

#504 Exploring the effectiveness of functional pelvic electrical stimulation for post prostatectomy incontinence: Taiwan experience



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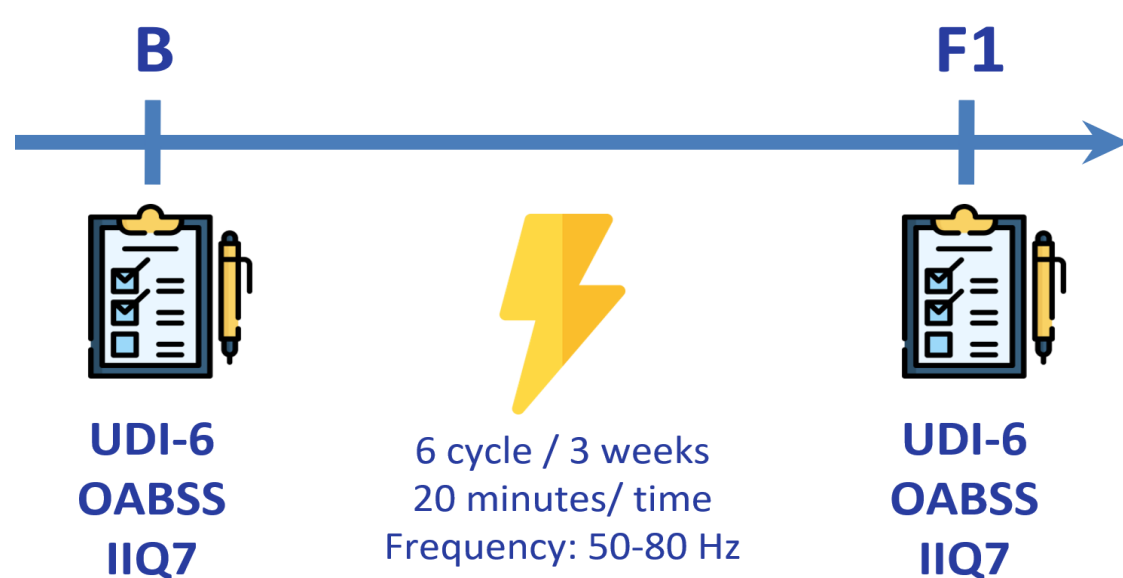
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Hypothesis / aims of study

Post-prostatectomy incontinence (PPI) is a distressing complication following radical prostatectomy, significantly impacting quality of life and increasing dependency on daily activities. The etiology of PPI can be multifactorial, dependent on patient characteristics, lower urinary tract function, or surgical factors. Functional pelvic electrical stimulation (FPES) stands out as a treatment modality for urinary incontinence and is the sole conservative management covered by Taiwan National Health Insurance. This study aimed to evaluate the effectiveness of FPES in managing PPI.

Study design, materials and methods

Patients who underwent robotic-assisted nerve-sparing radical prostatectomy between 2019 and 2023 and experienced complications of post-prostatectomy incontinence (PPI), and did not respond to behavioral and physical therapies, as well as pharmacological management such as Solifenacin, were included in the study. Each patient received functional pelvic floor electrical stimulation (FPES) twice weekly for one course. The electrical stimulation patch was positioned over the perineum, spanning from the base of the scrotum to the anus. The stimulation treatment lasts approximately 20 minutes, featuring a phase duration of 300 μ s, a frequency of 50-80 Hz, and an interval time of 15 seconds.



