Current Bladder Dysfunction Reports (2022) 17:139–142
https://doi.org/10.1007/s11884-022-00647-6

PATIENT ENGAGEMENT, EDUCATION, AND LITERACY FOR PELVIC FLOOR DISORDERS (J ANGER, SECTION EDITOR)

Enhancing Third-Line Therapies for Overactive Bladder Using Patient Education Strategies

Ron Ron Cheng[1] · **Una J. Lee**[1]

Accepted: 26 January 2022 / Published online: 14 March 2022

Abstract

Purpose of Review In this review, we discuss the current literature concerning the use of patient education interventions for the improvement of outcomes and patient experience during third-line treatment for overactive bladder.

Recent Findings There are only a few prospective studies in the past decade which examine the role of patient education interventions in sacral neuromodulation and intradetrusor onabotulinum toxin treatments; these studies focus on the ability of the interventions to improve patient understanding and satisfaction around the procedure.

Summary Evidence for the use of patient education to optimize third-line overactive bladder therapies is scarce, but results show promise for using these types of interventions to enhance the patient experience.

Keywords Overactive bladder · Patient education · Sacral neuromodulation · Bladder chemodenervation · Urge urinary incontinence · Female pelvic medicine

Introduction

The foundation of the therapeutic relationship between patient and physician features communication as a key support. Part of this communication is the act and process of patient education. Patient education serves the dual purpose of improving patients' ability to manage their health conditions (e.g., through behavior modification) as well as setting appropriate expectations for additional intervention. The pelvic floor literature has demonstrated that patients have high expectations for symptom resolution after treatment of stress urinary incontinence [1]. At the same time, improved patient preparedness and appropriate expectations have been correlated with higher quality of life, symptom improvement, and patient satisfaction for reconstructive pelvic surgery [2]. These findings suggest that education can help patients to have more informed expectations and higher satisfaction.

For overactive bladder (OAB), studies have shown a benefit in symptom reduction with combined behavioral therapy and medication vs. medication therapy alone both in older women [3] and in men [4••]. Beyond traditional behavioral therapy, there has been increasing interest in and utilization of newer formats for the delivery of patient health information beyond a paper handout. This has been demonstrated by an increase in the usage of the Internet, social media, and overall digital delivery of patient-directed information on OAB [5•]. Considering both the promising results of combination therapy involving patient education plus intervention in OAB and the link between patient education and patient satisfaction after pelvic floor surgery, there is likely a role for patient education in traditional and contemporary formats to improve the patient experience during third-line OAB therapies, such as sacral neuromodulation (SNM), intradetrusor onabotulinum toxin injection (Botox), and posterior tibial nerve stimulation (PTNS). This review will examine the current state of patient education use in conjunction with third-line OAB therapies.

This article is part of the Topical Collection on *Patient Engagement, Education, and Literacy for Pelvic Floor Disorders*

✉ Una J. Lee
Una.lee@virginiamason.org

[1] Section of Urology and Renal Transplantation, Virginia Mason Franciscan Health, 1100 Ninth Ave, C7-URO, Seattle, WA 98101, USA

Patient Education in the OAB Literature

A literature search was performed in PubMed and Google Scholar for studies published between January 1, 2010, and December 31, 2020, using the keywords "patient education," "overactive bladder [OAB]," "sacral neuromodulation [SNM]," "onabotulinum toxin [Botox]," and "posterior tibial nerve stimulation [PTNS]." Only three results specifically addressed the use of patient education in conjunction with one of the third-line OAB therapies. Two articles related to patient education in SNM, and the third involved formulating key patient education points for pre-operative counseling for Botox. We carefully reviewed these articles including the references to identify additional relevant articles. No additional relevant papers on patient education and third-line OAB treatments were identified. Additional articles were reviewed on the topics of patient education and overactive bladder for discussion.

