Abstract

Title

Evaluation of the Safety and Effectiveness of BOTOX® (Botulinum Toxin Type A) in the Treatment of Patients with Urinary Incontinence due to Neurogenic Detrusor Overactivity or Overactive Bladder: A Phase IV Non-interventional Post-marketing Surveillance Study in India

Keywords

BOTOX, urinary incontinence, non-interventional

Rationale and background

The rationale for the study is to collect relevant information on the safety and effectiveness of BOTOX as treatment for urinary incontinence in patients in India.

Research question and objectives

The purpose of this study was to evaluate the safety and effectiveness of BOTOX for the treatment of patients with urinary incontinence due to either neurogenic detrusor overactivity (NDO) or overactive bladder (OAB) through active surveillance under routine clinical practice after the launch of BOTOX in India. Safety was evaluated via adverse event (AE) monitoring, including serious and non-serious AEs; and effectiveness was evaluated using the International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF).

Study design

This study was a non-interventional study. Adult patients (≥18 years of age) in India with urinary incontinence due to NDO or OAB who had an inadequate response to or were intolerant of an anticholinergic medication as evaluated and determined by treating physicians, and who were treated with BOTOX, were surveyed. Only those patients who had consented to the study by a signed informed consent form were included in the study. The decision to treat a patient with BOTOX was determined by the physician and patient, and was separate from the decision to include the patient in the study.

Only sites that had investigators treating eligible patients with BOTOX, that were capable of following local and national regulations on Human Subject Protection, and that agreed to participate in this Phase IV post-marketing surveillance study were selected.

Allergan (the sponsor) planned to study approximately 250 patients with NDO or OAB who had received BOTOX injection(s) for the treatment of urinary incontinence.

For this non-interventional surveillance study, the visit schedule was determined by the physician based on clinical judgment and patient preference. The follow-up visits occurred within 1 to 4 months after injection, which is standard practice.

Setting

BOTOX in the treatment of NDO or OAB is expected to be mainly used in hospitals/clinics with urology departments in India. Therefore, this surveillance was mainly conducted by collecting relevant information on treated patients from contracted urologists in the applicable departments in hospitals and clinics in India. A total of 13 study sites in India participated in this trial.

Patients and study size, including dropouts

The sponsor planned to study approximately 250 patients with NDO or OAB who had received BOTOX injection(s) for the treatment of urinary incontinence. The actual number of patients enrolled in the study was 261. A total of 250 were treated with BOTOX.

Variables and data sources

The safety endpoints included the proportion, cumulative incidence rate, and patient-year incidence rate of AEs.

The effectiveness endpoint was the change from baseline value of the total ICIQ-SF score after BOTOX injection (i.e., ICIQ-SF score change = post-injection ICIQ-SF score – pre-injection ICIQ-SF score). The total ICIQ-SF score was the sum of values from the first 3 items on ICIQ-SF.

The baseline and BOTOX treatment information were collected at the initial visit when patients received BOTOX treatment and the safety and effectiveness data were collected at the first follow-up visit (or via telephone follow-up) during the period from 1 to 4 months after BOTOX treatment. The required information was collected by the investigators using Allergan-provided case report forms.

Results

Safety: The frequency of TEAEs (defined as an AE with a start date on or after the date of the BOTOX treatment) was low (NDO: 1.7%, OAB: 3.1%, total patients: 2.8%) and there were no severe TEAEs. Moderate TEAEs occurred only in OAB patients and included 2 events of urinary retention, 1 event of haematuria (also considered to be a serious TEAE, the only serious TEAE in the study, which was considered to be related to the study drug procedure/administration and not to the study drug), 1 event of cystitis, and 1 event of residual urine volume increased. The most frequently reported TEAE was urinary retention (3 OAB patients, 1.6%).

Effectiveness: The total ICIQ score for both OAB and NDO patients decreased (improved) post-injection as did the individual scores for question 1 regarding frequency of urine leakage, question 2 regarding the amount of urine leakage, and question 3 regarding the inference that leaking urine had on patients' everyday life.

Conclusion

BOTOX was generally safe and well-tolerated in the Indian patients evaluated in this study. It also showed effectiveness for the treatment of urinary incontinence.