Effects of transcutaneous spinal direct current stimulation in patients with idiopathic restless legs syndrome (iRLS)

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Background: Several studies have indicated that patients with iRLS may have an increased spinal cord excitability. Thoracic transcutaneous spinal cord stimulation (tsDCS) is a non-invasive tool for spinal cord neuromodulation. This study aimed to establish a new safe method to modulate spinal excitability in iRLS patients and alleviate symptom severity.

Methods: This double-blind, crossover study evaluated the soleus H_{max}/M_{max} ratio, the soleus H reflex recovery curves, and RLS symptom severity before, at current offset and 30 min after sham, anodal and cathodal transcutaneous spinal direct current stimulation (2.5 mA for 15 min, current density of 0.063 mA/cm^2) in 14 patients with iRLS and 14 controls.

Results: We aim to finish the study soon and to present our first results.