



Change in Quality of Life Scores in Incontinence Patients following an Intervention of External Electrical Stimulation as determined by the Kings Health Questionnaire



Authors: B. O`Reilly*, O. O`Sullivan*, K. Siddiqui, D. Keane, M. Skehan
*Cork University Maternity Hospital, Ireland

Introduction

Soeder 2013 has previously identified the clinical potential of a novel form of external electrical stimulation (EES) as a conservative treatment in the management of Urinary Incontinence (UI).¹ This non-invasive approach has been shown to reduce symptoms and elicit superior pelvic floor engagement compared to conventional probe based methods.^{1,2} While demonstrating an objective improvement in symptom scores is commendable, this may or may not actually represent a true marker of improvement from a patients perspective. Indeed, there is a growing call for research studies to incorporate more patient oriented measures which genuinely reflect patient responses to varying intervention methods. This registry exercise evaluated the impact of EES on the overall quality of life scores of a group of Irish (n=20) incontinence patients after treatment.

Aims

The purpose of this study was to retrospectively investigate the changes in patient Quality of Life (QoL) after an intervention of EES using the Vital Compact™ device.

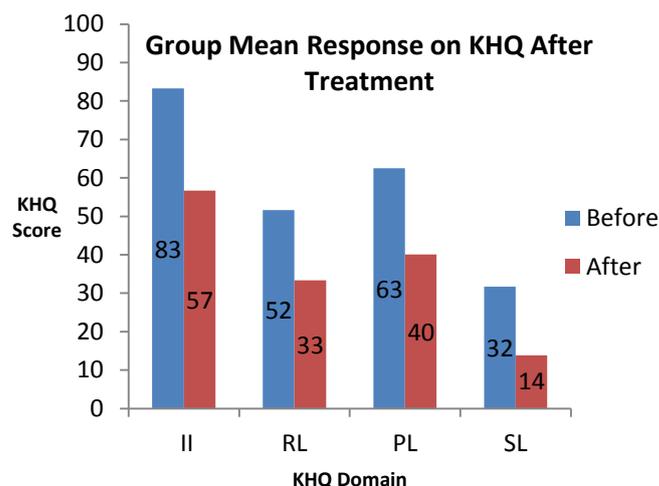
Methods

Treatment outcomes relating to QoL were monitored by means of the Kings Health Questionnaire (KHQ) following 12 weeks of intervention with the stimulation device. The KHQ is a psychometric questionnaire which measures the impact of urinary incontinence on patient quality of life. It has been shown to have good reliability and validity and is used internationally in practice as a marker of patient QoL. Outcomes were evaluated before and after treatment in 20 patients across 5 clinics in Ireland.

Results

The group response across all domains of the KHQ (including personal relationships, emotions, sleep & energy and overall severity not shown in Fig. 1 over) showed a reduction from baseline. A reduced score indicates patient improvement in that their condition has less of an impact on their overall QoL. Similarly all domains of the KHQ were observed to reduce by at least a 5-point margin from baseline. This is significant given that Kelleher 2004 reports that a change from

baseline of at least 5 points on KHQ domains indicates a change that is meaningful to patients and is indicative of a clinically meaningful improvement in health-related quality of life after treatment.



Legend II-Incontinence Impact, RL Role Limitations, PL Physical Limitations, SL Social Limitations.

Figure 1 –KHQ Scores following Intervention

Discussion and Conclusions

Results from this observation study have revealed a reduction in the group mean KHQ score across all domains of this quality of life scale. Moreover, it was found that all domains also reached the minimum clinical meaningful difference threshold after intervention. Overall, it was found that an intervention of EES training was found to significantly enhance the QoL of patients post intervention. Further research incorporating QoL outcomes with this novel method in a greater sample size is currently underway in a large multi-centre study.

References

1. Soeder S, Tunn R. (2013) - Neuromuscular Electrical Stimulation (NMES) of the Pelvic Floor Muscles using a Non-Invasive Surface Device in the Treatment of Stress Urinary Incontinence (SUI); A Pilot Study. IUGA Conference, Dublin,
2. Maher RM, Crockett J, Kozel C, Landers E, Vertucci J, Wilkes M. (2010) - A Comparison of 2 Delivery Methods of Neuromuscular Electrical Stimulation on Pelvic Floor Muscle Contraction in Healthy Subjects: Journal of Women's Health Physical Therapy 34(1), pp 18-23.
3. Kelleher CJ, Pleil A.M, Reese PR, Burgess SM, Brodish PH (2004). How much is enough and who says so? BJOG An international journal of obstetrics and gynaecology. 111(6):605-12.