385

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SEVERE URGE-INCONTINENCE IN OLD FRAIL WOMEN: THE BRILLIANT RESULTS OBTAINED WITH DETRUSORIAL INJECTIONS OF LOW DOSES OF BOTULINUM TOXIN

Hypothesis / aims of study

Urge-incontinence (UI) is not rare in the elderly but it is usually considered unavoidable, especially in people complaining of simultaneous serious diseases. Few studies have investigated the effects of detrusorial injections of botulinum toxin (ITox) in old patients (1) and none has been focused on frail old women. We report our experience with ITox performed in frail old women complaining of severe urge-incontinence resistant to conventional therapies.

Study design, materials and methods

From 2006 to 2010 ITox was administered to 18 women with severe urge-incontinence whose mean age was 74 years (minimum 68, maximum 80). Five of them could not assume antimuscarinics and the others were resistant to them. In most cases (14 patients) topical estrogens had been used for more than 2 months without benefit on the UI. All the women presented one or more significant diseases; their physical status was classified at 3 at least according to the American Society of Anesthesiologists**.**

The comorbidities were the following: diabetes mellitus insulin-dependent in 5, depressive psychosis in 4, recent treatment for breast cancer in 4, chronic obstructive pulmonary disease in 3, hemiplegia in 4, ischemic cardiopaty in 3 and obesity in 7. In 4 cases there was double incontinence. One woman had been operated twice on midurethral trans-vaginal sling, 7 had undergone multiple interventions for genital prolapse and 1 had a diagnosis of interstitial cystitis.

All of them filled in the short form of the International Consultation on Incontinence Questionnaire (SF-ICq) (2) reporting a mean score of 19 (min 16 max 21). The urinary urgency symptom was evaluated using a visual analogical scale (1 = no urgency at all → 5 = serious urgency) and the number of pads was checked

In 7 cases it was possible to obtain bladder diaries of 2-4 days pre- and post-ITox.

Two women performed 2 clean intermittent catheterisations (CIC) per day while 16 did not have post-void residual (PVR).

A urodynamic examination before the treatment was performed in 14 subjects: it confirmed overactive bladder contractions in all of them at a mean pressure value of 52 cm H20 (minimum 25, maximum 120) with an average bladder capacity of 85 ml (min 38 max 204); the woman with interstitial cystitis had bladder hyperalgesia and 5 pts presented also stress-incontinence.

In the 4 hemiplegic women the diagnosis was clinical and comprehensive of a negative urological ecography.

Patients underwent injections of 100 UI English botulinum toxin into the detrusor muscle at 10 sites under cystoscopic guidance using local anesthesia and, when necessary, a mild intravenous sedation with midazolam 2 mg.

Evaluations for evidence and duration of success followed postoperatively. Patients were evaluated at 10-20 days from treatment and subsequently as needed.

Results

The follow-up period ranges from 13 to 58 months, with an average of 31. No complications were observed and in all the cases the SF-ICq score decreased passing from a mean value of 19 to 6 (range 0-9).

UI disappeared in 13 pts (72%) and improved significantly in the other 5; the number of pads used per day decreased from an average of 5 to 1.2 (range 0-2). The urgency fell from an average of 5 to 1.6 (range 1-3).

All the pts maintained the ability to void without significant PVR (<100 ml) except for the 2 women who went on with 2 CIC/die and the one with previous midurethral sling: she needed de-novo 2 CIC per day for the removal of a mean PVR of 200 cc which lasted 6 months (yet 15 months after ITox she is still continent without CIC).

Bladder diaries, available in 7 cases, demonstrate that the number of micturitions per day decreased on average by 46% (from 16.4 to 7.6), with an average increase of 123% in the volume voided (from 94 to 210 ml).

The effect of ITox lasted 13,2 months on average (minimum 6.3, maximum 3 years), and 10 patients repeated the treatment (average 1.8 times, min 1, max 4) with the same efficacy.

Interpretation of results

ITox have become routine in the treatment of refractory UI and low dosages of botulinum toxin, besides being suggested in recent randomised study on dose ranging (3), have cured totally the UI in 72% of the old frail women and have ameliorated UI dramatically in the others with relevant repercussions on the QoL. These brilliant results are summarised by comparing the SF-ICq scores pre and post-ITox that passed from an average of 19 to 6.

No adverse events were detected and spontaneous micturitions were usually conserved without the need of de-novo CIC. In our experience hemiplegic women complaining of UI could undergo ITox without prior urodynamics.

Therefore we suggest a more extensive use of ITox in old frail women who look for a solution of UI in light of the fact that ITox are effective and safe.

Further experience is necessary before treating old frail men considering their major attitude to develop urinary retention.

Concluding message

ITox is an efficacious treatment of UI in old frail women. We did not observe complications while the satisfaction of the patients and the reduction of the scores in the SF-ICq resulted really significant. Considering that ITox are a mini-invasive treatment we recommend a more extensive use of it in frail old women

References

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**It is a report on the clinical experience**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**