

Electrical Stimulus to Treat Urinary Incontinence: A Review

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ABSTRACT

Urinary incontinence is a common issue that markedly affects women's quality of life. It consists of four main different entities including stress urinary incontinence, urge urinary incontinence, overflow incontinence and functional incontinence. Of various types of urinary incontinence, overactive bladder consists of one category, which is often resistant to various treatments, and is characterized by urgency, frequency nocturia and urges incontinence. There are several methods to mitigate or reduce this problem such as medication, surgery, or exercises. The focus of this paper is on the three electrical stimulation methods that have been considered a treatment option of overactive bladder and consists of providing electrical stimulus to nerves leading to the bladder. We here briefly summarize various treatment options for urinary incontinence, with special reference to the role of electrical stimulation methods for this disease. First, we are going to review first-line treatments such as lifestyle changes, physical therapy, and pharmacotherapy and one electrical method consisting of Vaginal Electrical Stimulation (VES). Botox injections to the bladder, Posterior tibial nerve stimulation (PTNS) and Sacral nerve stimulation (SNS) are three third-line treatments that are considered when first and second treatment lines fails, or the side effects are too substantial to continue with the treatment. The three electrical methods have shown good results, efficacy, and few possible side-effects compared to other treatments. Electrical stimulation is a solution that has a long way to go and more hopeful results to be found. We hope that these findings will contribute to achieving a better quality of life for patients.

Keywords: Urge urinary incontinence, Overactive bladder, Posterior tibial nerve, Stimulation, Sacral nerve stimulation

Abbreviations: OAB: Overactive Bladder; PFMT: Pelvic Floor Muscle Training; VES: Vaginal Electrical Stimulation; PTNS: Posterior Tibial Nerve Stimulation; SNS: Sacral Nerve Stimulation

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