

100. UNILATERAL RIGHT SIDE STELLATE GANGLION BLOCK ALLEVIATES PSEUDO-OBSTRUCTION SYMPTOMS. AN EVALUATION BY ELECTROAUTONOMOGRAPHY

Devulder, J.E.¹; Lerner, E.²; Vanderstraeten, G.³; Mortier, E.¹ 1. Anesthesiology, Ghent University Hospital, Ghent, Belgium; 2. Lerner Medical Technology, Amsterdam, Netherlands; 3. Physical Medicine and rehabilitation, Ghent University Hospital, Ghent, Belgium

Introduction: The chronic intestinal pseudo-obstruction syndrome due to visceral myopathy resembles bowel obstruction but without mechanical obstruction. We present a 49-year-old Caucasian woman suffering from the syndrome since 19 years. Surgery with colectomy and ileostomy failed to relieve the symptoms of abdominal distension and mechanical bowel obstruction. Finally, she needed parenteral nutrition by subclavian catheter, which induced causalgic pain in the right arm. A right sided Stellate Ganglion Block relieved not only the causalgic pain but also relieved the abdominal symptoms for 5 days. Repeated stellate ganglion blocks with a 6 week interval maintained the patient in a stable situation. Esophageal manometry and radioscintigraphic scan failed to confirm and to demonstrate the clinical improvement.

Methods: In this patient we evaluated sympathetic function with electroautonomography using an 8 channel electroautonomograph (E. Lerner US pat.5522386 1996). Skin potentials were recorded simultaneously from both hands and both feet. Besides the skin potentials, the electrogastrogram, the electrocardiogram and the respiration rate were recorded as well. Potentials were recorded before, during and after the stellate ganglion block, which was performed with 5 ml bupivacaine 0.5% at the C7 level. The infiltration was controlled by fluoroscopy after injecting 1 ml of contrast dye (Iotrolanum 250 Schering).

Results: As expected, after the block the evoked sympathetic skin response was abolished (10.24 mV to 0.24 mV amplitude) in the right arm and a tendency to decrease in the left arm and the right foot. The average latency time increased from 1 sec to 1.9 sec. The electrogastrogram (EGG) amplitude decreased from 226.7 μ V to 140.7 μ V. Although this is not statistically significant, there is a clear tendency for amplitude decrease. The EGG averaged frequency remained unchanged (2.9Hz to 2.8 Hz). The heart rate and respiration rate also decreased.

Conclusion: In this patient, the beneficial effects of the Stellate Ganglion Block on the gastric-bowel function could be documented. Not only the sympathetic skin response decreased significantly after the infiltration but also the amplitude of the electrogastrogram, reflecting motor inhibition and stomach relaxation by the sympathetic nerve, decreased. The frequency of the gastrogram, reflecting vagal tone, remained unaffected.

By this examination we can explain in this particular patient, with pseudo-obstruction symptoms, that stellate ganglion block alleviates symptoms by a polysystemic decrease in sympathetic function