Discussion.--This study compiles valuable data which can be used to identify and target the ULS patients most likely to benefit from BoNT-A treatment.

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P064-e

Gait study in hemiplegic patients: Role of spasticity on baropodometric parameters
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Keywords: Hemiparetic; Gait analysis; Spasticity, Nerve block; COP

A study was conducted to evaluate the effect of treatment on triceps surae spasticity in hemiparetic patients using a quantitative and reproducible parameter: the anterior-posterior path length of the center of pressure (COP). The F-Scan system used the embedded footings to analyze the path of the COP and the plantar pressure during walking. COP parameters have a good repeatability in hemiparetic patients [1]. The population consisted of 10 hemiparetic patients (six left, four right), with disturbing spasticity of the triceps surae during ambulation, able to walk alone with or without technical assistance (FAC functional scale between 3 and 5). After clinical examination, walking study was achieved at own speed (with or without technical assistance), before and after an anesthetic block of the posterior tibial nerve. The session comprised of baropodometric, spatiotemporal recordings, and a videographic survey. The main variable analyzed was the change of anterior-posterior path length of the COP (AP) in hemiparetic side after completion of the nerve block. According to literature, a significant decrease in the AP in parietic side compared to the non-parietic side was found before the nerve block [2]. AP increased significantly after completion of the nerve block (112 vs 99 mm, \( P = 0.03 \)). In conclusion, we find a significant variation of a quantitative variable of gait in hemiparetic patients after abolition of spasticity.

References

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P065-e

The contribution of anaesthetic blocks in the evaluation of spastic patients
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Keywords: Spasticity; Assessment; Anesthetic blocks

Introduction.– The anaesthetic blocks are currently in the arsenal of diagnostic and therapeutic motor disorders associated with spasticity. The aim of our study is to clarify the interest of the anaesthetic block in patient assessment spastic.

Patients and methods.– Twenty patients hospitalized in the physical medical and functional rehabilitation were selected over a period of 2 years (since January 2010) and who received anaesthetic block during their hospitalization. These were patients aged between 13 and 72 years (mean age 43 years) with vascular hemiplegia in 12 cases (60%), cerebral palsy in three cases (15%), spinal cord injury in three cases (15%), head trauma in 1 case (5%) and a hereditary disease in one case (5%). The anaesthetic blocks were performed by specific needles and a pacemaker, respecting the location techniques. The anaesthetic used was mainly 2% non-adrenalized etidocaine (Xylocaine®). An analytical assessment of spasticity by the Ashworth score and functional walking was performed for each patient. Results.– Twenty anesthetic blocks were performed. The injected sites were dominated by the soleus nerve (48%), the median nerve (33%) and the posterior tibial nerve (11%). We noted an Ashworth score gain of about 1 to 2 points, a gain of 13° joint and an average improvement of gait in 11 patients (64%). Fifteen patients (75%) benefited from an injection of botulinum toxin and one patient was operated (neurotomy).

Conclusion.– The anaesthetic blocks currently represent a simple and effective approach with a dual interest in diagnosis and prognosis. They are shown to reproduce the transient effect expected a more sustainable and therefore more costly by providing an effective local treatment of spasticity.

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P066-e

Intrathecal baclofen for spasticity management:
A comparative analysis of complications in a series of 88 pumps for adults and children
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Keywords: Spasticity; Baclofen; Complication; Cerebral palsy

Objective.– To examine differences in complication rates between children and adults treated by intrathecal baclofen.

Material and method.– Retrospective chart review of 73 patients (adults and children; 88 pumps) with a diagnosis of severe spasticity requiring intrathecal baclofen therapy.

Results.– Complication rates by category were as follows: related to human error: 8%, related to baclofen: 11%, related to surgery: 19% and related to the implantable device: 27%. Complications were more frequent in adults than in children, except for complications related to surgery. The complication rate related to the implantable device was higher in ambulatory patients. The complication rates related to surgery and the implantable device decreased during the course of the study.

Conclusions.– The overall complication rate observed in our series is comparable to that reported in the literature and, in contrast with the literature, was not higher in children than in adults. Only complications related to the surgical procedure were slightly more common in children. Baclofen pump implantation in children is therefore a safe procedure.

