Posters

English version

P042-e
Use of baclofen pump in the cerebral palsy of child: National survey of practice
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Keywords: Physical Medicine and rehabilitation; Cerebral palsy; Children; Spasticity; Intrathecal baclofen

Introduction.– The aim of this study was to shed a light on the current use of intrathecal baclofen delivered by pump infusion in France for cerebral palsy in children in order to standardize practice in that specific indication.

Material and methods.– We performed an observational study based on a standardized questionnaire sent to 29 pediatric PM&R services over the country. The questionnaire consisted in closed responses (yes or no).

Results.– Twenty-four services responded to the questionnaire. Cerebral palsy was the most common indication for pump implantation (23/24). Pre-test evaluation was performed in 22 cases and post-test evaluation in 21 cases, and early after implantation in 20 cases and late after implantation in 17 cases. Single shot infusion was the test favored by PM&R physicians in 15 cases. The pump was implanted in the subcutaneous tissue in 19 cases. Early complications were observed in 16 cases after pump implantation. Late complications were observed in two cases and consisted in catheter migration.

Conclusion.– In conclusion, the current study demonstrated large practice diversity over the country and highlighted to potential for complications due to the treatment. The follow-up of the treated patients was also non-uniform. It should be of interest to develop nationwide standardized strategies in order to improve and make uniform patient management.

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P043-e
Permanent mechanical deformation of an intrathecal baclofen pump secondary to altered pressure in scuba diving: A case report
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Keywords: Spinal cord injury; Spasticity; Intrathecal baclofen therapy; Scuba diving

Introduction.– Intrathecal baclofen (ITB) therapy is a safe method for treating generalised spasticity which cannot be controlled by oral medication. Complications related to ITB therapy mostly consist of catheter related problems. Persons with a spinal cord injury are encouraged to be active even with an ITB pump and often take part in different sport activities.

Observations.– A 37-year-old male with a paraplegia T4 AIS A, secondary to a road traffic accident in 2003 presents at the outpatient clinic in September 2012 for refill of his ITB pump (SynchroMed II, Medtronic) placed in 2008 for uncontrollable spasticity of the lower limbs. Spasticity is well controlled and the patient doesn’t have any specific complaints. During refill-procedure, only 27 mL can be injected in the reservoir whereas the reservoir of the pump is made to contain 40 mL. Anamnesis reveals that three weeks before, the patient went scuba diving to a depth of 30 m below sea level. He does not recall any altering of spasticity during or after diving. X-ray reveals a collaps of the bottom shield of the baclofen pump.

Discussion.– This is the first clinical case reported of a patient with a mechanical deformation of an ITB pump following scuba diving. Scuba diving with a SynchroMed II pump (Medtronic) is restricted by the company to a depth of ten meters or 33 feet below sea-level as testing has shown that the pump may be damaged during a single exposure when the pump is not full and exposed to pressures greater than 2.0 ATA (atmospheres absolute), or with repeated exposure to increased pressures even if they are less than 2.0 ATA. Besides the permanent effect of a collapsing bottom shield, there is the temporary effect of reduced flow rate.

Patients with an ITB pump should be warned for the risks associated with scuba diving and should not dive more than 10 m below sea level.

Further reading
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P044-e
Functional outcomes after surgery for heterotopic ossifications: 22 cases
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Keywords: Heterotopic ossifications; Functional surgery; Functional rehabilitation

Introduction.– Heterotopic ossification is a frequent complication occurring particularly in the aftermath of neurological damage. The functional impairment may be severe. The goal of surgery is to improve function. The aim is to determine functional outcomes of patients undergoing surgery for heterotopic ossifications.

Patients and methods.– This was a prospective study of patients who underwent surgery for heterotopic ossifications followed by intensive rehabilitation care in our department from January 2009 to March 2013. The evaluation included a joint assessment and a functional assessment for each affected joint.

Results.– There were 22 patients (29 operated joints), predominantly male (82%) and the average age 31.6 years (19–41 years). Nineteen traumatic brain injury patients and three injury spinal cord patients. Operated joints were: knee (n = 11, 38%), elbows (n = 11, 38%), hips (n = 7, 24%). All patients received physical therapy based mainly on continuous passive mobilization of the elbow or knee in addition to functional work. For operated hips, the Postel Merle d’Aubigné (PMA) score improved from 6.5 to 8. In patients who had knee surgery, the functional status improved: one patient recovered ability to walk and the others a good sitting position. For patients who had elbow surgery, the functional assessment revealed improved possibilities for global nutrition (hand-mouth), hygiene (hand-face) and grooming (hand-neck).