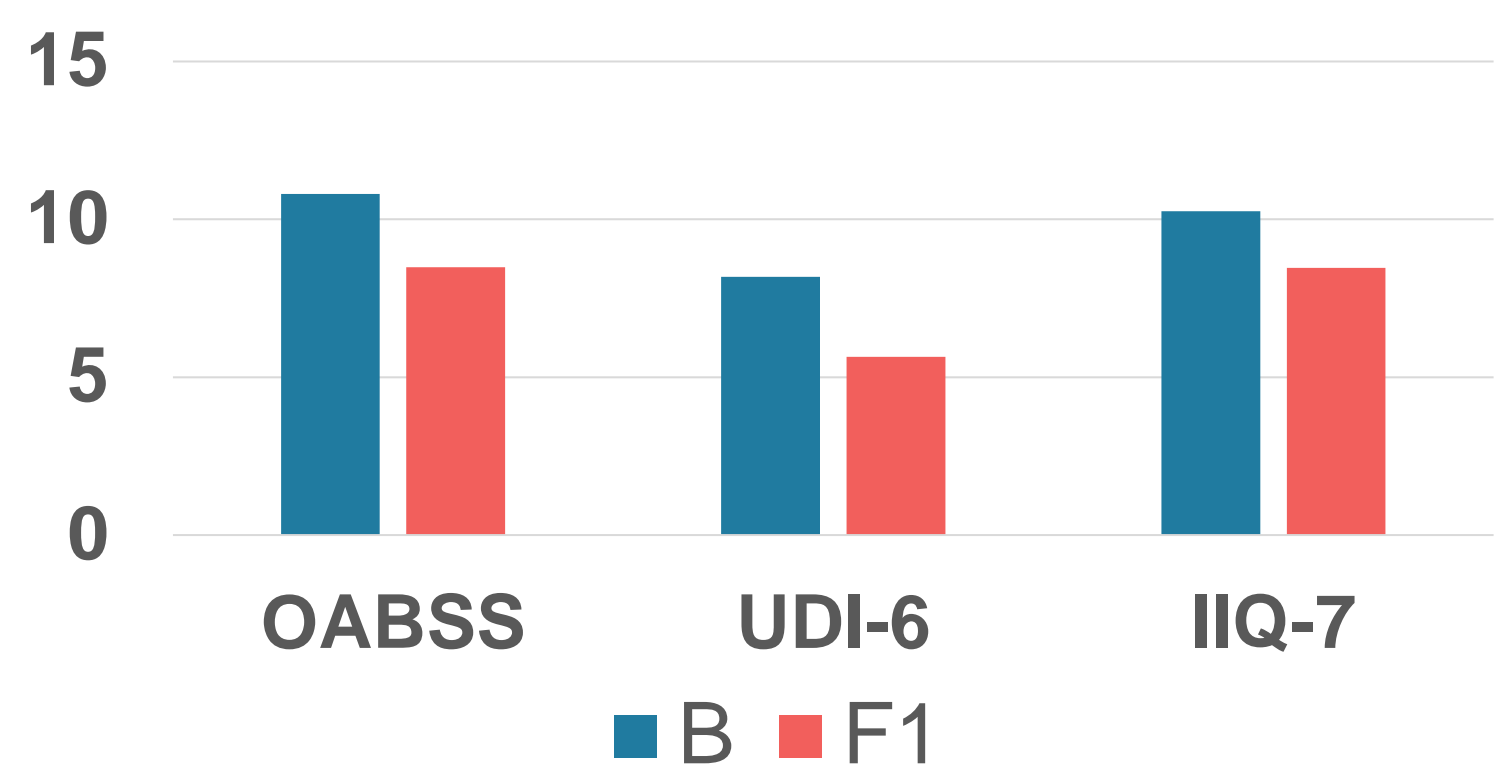
Throughout the treatment process, we also educate patients on correctly performing pelvic floor muscle training at home. The assessment and quantification of incontinence symptoms were conducted using the Urinary Distress Inventory, Short Form (UDI-6), Overactive Bladder Symptom Score (OABSS), and Incontinence Impact Questionnaire, Short Form (IIQ-7). Measurements were taken before and after three courses of FPES treatment. Pre-FPES and post-FPES scores were collected and analyzed using paired sample t-tests.



Results and interpretation

Questionnaire data of 33 patients with PPI were collected in this study. No complication was noted during the whole treatment course of FPES. Bothersome questionnaire scores significantly improved at follow up when compared to the baseline. The average score of OABSS (10.8 to 8.48, $p=0.00017$) and UDI-6 (8.18 to 5.65, $p=0.00026$) both got significant reductions. But there is no difference between pre and post-FPES IIQ-7 score (10.26 to 8.46, $p=0.09$).

Questionnaire score



Based on the statistically significant decrease in the total score of the questionnaire, it can be inferred that the patients subjectively perceive an improvement in urinary symptoms and overall quality of life. The patient experienced no complications during the treatment and subsequent follow-up, confirming the safety of the procedure.

Conclusions

Our study demonstrated improvement in post-prostatectomy incontinence symptoms following treatment with functional pelvic electrical stimulation therapy combined with pelvic floor muscle training. Functional pelvic electrical stimulation is a safe and effective treatment for post-prostatectomy incontinence.

References

Pan, Jiancheng et al. "Progress in studies on pathological changes and future treatment strategies of obesity-associated female stress urinary incontinence: a narrative review." *Translational andrology and urology* vol. 10,1 (2021): 494-503.