Somatosensory rehabilitation: Treatment of a complex regional pain syndrome type II

C. Massot a,*, L. Heymans b, V. Durlent b, A. Thevenon a, V. Tiffreau a
a CHU de Lille, 2, avenue Oscar-Lambret, 59000 Lille, France
b CHR Wattrelos, France
*Corresponding author.
E-mail address: carolinemassot29@gmail.com

Introduction.– The Complex regional pain syndrome (CRPS) presents serious therapeutic difficulties. Two types of this syndrome are known: type I without peripheral nerve lesion and type II with peripheral nerve lesion. Three stages are described: stage one with vasomotor troubles and allodynia, the stage two with hypoesthesia, then, the stage three with decreased range of motion. Here is, a CRPS case with neuropathic pain which was treated with somatosensory rehabilitation.

Observation.– A 64-year-old woman, was suffering from a CRPS type II in first stage in acromioplastia post-surgical of left shoulder in October 2011. The CRPS was diagnosed with Bruel criteria and a scintigraphy. The somatosensory rehabilitation was started in March 2012. The patient took analgesic pills which did not much relieved the pain. A map of the allodynia territory had decreased to disappear one month later. The patient did not take treatment any longer. The range of motion of the arm.

The somatosensory rehabilitation consisted in:
– a distant vibrotactile counter stimulation 8 times a day during 1 minute with comfortable stimuli in C8-D1;
– a distant viber counter stimulation realised with Vibralgic at 300 Hz, 0.9 v during less than 1 minute;
– none stimuli on the allodynia territory.

An assisted active range of motion exercise of the left shoulder was effected. The pain was gone, the alldodynic territory had decreased to disappear one month later. The patient did not take treatment any longer. The range of motion of shoulder was normal.


References

CH Saint-Amand-Montrond, 1, rue de la Croix-Duchet, 18200 Saint-Amand-Montrond, France
E-mail address: azzeddine_hafid@yahoo.fr

Keywords: Equimolar mixture oxygen-nitrous oxide; Regional pain syndrome complex type I; Joint stiffness

Introduction.– Mobilization of a stiff knee in NITROUS within a complex regional pain syndrome type I of a case.

Objectives.– Nitrous oxide interest in pain management to gain joint work within the framework of complex regional pain syndrome type I of a case.

Clinical case.– Mrs H.F., 45 years, CRPS type I in the right knee of sick.

Walk with 2 CA with stiffness in his right knee, independent with ADL in long sick.

Support.– Day hospital with physical therapy at 3 times/week.

Intolerance TT requires dose adjustment (maximum tolerated 10 mg).

Mobilization painful; flexion 70°, extension 0° after 16 weeks.

Making use of nitrous oxide for its analgesic and relaxant [2] and its safe use to maintain the swallowing reflex [1].

After explanation of the gesture, nitrous oxide administration (maxi/5 min, flow 12 L) before mobilization followed by a gentle passive mobilization (flow 12 L, maxi/20 min) with bending posture respecting the no pain.
Twelve sessions were conducted.

Results.– Amnestic effect on pain may occur during mobilization.

Flexion: 95° active.

Pain: 0/10 at rest and walking.

Improving the quality of walking with a smooth and not increase walking speed without technical assistance.

Resumption of his previous 26 months work after the diagnosis of CRPS-I.

Scintigraphy: net regression process CRPS-I detected in his right knee in 2010.

Regularization of all households hyperactive.

Discussion and conclusion.– This would be for the benefit of nitrous oxide in the mobilization of a stiff joint including CRPS-I through a permitting algo-

functional improvement and joints that enabled our patient to return to his previous work.

