

## **IMPACT OF EXTRACORPOREAL MAGNETIC INNERVATION (ExMI) ON QUALITY OF LIFE IN THE TREATMENT OF STRESS URINARY INCONTINENCE**

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**Key words:** *Quality of Life, Stress Urinary Incontinence, ExMI*

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### **ABSTRACT**

**Introduction and Objectives:** Stress urinary incontinence (SUI) is an important healthcare problem with significant personal and economic costs. The Incontinence Quality of Life (I-QOL), a valid, reproducible and responsive instrument, was developed as a self-report instrument specific to urinary incontinence. This is the first report of the use of I-QOL as a measure of treatment outcome in women with SUI using ExMI.

**Methods:** Sixty-six women with SUI were treated with a mean age of 56 ( $\pm 11$ ) years. The mean duration of incontinence was 12.5 ( $\pm 10.7$ ) years and 52% reported a previous hysterectomy. Thirty-three had urinary frequency of 10 or more voids per day. For treatment, the patient was seated in the chair of a Neocontrol® system. The chair contains a magnetic field generator that induces contraction of the pelvic floor muscles. Twelve 20 minutes treatments (10 of 5 Hz and 10 of 50 Hz) were given over 6 weeks. I-QOL and bladder diaries were completed at 0 and 8 weeks. The I-QOL consists of 22 items. Each item has a five-point scale, yielding a total score. Statistical analysis included t-tests, ANOVA and Wilcoxon test for non-parametric data.

**Results:** Eighty percent (53/66) showed an improved I-QOL score. The mean score was increased from  $71.6 \pm 20.5$  to  $90.5 \pm 17.0$  ( $p$ -value=0.01). One had no change and 18% (12/66) worsened from  $71.4 \pm 20.2$  to  $65.2 \pm 21.2$  (n.s.). Of the 53 patients who had an improvement in I-QOL score, 40 had a corresponding decrease in number of incontinent episodes ( $p < 0.01$ ) and 46 had a decrease in pad changes ( $p < 0.01$ ). Of the 12 patients who had a decrease in I-QOL score, 4 exhibited an increase in number of incontinence episodes ( $p > 0.05$ ) and 5 reported an increase in pad changes ( $p > 0.05$ ). In the analysis of urinary frequency, 20/33 women exhibited a decrease in voids/day at 8 weeks ( $p = 0.002$ ) and 16 reported a corresponding increase in I-QOL ( $p = 0.002$ ). Thirteen had an increase in urinary frequency with 5 reporting a decrease in I-QOL ( $p = 0.7$ ).

**Conclusion:** There is a high correlation between increased I-QOL scores and positive changes in the number of leaks, pad changes and urinary frequency, before and after ExMI therapy. This previously validated QOL instrument demonstrates the effectiveness of ExMI as a treatment for stress urinary incontinence.

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