Botulinum Toxin A for the Management of Gustatory Sweating

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Introduction

Gustatory sweating occurs due to various causes, the commonest being parotid surgery. The incidence of Gustatory sweating is much higher than originally thought. It results from a disruption of the auriculotemporal nerve pathways. Damage to the nerve leads to a misdirected re-growth that results in parasympathetic innervation of sympathetic receptors and, therefore, facial sweating and flushing with gustatory stimulation. Various treatment options exist but recently botulinum toxin A has been found to be increasingly successful in the management of this condition.

Aim of Study

To review systematically the evidence currently available on the use of botulinum toxin A in the management of gustatory sweating

Methods

We conducted a systematic search of databases including PubMed (1950-December 2007), EMBASE (1966-2007), MEDLINE (1950-2007) and the Cochrane library (up to December 2007). The terms used in the search included gustatory sweating Frey’s syndrome, treatment, Botulinum toxin, Botox and Dysport. Data extraction and study evaluation were performed independently by two reviewers and results were pooled quantitatively. Data collected included demographic details of patients, aetiology of Frey’s syndrome (parotid pathology), duration of symptoms, units of injection, number of injections, commercial types of Botulinum toxin A, rate of recurrence, complications and length of follow-up.

Results

There are two prospective studies that compared doses of Botulinum toxin (one randomized and the other non-randomized) in the management of gustatory sweating (Frey’s syndrome). The other studies included prospective and retrospective case series and case-reports. Pooled results from these studies on a total of 239 patients (Table 1) show

1. Favourable results both symptomatically and clinically have been reported in studies with short follow-up (Table 2)
2. Response to treatment did not vary with the size of the affected area or parotid pathology.
3. The rate of recurrence or incomplete resolution of symptoms were dose-dependent.
4. The longer the follow-up, the higher the rate of recurrence and the need for repeat treatment (Table 3).
5. The demographical details did not differ in the patients with recurrence compared to those patients who were symptom-free.
6. Dosage of Botulinum toxin is shown in Table 4
7. Complications were also not dose-related and were minimal (transient facial paralysis)

CONCLUSIONS

Botulinum toxin A is a highly effective, minimally invasive and safe procedure for the treatment of gustatory sweating. It appears to be effective in most patients in the first six months. It is safe with limited and transient cases of facial paresis. It can be also be repeated safely in recurrent cases. The systematic review shows that there is no consensus on the doses used, while there is a trend to better response with higher doses.

References