References

P090-e Intrathecal ziconotide and baclofene, an efficient association
J.-C. Kleiber a,*, A. Rapin a, J.-M. Coulon a, E. Theret a, F. Boyer b, P. Peruzzi c
a Service de neurochirurgie, CHU de Reims, 45, rue Cognacq-Jay, 51100 Reims, France
b Service de MPR, CHU de Reims, 45, rue Cognacq-Jay, 51100 Reims, France
*Corresponding author.
E-mail address: jean-charles.kleiber@neurochirurgie.fr

Keywords: Chronic pain; Spasticity; Ziconotide; Baclofene; Intrathecal treatment

Introduction.– Intrathecal ziconotide has shown its efficiency in chronic resistant pain, we studied the association with baclofene in spastic pain management.

Patients.– Seven patients, 4 female, 3 male, average age 54.3 years old [39; 75] have been treated with continuous intrathecal infusion of baclofene, ziconotide and morphine. Four had a failed back surgery syndrome, 1 peripherical nerve lesion, 1 spine injury, 1 cerebral palsy. Ziconotide has been introduced after the failure of an intrarachidian morphine + baclofene treatment.

Results.– The average decrease of pain intensity after we began the ziconotide treatment was equal to 31 mm on visual analog pain scale, from 68 to 37 mm after ziconotide introduction. Ziconotide adding had no effect on spasticity which was already efficiently managed by intrathecal baclofene. The average follow-up was 13.3 months [2; 26 months]. Average ziconotide posologies were 3.1 µg per day [1.25; 5.7 µg per day] and 342 µg per day [43; 1800 µg per day] for baclofene. Ziconotide had to be stopped for 3/7 (43%) because of side effects, with a full recovery after treatment interruption. One patient kept auditory hallucination but did not want any posology modification since he was satisfied with the antalgic level. Most of the side effects occurred during the first semester of our use of ziconotide due to too fast dose increase. The commonest side effects were: nausea, dizziness, ataxia, visual and/or auditory hallucination. No treatment failure has been noticed for two years. Initial treatment administration has to be as low as possible (1 µg per day in our population) in order to obtain antalgic effect without major side effects. A slight increase of doses (+0.3 µg per week) allows pain management without side effects.

Conclusion.– Ziconotide in association with intrathecal baclofene is a good way to deal with chronic pain with spasticity.

http://dx.doi.org/10.1016/j.rehab.2013.07.250

P091-e Clinical, ultrasonographic and CT markers for botulinum toxin injections into the piriformis muscle
F. Michel a,*, S. Aubry, P. Decavel, L. Tatu, E. Toussirot, E. Aleton, B. Parratte
CHU Jean-Minjoz, boulevard Fleming, 25000 Besançon, France
*Corresponding author.
E-mail address: fmichel@chu-besancon.fr

Keywords: Piriformis muscle; Ultrasound; Botulinum toxin

Objective.– The study of the literature concerning the treatment of piriformis muscle syndrome (PMS) to validate the role of botulinum toxin injections after failure of medical management and rehabilitation. The few reported series confirm the results significantly superior to placebo injections and even repeated anesthetics and/or corticosteroids. The piriformis muscle belongs to the deep part of the gluteal region where the need for radiological identification. Our team couples the ultrasound with electromyography detection, allowing the latter through an active lateral rotation maneuver (in a subject supine on the healthy side) to optimize the injection site. Ultrasound, with constant technical progress and the development of new sensors, allows very interesting morphological evaluation of the muscle and its relationship with the main sciatic nerve. The objective of this study was to validate the clinical and ultrasonographic markers compared to CT and anatomical data.

Patients and methods.– Five patients supported for SMP received botulinum toxin injections under ultrasound and CT with a minimum of 3 months between each injection, the second injection performed because of insufficient improvement of symptoms.

Results.– The clinical markers of projection of the piriformis muscle is defined by a triangle whose base joins the posterior superior iliac spine and the upper part of the inter-gluteal fold, and whose summit is next to the upper pole of the greater trochanter. Ultrasound (abdominal convex probe tone) body muscle is visualized on the lateral edge of the sacrum with a depth of 4.8 cm for the