Arab Journal of Urology (2013) **11**, 344–349

Arab Journal of Urology
(Official Journal of the Arab Association of Urology)

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VOIDING DYSFUNCTION / FEMALE UROLOGY
ORIGINAL ARTICLE

The satisfaction of patients with refractory idiopathic overactive bladder with onabotulinumtoxinA and augmentation cystoplasty

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Received 20 May 2013, Received in revised form 10 July 2013, Accepted 13 July 2013
Available online 12 August 2013

KEYWORDS

Refractory;
Overactive bladder;
Botulinum toxin;
Augmentation cystoplasty

ABBREVIATIONS

OAB, overactive bladder;
oBTX, onabotulinumtoxinA;
DO, detrusor overactivity;
AC, augmentation ileocystoplasty;
UDI-, Urogenital Distress Inventory;

Abstract ***Objective:*** To assess the satisfaction of patients with refractory idiopathic overactive bladder (OAB) with two treatment methods, onabotulinumtoxinA (oBTX) and augmentation ileocystoplasty (AC).

Patients and methods: This prospective study included patients with refractory idiopathic OAB for >6 months and a urodynamic diagnosis of OAB. Oral pharmacotherapy had failed in all patients. Patients with any suspected neurological disorder were excluded. Before the procedure, patients completed the Urogenital Distress Inventory (UDI-6) and modified Incontinence Impact Questionnaire (IIQ-7), a neurological evaluation, a urodynamic study and their postvoid residual urine volume was measured. Patients were assigned to receive oBTX or AC, depending on patient's preference. Follow-up visits were at 6 weeks and 3 and 6 months after the procedure. The OAB Satisfaction questionnaire (OAB-SAT-q) was used to assess satisfaction after the procedure.

Results: In all, 31 patients with refractory OAB were included, 16 in the oBTX group and 15 in the AC group. There was no significant difference between the groups in mean age, baseline OAB symptoms and urodynamic values. There were significant improvements in urinary symptoms (UDI-6) and quality of life (IIQ-7) after both procedures (except in the domain enquiring about difficulty, which significantly worsened after AC). Of the 16 patients, 15/16 and seven of 15 were com-

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Peer review under responsibility of Arab Association of Urology.

Production and hosting by Elsevier

http://dx.doi.org/10.1016/j.aju.2013.07.003

IIQ-7, modified Incontinence Impact Questionnaire;
OAB-SAT-q, OAB Satisfaction questionnaire;
CIC, clean intermittent self-catheterisation;
QoL, quality-of-life;
PVR, postvoid residual urine volume;
NE, nocturnal enuresis

pletely dry after AC and oBTX, respectively. The overall and individual scores of the OAB-SAT-q were significantly higher among patients treated with AC than with oBTX. The incidence of the de novo need to use clean intermittent catheterisation after oBTX and AC was two of 16 and four of 15, respectively.

Conclusions: Both procedures are effective in improving the symptoms of OAB and of quality of life, but patients were more satisfied with AC than oBTX therapy.

Introduction

The refractory overactive bladder (OAB) represents one of the most challenging problems in general urological practice. The effects on an individual's quality of life in the physical and psychosocial domains are significant. Although the efficacy and specificity of antimuscarinic agents have improved in the last decade, many patients do not tolerate or fail to respond to oral therapy. Of those who respond to antimuscarinic agents, $<30\%$ remain on this therapy at 1 year after starting therapy for OAB [1]. Alternatives for patients with refractory OAB include sacral neuromodulation, intradetrusor injection of onabotulinum toxin A (oBTX), posterior tibial nerve stimulation and augmentation cystoplasty (AC). Sacral neuromodulation has been confirmed as a long-term successful method of treatment for refractory OAB [2]. There is also a good level of evidence that posterior tibial nerve stimulation is effective for treating the symptoms of OAB, with no side-effects, but the follow-up is short [3]. Since it was introduced into clinical practice by Schurch et al. [4] in 2000, oBTX therapy has been effective for treating patients with detrusor overactivity (DO), whether neurogenic or idiopathic. AC is an invasive and irreversible procedure, and can be associated with long-term adverse events. This procedure increases the bladder capacity and reduces the storage pressure, but many patients subsequently require regular clean intermittent self-catheterisation (CIC) for effective bladder emptying. This procedure can be associated with adverse events on the short and long-term. A review of previous reports showed that the success rate of AC for refractory OAB is 75–100% [5].

Patient satisfaction is a subjective, personal assessment of the effectiveness of treatment, based on the fulfilment of the expectations of patients [6]. Satisfaction is different from quality-of-life (QoL) measures, and its measure allows healthcare providers to assess the appropriateness of treatment according to patients' expectations. In addition, an assessment of patient satisfaction provides feedback from patients that can be used to alter and improve the quality of healthcare delivery [7]. Many surveys intentionally avoid asking patients how they feel about the quality of specific healthcare given to patients [8]. Treatment might be effective but it does not suit the social and economic character of the community. The primary aim of the present study was to assess the satisfaction of patients with refractory OAB after treatment with two methods, oBTX or AC.

Patients and methods

This was a prospective study that included patients of either sex with refractory idiopathic OAB symptoms for >6 months and a urodynamic diagnosis of DO. In all patients behavioural therapy and oral pharmacotherapy (high-dose combined anticholinergics) had failed (due to poor efficacy or tolerability). A requisite for inclusion was the confirmation of DO with standard cystometry. Excluded from the study were patients with any suspected neurological disorder, pregnant or lactating women, patients on anticoagulant therapy, patients with myasthenia gravis, interstitial cystitis, associated stress incontinence, associated schistosomiasis, those with renal impairment, those with upper tract dilatation due to poor compliance and those with a poor bladder outlet. The study was approved by the local ethics committee of the University.

All consecutive patients who met the inclusion criteria were invited to participate in the study. After signing the informed consent and extensive patient counselling, eligible patients were required to complete the Urogenital Distress Inventory (UDI-6) and modified Incontinence Impact Questionnaire (IIQ-7) questionnaires [9]. Patients then had a focused neurological evaluation, urine analysis and culture, a multichannel urodynamic study and their postvoid residual urine volume (PVR) was assessed. Follow-up visits were at 6 weeks and 3 and 6 months after the procedure. If the PVR was $\geqslant 150$ mL during any of these follow-up visits, CIC was recommended. Patients were assigned to receive oBTX or AC, but not randomly, the selection of therapy depending on the patient's preference. Patients treated with oBTX were injected with 200 or 100 U of oBTX (Allergan, Irvine, CA, USA), and each 100 U was diluted in 1 mL of saline. The injection comprised