Discussion and conclusion.– The main objective of surgery for heterotopic ossifications is to restore joint mobility and function. Appropriate rehabilitation in an experienced PRM unit greatly contributes to improved functional capacities.

Further reading
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P045-e
Isotopic scintigraphy coupled to tomodensitometry: Interest in the diagnosis of baclofen pump dysfunction
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Keywords: Scuba diving; Intrathecal baclofen therapy; Spasticity in children; Permanent mechanical deformation of an ITB pump following scuba diving; A case report. Under revision in Spinal Cord.
Introduction

Total hip arthroplasty; Spasticity; Rehabilitation; Handicap

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P046-e

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Imaging evaluation of intrathecal baclofen pump-catheter systems. AJNR Am

Miracle AC, Fox MA, Ayyangar RN, Vyas A, Mukherji SK, Quint DJ.

dural sac shown in these investigations is related with the orientation of the

uncontrolled spasticity in patients with ITB pump. Baclofen stagnation in the

scintigraphy coupled with a tomodensitometry in the etiologic diagnosis of

controlled. Six months later, a second Indium111 DTPA scintigraphy confirmed

Very low activity of the radioisotope was observed above the lumbar level. The

next to the first sacral vertebra related with the atypical orientation of the

intrathecal catheter distal extremity. No leakage of the product was revealed. Very low activity of the radioisotope was observed above the lumbar level. The catheter was then replaced at T7 level. One month later, spasticity was well controlled. Six months later, a second Indium111 DTPA scintigraphy confirmed a high activity of intrathecal radioisotope up to the basal cisterns.

Discussion.– This observation emphasizes the importance of Indium111 DTPA scintigraphy coupled with a tomodensitometry in the etiologic diagnosis of uncontrolled spasticity in patients with ITB pump. Baclofen stagnation in the dural sac shown in these investigations is related with the orientation of the catheter.

Further reading

Miracle AC, Fox MA, Ayyangar RN, Vyas A, Mukherji SK, Quint DJ. Imaging evaluation of intrathecal baclofen pump-catheter systems. AJNR Am

N Euroradiol 2011;32:1158–64.

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P047-e

Training evaluation for a practice in spasticity associated techniques

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Keywords: Spasticity; Training; Anatomy; Analysis; Botulinum toxin; Phenol; Motor block

Motivation.– Since 2006 several trainings on injections techniques in the spasticity domain (botulinum toxin, phenol nerve blocks and motor branch blocks) have been performed on anatomical preparations. These seminars were organized three times a year by the European School of Surgery (ESS) and 10 to 20 physicians in Physical Medicine and Rehabilitation were concerned.

Problem statement.– To specify the needs for trainings by using the feedback from this 5-year experience in seminars.

Population.– All the professionals who had benefited from one or several trainings at the ESS from the beginning of this program.

Method.– Analysis of standardized questionnaires sent by mail to the participants. The questionnaire included a retrospective evaluation of the previous ESS trainings targeted on real educational impact (modifications in professional practices). Specific questions were asked concerning participants’ wishes regarding previous seminars in terms of training, themes and organization. Each participant was incited to propose areas for improvement and innovation in each domain.

Results.– Among 307 people who followed this training 110 answers were obtained and we expect 150 all in all. Previous trainings enabled modifications in professional practices for 77% of respondents, and 91% wished to renew this kind of seminars. Answers to several questions concerning further needs and future evolution of the seminars were obtained.

Conclusion.– This original project of training practices evaluation should allow educational innovations and an adaption of trainings to participants’ needs.

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P048-e

Correlation between muscle length, spasticity and motor weakness in adult spastic paresis: Infant vs adult-acquired lesions

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Patient 2.– Female, 53-years-old, multiple sclerosis, EDSS 7.5, THA with left spastic hemiparesis, attitude of hip adduction, internal rotation and flexion with diffuse spasticity between 2 and 3 in the left lower limb. Management is carried out at home.