment AMPS

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Keywords: Constraint induced movement therapy (CIMT); AMPS; Sensory motor hemiplegia; Motor rehabilitation; Measurement; Integration of the paretic limb; Activities of daily life; Occupational therapy

Upper limb paresis post-AVC decreases the performance in activities of daily life (ADL). Several studies have demonstrated evidence of effectiveness in using CIMT (Taub, 1993, 1994; Sirtori et al., 2009). However, few situational tools are used to measure actual integration of the paretic limb in ADL following CIMT program.

Objective.— To observe the transfer in ADL of functional improvements following CIMT in applying a situational measure.

Method.— We present the case of a 63-year-old patient with a right sensitomotor hemiparesis, without aphasia, at three months after stroke. Following a standard rehabilitation, we practice two phases of 3 weeks of CIMT interrupted by two weeks of traditional rehabilitation.

Outcome measurements.— The outcome measurements are practiced at the beginning and at the end of each phase: motor assessment, Box and Block Test, Purdue pegboard, Barthel (IB), FIM. The situational measurement namely the AMPS (Fisher 2005), is a validated assessment offering 115 standardized daily living tasks. The assessment consists of a motor and a procedural scales. The AMPS is practiced at the beginning and at the end of phase 2 and 8 months post-CIMT?

Results.— After CIMT, the patient presents significant improvements in all functional tests: motor assessment, wrist and fingers (2+ to 4). Number of cubes/mm at the Box and Block Test (21) to 21). The number of threaded rods strung/mm at Purdue Pegboard (1 to 7). The IB (40 to 65), FIM (82 to 110). The AMPS shows a substantial but non-significant improvement (−1.86 to 1.47 logits) but shows no change in the procedural scale (0.33 to 0.33 logits). At eight months post-CIMT, the patient shows a significant change in the motor scale (−1.47 to −0.95) but no change on the procedural scale.

Discussion.— Actually these results show the relevance in measuring transfer of the rehabilitation experiences to ADL using validated situational assessment. Using AMPS allows a qualitative detailed analysis of the motor and procedural performance in real ADL situations.

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