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### A case of abdominal myoclonus secondary to spinal cord stimulation

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*Introduction:* Myoclonus is defined as brief, rapid involuntary movements caused by muscular contractions. Abdominal myoclonus (AM) is a rare form of spinal segmental myoclonus whose aetiology may include functional or structural lesions of the spinal cord, causing abnormal rearrangement of the spinal circuitry [1].

*Objective:* To describe a case of acute/subacute onset AM due to spinal cord stimulator (SCS).

*Methods:* Retrospective examination of medical charts and report of a single case of AM.

*Case presentation:* A 78-year-old man was admitted for acute/subacute onset of AM. Patient had seven years-long history of Parkinson's disease (treated with pramipexole 1.05 mg/die) and previous spinal surgery for severe spondylosis. Because of a severe low back pain syndrome, he was implanted either with a spinal cord stimulator (SCS) (leads placed at T7 level), or an intrathecal morphine delivery system (providing 1.5 mg/die), five and one year earlier respectively. Neurological examination showed AM, exaggerated in supine position; sensory stimuli and distraction tasks, did not affect AM. Besides parkinsonian syndrome, no further focal signs emerged. Spinal RX showed the correct leads placement. Video EEG polygraphy excluded focal epileptic activity. Patient was initially treated with clonazepam (up to 2 mg/die) and gabapentin (up to 900 mg/die), with no significant improvement (pramipexole was continued). Of relevance, AM presented a sudden increase in amplitude and intensity during a recharge session of the SCS. Turning-off the SCS, the AM completely resolved in few minutes, without reappearing in the successive six months.

*Conclusions:* This case indicates that AM can be secondary to SCS. Muscle spasms are reported in literature as rare side effects [2][3] of SCS implantation, probably due to the spinal anterior horn cells hyperexcitability. Here, we observed a direct time correlation between AM worsening and SCS recharge first, and the complete resolution of AM after switching-off of the device.

#### References:

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- [3] Benyamin R, Galan V, Hatheway J, et al. Prospective Study Options: A Prospective, Open-Label Study of High-Dose Spinal Cord Stimulation in Patients with Chronic Back and Leg Pain. [www.painphysicianjournal.com](http://www.painphysicianjournal.com)