

332

**Authors:** Bruschini H, Almeida F, Srougi M.

**Institution:** Federal University of San Paolo

**Title:** ASSESSMENT OF EXTRACORPOREAL MAGNETIC INNERVATION (EXMI) AS A FIRST LINE TREATMENT FOR FEMALE PATIENTS WITH URINARY INCONTINENCE

### **Aims of Study:**

Extracorporeal Magnetic Innervation therapy (ExMI) is a conservative, non-invasive treatment for female urinary incontinence. ExMI generates a pulsed magnetic field that induces electrical depolarization of the nerves within the pelvic floor, causing a contraction of the pelvic floor muscles (1). This study was designed to determine whether ExMI therapy improves urinary incontinence symptoms in females, making it an effective first line treatment.

### **Methods:**

91 female patients with a mean age of 60.5 +/- 10.13 years and demonstrable urinary incontinence were evaluated in a prospective clinical trial. Eligible patients were ambulatory, neurologically normal, had normal urinalysis and were not receiving treatment for incontinence.

Treatment consisted of 16 sessions, each lasting approximately 25 minutes. Pulsed magnetic stimulation included 10 minutes of intermittent low frequency stimulation at 5Hz, 10 minutes of intermittent high frequency stimulation at 50Hz, and a five-minute rest interval. Outcome measures included a 72-hour bladder diary, validated quality of life (QOL) survey, number of pads per day, and number of leaks per day.

### **Results:**

Significant improvements on several outcome measures were noted. QOL scores showed a mean improvement of 35% ( $p < 0.001$ ). Number of leaks per day decreased 54% ( $p < 0.001$ ), and number of pads per day decreased 40% ( $p < 0.001$ ). 34 (37%) patients were dry, and 24 (26%) patients were free of pads after treatment. A statistically significant correlation existed between QOL improvement and reduction in pad use and leaks per day ( $p < 0.001$ ).

### **Conclusions:**

Subjective and objective outcome measures for patients who completed treatment showed significant improvement. ExMI therapy should be considered as a first line approach in treating urinary incontinence in females. No support was provided for this study.

(1) Galloway N, El-Galley R, Sand P, Appell R, Russell H, Carlan S. (2000). Update on Extracorporeal Magnetic Innervation (ExMI) Therapy for Stress Urinary Incontinence. *Urology*, 56 (6A):82-86.