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Highly paretic patients within four to six weeks after stroke: An early botulinum toxin A treatment may prevent a disabling finger flexor spasticity six months later

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Objective.– The study asked whether an early BTX-A injection in sub-acute stroke patients may prevent a disabling finger flexor spasticity six months later.

Design.– A single-blind, randomized pilot study.

Setting.– In-patient rehabilitation centre.

Subjects.– Eighteen stroke patients, interval 4–6 weeks, non-functional upper limb (UL), Fugl-Meyer UL score (FM, 0–66) ≥20, beginning finger flexor spasticity, randomly allocated to group A or B.

Interventions.– In A-patients 150 units BTX-A (Xeomin) injected into the deep flexors of the fingers, secondary the whole UL tonus with the REPAS, the UL motor control with the FM, and a disability scale, blindly assessed at T0 (begin), T1 (4 weeks) and T6 (6 months).

Results.– Homogeneous groups at T0. Significantly less finger flexor tonus in the BTX-A group at T1 and T6, the mean (SD) AS scores in group A (B) were: 1.7 ± 0.5 (1.6 ± 0.5) at T0; 0.4 ± 0.5 (1.9 ± 0.7) at T1; and 1.4 ± 0.7 (2.4 ± 0.9) at T6. Among the secondary, the disability score, namely the items pain and passive nail trimming, was less in group A at T1 and T6.

Conclusions.– The pilot character prohibits any conclusions, but the results indicate a prophylactic effect of an early BTX-A injection on finger flexor spasticity six months later. By minimizing involuntary muscle activity, the fingers were held in a less fixed position, which may have hindered contractures, usually rapidly developing.


CO16-007–EN

Validation study of subjective spasticity questionnaire

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Objective.– To test the validity and reliability of a subjective questionnaire for evaluation of spasticity during daytime, sleep and activities of daily living (ADL).

Subjects and methods.– Our sample consisted of 50 subjects (30 male) with mean age 48.2 ± 15.3 years (ranging from 21 to 84 years). The questionnaire was constructed based on the functional classification of disability according to WHO (2001) and it is self-administered. It consists of 12 domains (Likert scale) for evaluation of the effect of pain, involuntary movement and spasticity on ADL such as sleep quality, hygiene, routine activities, social life, driving, orthosis wear and gait. Reliability was tested via Cronbach’s α coefficient. The item discriminant validity test was performed according to the severity of complaints based on clinical evaluation of spasticity via modified Ashworth scale. The construct validity was tested via item-scale correlations.

Results.– More than half of the patients reported that spasticity, accompanying pain and involuntary movements were getting more intense during night. Medium to severe spasticity, accompanying pain and involuntary movements were reported by 80.4%, 52.9% and 60% of the subjects, respectively. Most of the complaints were noted during walking. Internal consistency was measured by Cronbach’s α, which was found 0.96 for questions concerning pain, 0.98 for questions concerning involuntary movements and 0.97 for spasticity. The more severe the clinical grade of spasticity, the more troublesome complaints were reported by the patients in a number of questions. The Pearson correlation coefficients ranged mostly from medium (r>0.4) to high (r>0.6), indicating medium to high reproducible scales, respectively.

Conclusion.– The questionnaire is a promising, new instrument for evaluation of the subjective feeling of spasticity during night and ADL. It comes up forward to fill in the gap in the field of spasticity and it is useful for recording the effectiveness of spasticity treatment outcome and rehabilitation program.


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Botulinum toxin for the treatment of spastic equinovarus foot in adults: Effect on gait parameters. Comparative randomized double-blind trial versus placebo

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Stroke is the leading cause of disability for adults in France. After stroke, equinovarus foot is the main cause of gait abnormalities. The efficiency of botulinum toxin in decreasing spasticity has been demonstrated but the effects on gait parameters (gait velocity…) are still conflicting. The purpose of this study was to evaluate the effects of an injection of botulinum toxin type A, compared with placebo, on gait parameters.

Methods.– This was a multicenter, randomised, double-blind, versus placebo study. To be included, patients had to suffer from a hemiplegia with an equinovarus foot due to stroke. A medical examination (physical examination, gait analysis using a GAITRite® system…) was performed before and 4 to 6 weeks after the injection.

Results.– We included 49 patients, randomised in two groups: treatment with botulinum toxin type A (n = 23) and placebo (n = 26). No significant difference...