Patient Education in SNM

In their prospective cohort study of 36 female patients, Firoozi et al. examined the effect of a group shared appointment versus standard office counseling on patient preparedness and post-operative outcomes for sacral neuromodulation for overactive bladder and/or urge urinary incontinence [6•]. The authors hypothesized that patients who went through a group shared appointment would have better preparedness for SNM surgery as compared to standard individual office counseling, and this better preparedness would yield better patient-reported outcomes post-operatively. The authors prospectively enrolled patients interested in SNM for OAB and/or urge urinary incontinence (UUI) between October 2009 and March 2010. Attending the group shared appointment was not mandatory to undergo surgery, and patients were not randomized. The group shared appointment comprised 6–7 patients with a fellowship-trained FPMRS urologist presenting a 30-min slide show on SNM. This was followed by a 45-min question and answer session with the surgeon and a patient volunteer who had previously undergone SNM surgery. Patients attending the group shared appointment did so in lieu of the standard individual preoperative visit. Standard in-office counseling sessions lasted approximately 45 min. Patients in both cohorts were given the same written literature on SNM. All patients were asked to complete a preoperative preparedness questionnaire as well as pre- and post-operative voiding diaries. After the test phase, which followed stage 1 sacral nerve lead implantation with stimulation via an external battery pack, all patients were asked to complete the postoperative satisfaction questionnaire and Patient Global Impression of Improvement (PGI-I).

Among the 19 women who attended a group shared appointment, there was greater preparedness and better understanding of the purpose of and alternatives to SNM (see Table 1) compared to the 17 women who underwent standard in-office counseling. There was a significantly greater proportion of women in the group shared appointment cohort who felt completely prepared and completely satisfied or very much better according to the PGI-I. Both cohorts had approximately 88% of participants who experienced a 50% or greater decrease in symptoms based on voiding diaries. Through these results, the authors suggest the group shared appointment as a time-efficient means to improve patient preparedness, perception of outcomes, and overall satisfaction with SNM.

Jeppson and colleagues sought to identify the knowledge gaps and informational needs of patients considering SNM for OAB through conducting an initial set of five semi-structured focus groups [7•]. These focus groups resulted in the identification of 10 knowledge domains important to patients, including (1) anatomy, (2) expectations, (3) sacral nerve stimulation device efficacy, (4) surgical procedure (including the steps involved with stage 1 and 2 SNM operations), (5) surgical/device complications, (6) post-procedure recovery, (7) sacral nerve stimulation side effects, (8) postoperative restrictions, (9) device maintenance, and (10) general sacral nerve stimulation information. These domains were addressed in a 16-min educational video created with patient footage, 3D animations, and peer-reviewed literature. A customized questionnaire was

Table 1 Patient education interventions in third-line OAB therapy

Study	Third-line therapy	Patient education intervention	Outcome
Firoozi F et al. (2013)	SNM	Group appointment for patient preparedness	Improved preparedness, complete satisfaction with SNM, and feeling very much better (78.9% vs. 29.4%, 78.9% vs. 35.3%, and 68.4% vs. 17.6%, respectively). No difference in women with 50% or greater symptom reduction on voiding diary
Jeppson PC et al. (2013)	SNM	Patient-centered educational video	Improved short-term patient knowledge vs. manufacturer video
Dominique I et al. (2016)	Botox	Expert consensus developed essential pre-op informational items for patients	List of 27 essential items for pre-op understanding for Botox confirmed by 75% of an expert panel

developed to evaluate patient SNM knowledge and therapy attitudes. Patients with OAB were then randomized to watch either the custom-created educational video ($n=20$) or the manufacturer video ($n=20$).

The educational video group demonstrated improved knowledge scores across all domains, while the manufacturer video group failed to show improvement in the postoperative restrictions and complications domains. When comparing between the two groups, the educational video group demonstrated superior improvement in scores for all domains except anatomy and surgery, where knowledge improvement was equivalent for both groups. Participant attitudes regarding SNM were evaluated on a 5-point Likert scale ranging from strongly disagree to strongly agree. Patients who watched the educational video reported higher scores on the ability to understand the surgical procedure, postoperative expectations, SNM device placement, side effects, recovery, and complications. There was no significant difference in scores between educational video and manufacturer video group for attitudes regarding video length or complexity, desire to have surgery, or fundamentals of SNM. The authors suggest that a patient-centered educational video is therefore an effective means to set appropriate pre-operative goals prior to SNM, with the implication that the achievement of stated pre-operative goals would translate to higher postoperative patient satisfaction, which has been demonstrated previously in pelvic floor surgery [8].

