Central nervous system abnormalities in vaginismus

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Objective: To investigate possible altered CNS excitability in vaginismus.

Methods: In 10 patients with primary idiopathic lifelong vaginismus, 10 with vulvar vestibulitis syndrome accompanied by vaginismus and healthy controls we recorded EMG activity from the levator ani (LA) and external anal sphincter (EAS) muscles and tested bulbocavernosus reflex (BCR). Pudendalnerve somatosensory evoked potentials (SEPs) were tested after a single stimulus. Pudendal-nerve SEP recovery functions were assessed using a paired conditioning-test paradigm at interstimulus intervals (ISIs) of 5, 20 and 40 ms.

Results: EMG in patients showed muscular hyperactivity at rest and reduced inhibition during straining. The BCR polysynaptic R2 had larger amplitude ($p < 0.01$) and longer duration ($p < 0.01$) in patients from both groups than in controls. In controls, paired-pulse SEPs were suppressed at the 5 ms ISI for N35–P40 ($p < 0.05$) and P40–N50 ms ($p < 0.001$) and facilitated at the 20 ms ISI for N35–P40 ($p < 0.05$) and P40– N50 ($p < 0.05$). No significant differences were found in the paired-pulse N35–P40 in patients and controls but the cortical P40–N50 at 20 ISI was facilitated in patients ($p < 0.05$).

Conclusions: EMG activity is enhanced and the cortical SEP recovery cycle and BCR are hyperexcitable in vaginismus.

Significance: The neurophysiological abnormalities in patients with vaginismus indicate concomitant CNS changes in this disorder.

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