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P066-e

Extensor truncal dystonia with spondylolysis: Interest of botulinum toxin in the spinal muscles for pain relief
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Keywords: Truncal dystonia; Spondylolysis; Low-back pain; Botulinum toxin

Introduction.– Primary and secondary dystonia with truncal dystonia are often associated with spinal involvement as low-back pain. Interest of botulinum toxin is well described in literature for cervical dystonia but less for truncal dystonia. We report the case of a patient who received local botulinum toxin
Pneumothorax after botulinum toxin type A

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Keywords: Spasticity; Botulinum toxin; Pneumothorax

We are reporting a case of a pneumothorax after BoNT-A injection. A 58-year-old patient with right spastic proportional hemiplegia due to a frontal menigioma surgery 36 years before required regular BoNT-A injections. The muscles (subscapularis, anterior and posterior way, and pectoralis major, two anterior injection sights) were injected with the help of electrostimulation detection. During the 6th session, the subscapularis was detected with difficulty. Two hours after the injection the patient presented acute dysnea. A pneumothorax was diagnosed and drained; the patient was hospitalized in intensive care for 5 days. A relation between the injection and the pneumothorax was then established. There were no after effects of this episode. This is the first described case of pneumothorax after BoNT-A injection. The probable cause was the detection of the subscapularis and not the pectoralis major who is superficial and easily spotted.

Similar cases were described during electromyographic exams of the muscles teres major and pectoralis major but never for the subscapularis [1]. This case reminds of the necessity of a technical aid for the detection of the muscles to be injected, as well as the risks taken while trying to detect thoracic muscles.

Reference

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Botulism-like syndrome or widespread diffusion syndrome after injection of botulinum toxin A for neurogenic detrusor overactivity

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Keywords: Botulism-like syndrome; Botulinum toxin; Detrusor overactivity; Neuromuscular jitter; Adverse events; Muscular weakness

Introduction.– Botulinum toxin is an effective treatment for neurogenic or idiopathic detrusor overactivity refractory to antimuscarinics. Nevertheless, it can lead to locoregional and sometimes systemic complications like botulism-like syndrome.

Observation.– A 24-year-old woman, quadriplegic Cervical 7 ASIA C, spastic post-traumatic with detrusor overactivity at urodynamic assessment, was effectively treated for a year by antimuscarinics and intradetrusor botulinum toxin injections. Ten days after the last injection (Botox 300 UI), the patient complained of generalized muscle weakness, an inability to manipulate the steering wheel of her car and to transfer. The physical examination revealed an increase in the deficit of the triceps (MRC scale 2 vs 3+ initially), and a loss of 67 and 72% of strength in the isometric assessment of right and left deltoids respectively. The vital capacity was 2.07 L vs 2.36 L initially. The neuromuscular jitter of the orbicularis oculi was impaired with 22.7% of abnormal fibers and a mean jitter of 27.45 μsec. Differential diagnoses were excluded with anti-Musk and anti-Ach R negative, a spinal MRI showing the absence of syringomyelia and compressive disc hernia, and the diagnosis of botulism-like syndrome was made. The patient had a clinical and electrophysiological follow-up, with a normalization of muscle power in a year and slow improvement of neuromuscular jitter.

Discussion.– Several cases of generalized muscle weakness after intradetrusor botulinum toxin injections have been described, with poorly understood pathophysiological mechanisms. The interest of this observation is the one-year follow-up with electrophysiological measures, muscle power evaluation and occupational therapy evaluation of prehension. General complications of botulinum toxin injections for detrusor overactivity require regular clinical and electrophysiological monitoring. Patients should be informed of this potential risk.

Further reading

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Proposal for a decision algorithm in the diagnostic and therapeutic management of stiff-knee in the neurological patient

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Keywords: Gait; Hemiplegia; Stiff-knee; Botulinum toxin

Introduction.– The stiff-knee is a lack of shortening of the lower limb during walking secondary to a defect of knee flexion during the swing phase. This is a