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Changes in head motion after saline induced neck pain

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Introduction In previous studies the kinematic analysis of painful head movements in patients showed characteristic changes in velocity, amplitude, synkineses, acceleration and deceleration. The aim of the present study was to investigate the amount and duration of these changes in healthy volunteers after pain stimulation by injection of hypertonic saline.
Method 12 volunteers participated in the study (six females; six males; age range: 22–30 years; mean: 26 years). The head movements were recorded by Cervicomotography (Berger 1990), a method using a magnetic field measuring system (Flock of Birds) and special software programmes. 0.5 ml hypertonic sa-line was injected paravertebrally right of the seventh cervical vertebra. A one minute lasting head rotation was measured three times before the injection, immediately after the injection and one, three and twenty-four hours after the injection. The course of pain intensity was recorded by a visual analogue scale.
Results The saline induced pain lasted from 3 to 7 minutes with a medium duration of 4.5 minutes. 1 and especially 3 hours after the injection a significant reduction of the range of movement (ROM) was seen. Significant changes could be detected in other kinematic parameters too, as mean maximum velocity, mean velocity, pain inhibition, harmony of movement etc. Only after 24 hours all parameters have returned to their baseline.
Conclusion It could be clearly demonstrated that movements remain changed even after the pain has already subsided.

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Lamotrigine for chronic neuropathic pain

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Introduction Lamotrigine is an anticonvulsant with pharmacological actions that include activity in blocking voltage-gated sodium channels, as well as several blocking activities at calcium channels (N and P-type). These mechanisms of activity have been shown to be useful in pain and headache in many compounds that possess them. I chose to evaluate lamotrigine in a population of refractory chronic pain patients.
Method 35 patients (25 males, 10 females) were given lamotrigine as an add-on medication for their painful symptoms. All had some form of neuropathic pain: 21 had cervical or lumbosacral symptoms; 3 had facial pain; 5 had complex regional pain syndrome pain; 4 had diabetic or other endocrinopathic pain; 2 had neuroma pain. All had failed at least two or more other attempts at treatments with neuronal stabilizing agents for their pain.
Results Patients rated their pain on a 0 to 10 numeric rating scale (NRS). Average length of treatment was 4 months or more. Average dose was 260 mg per day. The average reduction in pain scores, rated on a NRS, was 70.9% in 14 patients. 6 patients were non-responders, and 2 were dropped due to side effects (drowsiness and rash). 5 were lost to follow up or did not follow the titration schedule accurately and 8 were just started on lamotrigine.
Conclusion Lamotrigine was found to be an effective agent for refractory neuropathic pain syndromes with an excellent margin of safety and tolerability in this open-label study. Further double-blind studies are warranted with this agent.

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Intradermal Botulinum toxin, type B, treatment for cervicogenic migraine

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Introduction Botulinum toxin, type B, is primarily used intramuscularly for a number of disorders, including spasm and headache. This study used intradermal sites of administration of the toxin to study its effect in cervicogenic migraines. This is based on the high concentration of nociceptive fibers in the skin and the possibility that cutaneous inputs from the cervical region may contribute to these migraines.
Method 10 patients were given open-label botulinum toxin, type B, intradermally. All had unilateral IHS-criteria migraines with muscle spasm; 4 had failed cervical surgery and all had known cervical structural pathology by MRI. 2500 or 5000 units of type B toxin were given intradermally by raising a skin wheal on the side of the migraine at the level of the greater and lesser occipital nerve inlets.
Results 5 patients reported a significant decrease in migraine frequency, at least 75%. Spasm was also reduced to the same or greater amount. 3 of these patients reported greater than 90% reductions and average duration of effect was 16 weeks (range= 10–24 weeks). 2 patients did not have any significant change in migraine pattern, and 3 were just injected. Remaining migraines were easier to abort. One patient reported transient flu-like symptoms.
Conclusion This study shows the effectiveness of a new site of delivery of botulinum toxin, type B, in treating cervicogenic migraines. Intradermal delivery suggests, speculatively, anterograde transport of toxin to the dorsal horn in nociceptive fibers where pain transmission may be blocked via any number of mechanisms, including central sensitisation, windup and blockade of specific facilitatory neuromodulators. Double-blind studies to replicate these open-label findings are warranted in the study of botulinum toxin, type B.

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Pain responsiveness in cervical dystonia: different doses of Botulinum toxin type-a

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Introduction Effectiveness of Botulinum Toxin Type-A (BTX-A) against pain associated with cervical dystonia has been established. However, several studies suggest that a direct antinociceptive effect distinct from reduction in muscle spasm may be involved in this process. The aim of the present study was to investigate the effectiveness of different doses of BTX-A in pain associated with cervical dystonia.
Method We studied 31 patients with painful cervical dystonia (age range 24–63 years). Using a randomised, double-blind, cross-over design (3 treatment periods of 4-month duration) we injected patients with three different doses of BTX-A (50, 100 and 150 U of BTX-A as BOTOX) in the most affected muscles. The patients' baseline level of pain and the Toronto Western Spasmodic Torticollis Rating Scale (TWSTRS) were assessed.

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