Patient Education in Botox

Dominique et al. sought to distill essential pre-operative information for patients undergoing intradetrusor Botox in an effort to achieve better outcomes through improved patient understanding [9]. This was accomplished by using the Delphi method, a validated technique to obtain consensus from a panel of experts; the method consists of multiple passes or rounds. The group started with a pre-operative patient information sheet for Botox previously developed by GENULF (Study Group of French-language Neuro-urology), SIFUD-PP (Francophone Interdisciplinary Society of Urodynamics and Pelvi-Perineology), and AFU (Association of French Urology). From this information sheet, 38 items were extracted and sent to 24 members of GENULF, composed of urologists, neurologists, and rehabilitation physicians. In this first Delphi round, members were asked to rate each item from 0 (no interest) to 9 (essential) in terms of how vital it was that the patient retains that knowledge item in preparation for Botox therapy. Mean interest scores were calculated and the number of 8 or 9 ratings for each item was noted. There were 19 responses in the first Delphi round, and examples of essential items include "learning self-catheterization is essential" and "it is possible to develop urinary tract infection with symptoms including fever."

For the second Delphi round, based on responses from the first round, the original 38 items were then stratified into two groups, items to keep ($n=27$) and items to be deleted ($n=11$). These were then sent back out to the panel, who were asked to answer "yes" or "no" to whether the item should be kept or deleted, based on how it was stratified previously. Based on the responses from 18 panel members, the 27 items from the "items to keep" group were retained. For the third and final Delphi round, this list of 27 items was sent to the panel with a single question, whether there was an agreement or not with this list. Of those responding, 75% of the experts confirmed the list of essential pre-operative information for patients considering Botox. The authors considered this to be a valuable exercise given that the literature had demonstrated that knowledge building based on group consensus had greater validity than that based on an individual. The authors do acknowledge that it would have been interesting to have patient representation on this knowledge building task, but the Delphi methodology is limited to those with subject matter expertise.

Discussion

As a chronic condition, OAB is more successfully treated with active patient participation. Therefore, patient education plays a uniquely important role in the management of OAB. Reports studying the role of patient education interventions associated with third-line OAB therapies are few and far between in the literature. This is not altogether unexpected with the logical emphasis on the progression of therapies, where education is utilized earlier in first- and second-line therapies. In the handful of reports purposefully studying patient education interventions, the various endpoints may be placed in the two broad categories of either patient understanding or patient satisfaction. Patient understanding was the focus of all three studies through differing approaches of a group shared appointment, a patient-centric video, and an expert consensus-guided handout. For SNM, group shared appointments and patient-centered educational videos both improved patient preparedness or understanding prior to surgery as compared to standard office practice and the manufacturer's video, respectively. Patient satisfaction was only addressed in the group shared appointment study, in which it was significantly boosted in the intervention group. Overall, the impression seems to be that patient education may enhance the patient experience, bolster patient satisfaction, and even improve subjective outcomes. There is not enough information to definitively show an effect on objective measures of clinical efficacy. However, given that OAB revolves so heavily around a patient's quality of life, it could be argued that optimization of patient perceptions may carry significant benefit.

Beyond patient education interventions purely directed towards preparing for a third-line OAB procedure, there has been research into the patient experience of OAB that may also inspire and inform further patient education and outreach strategies. For instance, Cohen et al. applied a human factors approach to create interventions that significantly improved patient experience with respect to SNM [10•]. Analysis of qualitative data from structured interviews has shed light on understanding the concept of what constitutes normal bladder function for each patient; using this "normal" as a baseline could have major implications in personalizing the patient experience with treatment [11]. Finally, work has been done to elucidate microaggressions that women with urinary incontinence experience, which may prevent them from seeking treatment due to the attached stigma (i.e., getting help acknowledges the problem) [12]; recognition of and screening for these microaggressions may improve access to specialist care by prompting referral.

Conclusion

This review demonstrates the potential role of patient education to better meet the needs of achieving patient-centered goals, improving understanding of surgical treatment for OAB, and improving patient outcomes post-operatively. There are likely many unexplored avenues that could add to our body of knowledge and these should be informed by discovering patient needs. For example, there is certainly room to examine more closely the role of patient education in patients undergoing Botox and PTNS. Evidence-based approaches to better understand these patient needs may drive future research to improve clinical outcomes and bolster the patient experience for third-line OAB therapies.

Declarations

Conflict of Interest The authors have no conflicts to declare.

Human and Animal Rights and Informed Consent This review does not contain any studies with human or animal subjects performed by any of the authors.

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• Of importance
•• Of major importance

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