

Background.— To estimate the nature and intensity of pain during botulinum toxin injections in treatment of adult spasticity.

Methods.— Observational study on 46 patients (19M/27W, 60.5 ± 16 years) evaluated without analgesia during botulinum toxin type A injections, 6.5 years after stroke. Pain was evaluated by numeric verbal scale (0–10) after needle insertion, electric stimulation, toxin injection and needle withdrawal. The needle type was accounted for. Data is presented in median values [25 and 75th percentiles].

Results.— The most painful time was during stimulation (4 [2.6–5.3]; $P < 0.001$) followed by needle insertion (3.1 [1.3–4.1]; $P < 0.01$). The pain resulting from toxin injection was not negligible (1 [0.12–2.3]; $P < 0.01$), superior to the pain resulting from needle withdrawal (0 [0–0.3]; $P < 0.05$). The form of toxin used, the number of injections and the injected volume per muscle had no influence on the pain. The intensity of pain resulting from needle insertion and stimulation was influenced by the length and the diameter of needles.

Conclusions.— The stimulation for muscle identification can be very painful. The needle choice influences the pain intensity. This data advocates for procedure adaptation in order to reduce pain.

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Pain during botulinum toxin injections in spastic adults: Influence of patients' clinical characteristics

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Keywords: Spasticity; Pain; Botulinum toxin; Sensory disorders; Muscles

Background.— To specify the influence of clinical characteristics of patients on the pain intensity during botulinum toxin injections in spasticity treatment.

Methods.— Observational study on 46 patients (19M/27W, 60.5 ± 16 years) evaluated without analgesia during botulinum toxin type A injections, 6.5 years after stroke. Pain was evaluated by numeric verbal scale (0–10). The sensory disorders were evaluated by Semmes–Weinstein monofilaments. The data is presented in median values [25 and 75th percentiles].

Results.— A total of 1288 numerical verbal scale results were analysed. The number of injected muscles per patient was 4.3 and the number of injections per muscle was 1.6. Age, type of stroke, stroke side or delay had no influence on pain. Pain was higher in patients without or light sensory disorders, distal and small muscles. Females felt greater pain during stimulation than men.

Conclusions.— Female patients and those with light sensory loss, in whom small and distal muscles are stimulated, are most likely to experience pain during botulinum toxin injection sessions. In order to reduce the high risk of pain among these patients, analgesia is required, as well an adaptation and a learning of therapeutic techniques.

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“Honey moon” after spinal cord stimulation in a patient with Strumpell–Lorrain disease

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Keywords: Spinal cord stimulation; Spasticity; Strumpell–Lorrain disease

Background.— There is renewed interest in spinal cord stimulation as a treatment of spasticity. Here, we present documented the positive effects both on spasticity and on motor control; in a 26-year-old man Strumpell–Lorrain disease with severe, widespread lower limb spasticity and limitation of mobility.

Methods.— The main parameters tested were: spasticity, gait velocity at self-preferred and fast speed, time of maintenance right and left unipodal stance.

6 months apart.

Results.— During stimulation, spasticity decreased and postural and gait capacities improved. Gains obtained after 6 months of stimulation were substantial: 11.7% for fast walking, 6.3% for walking at self-preferred speed, 85.5% for the right unipodal stance and 55% for left unipodal stance. The patient was very satisfied and reported living normally. This spectacular improvement was even maintained several hours after the stimulation was stopped.

Conclusions.— This therapeutic approach could be interesting.

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Safety aspects of incobotulinumtoxinA high dose therapy

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Keywords: Dystonia; Spasticity; IncobotulinumtoxinA; Xeomin; High dose

Background.— Botulinum toxin (BT) is used for dystonia and spasticity in a wide dose range. The upper end of this range, however, still needs to be explored.

Methods.— In a prospective non-interventional study, we compared a randomly selected group of dystonia and spasticity patients receiving incobotulinumtoxinA (Xeomin®) high dose therapy (HD group, $n = 100$, single dose ≥ 400 MU) to a control group receiving Xeomin® regular dose therapy (RD group, $n = 30$, single dose ≤ 200 MU).

Results.— HD group patients (56.1 ± 13.8 years, 46 dystonia, 54 spasticity) were treated with Xeomin® 570.1 ± 158.9 (min 400, max 1200) MU during 10.2 ± 7.0 (min 4, max 37) injection series. HD and RD group patients reported 59 occurrences of items on the systemic toxicity questionnaire (STQ). Generalised weakness, being bed ridden, feeling of residual urine and constipation were caused by underlying paresis, blurred vision by presbyopia. Dysphagia and dry eyes were local BT adverse effects. Neurologic examination, serum chemistry and full blood count did not indicate any systemic adverse effects. No patient developed antibody induced therapy failure.

Conclusions.— Xeomin® can be used safely in doses ≤ 1200 MU without detectable systemic toxicity. This allows expanding the use of BT therapy to patients with more widespread and more severe muscle hyperactivity conditions.

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Influence of botulinum toxin in injection in gait velocity of patients with lower limb spasticity

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Keywords: Botulinum toxin; Stroke; Gait; Spasticity

Background.— To evaluate through pedobarogram, the influence of botulinum toxin type A in gait velocity of post-stroke patients with lower limb spasticity.

Methods.— Seven post-stroke patients with hemiplegia and lower limb spasticity were studied. The measurements included: time for the patient to cover 10 m distance; percentage of load in the rear part of the hemiplegic foot during stance and gait; change in the length of gait after botulinum toxin injection. The measurements took place before the injection and two weeks and one month after.

Results.— Gait velocity, magnitude of stride and the load in the rear part of the foot were improved significantly after the injection of botulinum toxin.

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