

TRANSORAL ADMINISTRATION OF INCOBOTULINUMTOXIN A FOR THE MANAGEMENT OF LARYNGEAL DYSTONIA



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INTRODUCTION AND OBJECTIVES

Laryngeal dystonia is a clinical syndrome characterized by involuntary hyperfunctional contraction of the internal laryngeal muscles. The prominent feature of laryngeal dystonia is task specificity. Speaking is the most commonly affected task and is referred to as spasmodic dysphonia (SD). Botulinum toxin A (BTA) injection provides targeted therapy to the laryngeal muscles and has shown great efficacy in improving voice fluidity. There is no consensus on the ideal infiltration technique of BTA in patients with SD. We have previously reviewed the therapeutic techniques currently available with focus on the advantages/disadvantages of two techniques for infiltration: transcutaneous and transoral (1). A prospective, transversal, descriptive study was performed to describe the transoral treatment with BTA in patients with SD in terms of easiness, accuracy, time required and effectiveness.

METHODS

In a 9-year period (2007-2016), a group of 15 patients (4 male, 11 female) with SD were evaluated at the Movement Disorders Unit of our hospital. Patients had an average age of 44.06 years (IC: 95%. 34.2 – 53.8 years) at diagnosis of laryngeal dystonia. Ten patients (66.67%) had adductor SD, 3 (20%) had abductor SD, 1 patient (6.67%) was integrated in a process of generalized dystonia and in another patient (6.67%) SD was accompanied with cervical dystonia. They were treated with 134 therapeutic administrations of Incobotulinumtoxin A (Xeomin®) via transoral with direct puncture into the vocal cord (Fig. 1a, Fig 1b). The procedure was carried out under local anaesthesia with aerosolized lidocaine diluted according to the anatomical area, and the injection was performed using a Chiba needle with the help of a flexible fibroendoscope (Fig 2). Variables: gender, age, age at diagnosis, type of SD, dose of BTA administered, time of administration and appearance of adverse effects were recorded. For the assessment of the therapeutic response, a self-assessment scale was developed to be completed by the patients, ranging from one (no improvement) to five (very much improved).

Fig. 1a. Patients and operating room.



Fig. 1b. Patients and operating room.

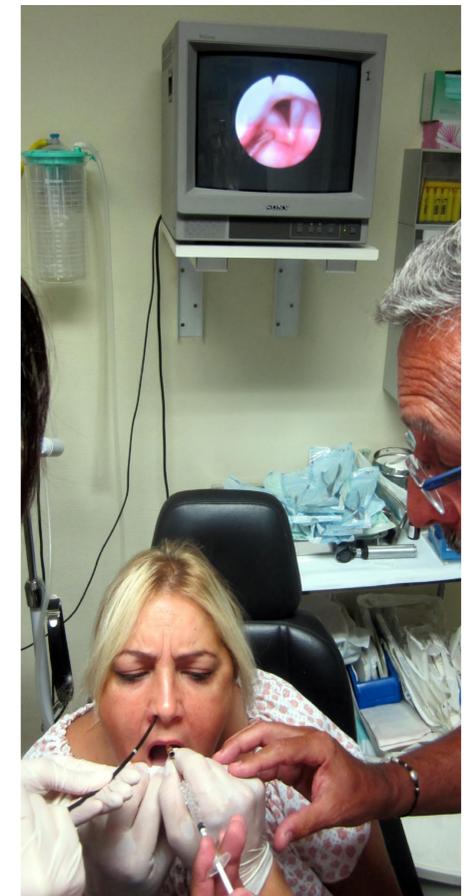


Fig. 2. Material used.



RESULTS

An average dose of 5 IU (2.5-7.5) BTA was administered per vocal cord. Average duration of the therapeutic effect was 5.3 months (4.9 -5.7). Effectiveness of treatment was confirmed by a marked-moderate improvement observed in 29.3% of patients and very high improvement in 64.7% of them (Fig.2). Adverse effects reported were transient and mild and included dysphagia (5.2%) dysphonia (5.2%) and choking (1.5%).

CONCLUSIONS

1. Transoral infiltration technique of BTA for the treatment of SD is **easy to perform and safe** if a good anaesthesia and relaxation of treated patients is achieved.
2. It shows many advantages over other therapeutic approaches (transcutaneous or transoral vias under general anaesthesia).
3. In addition, it is a **rapid** technique to perform (average time 11.9 minutes), and overall **safe**, as total accuracy at the injection site and inoculation is guaranteed. These previous characteristics ensure **high efficacy** (over 90%) in patients with SD, with very rare and transient adverse effects.

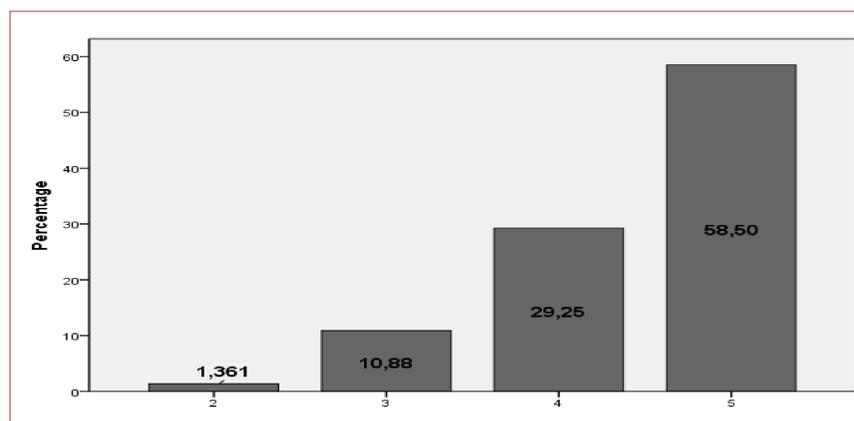


Fig. 2. Assessment of therapeutic response: percentages of clinical Improvement (2 = mild, 3 = moderate, 4 = marked-moderate improvement and 5 = very much improved).

REFERENCES

Lopez E, Martinez L, Lopez del Val LJ. Dystonia laringea: Actualización del tratamiento con toxina botulinica. Rev. Esp de Trast. del Mov. 2013 Ab; V-5 (1):20-22