Financial Disclosure: None reported.


Botulinum Toxin Type A vs Type B for Axillary Hyperhidrosis in a Case Series of Patients Observed for 6 Months

Although botulinum toxin type B (BT-B) is increasingly used for axillary hyperhidrosis, the effective dose is controversial. We compared the antihyperhidrotic effect of intra-axillary injections of BT-B (NeuroBloc; Eisai Europe Limited, Hatfield, Herts, England) and botulinum toxin type A (BT-A) (Botox; Allergan Inc, Irvine, California).

Methods. In a bilateral paired, single-blinded, randomized study, 10 patients (7 women and 3 men; age range, 23-54 years) with idiopathic focal axillary hyperhidrosis since childhood unresponsive to other nonsurgical treatments received BT-A unilaterally and BT-B contralaterally. None of the patients had other diseases or had received previous BT injections during the past year. All patients underwent a pretreatment clinical examination and objective quantification of sweat production at rest. The hyperhidrotic area was defined using the quinizarin sweat test then measured by gravimetric analysis. Mean (SD) pretreatment sweat production was used to determine the beginning and duration of benefit and global assessment on a treatment satisfaction scale.²

Results. All patients reported a reduction in axillary sweat production. Mean (SD) pretreatment sweat production rates and areas were similar bilaterally: rates, 217.0 (22.8) mg per 5-minute interval for BT-A and 206.0 (21.9) mg per 5-minute interval for BT-B; area, 31.4 (5.8) cm² for BT-A and 31.0 (8.1) cm² for BT-B. After BT injections, patients responded to treatment at each of the 4 identified time points after BT-A and BT-B injection. P<.05 was considered statistically significant. We determined that a sample size of 10 patients would have 94% power to detect the clinically important difference of 10% at α=.05.

Table. Changes in Gravimetric Sweat Production, Colorimetric Areas of Sweat Production, and Satisfaction Scores for Axillae Treated With BT-A and BT-B²

<table>
<thead>
<tr>
<th>Measurement Interval</th>
<th>Sweating Weight, %</th>
<th>Sweating Area, % Area</th>
<th>Satisfaction Score²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BT-A</td>
<td>BT-B</td>
<td>P Value</td>
</tr>
<tr>
<td>0 d</td>
<td>100</td>
<td>100</td>
<td>NA</td>
</tr>
<tr>
<td>1 wk</td>
<td>68.0 (32.1)</td>
<td>14.9 (20.3)</td>
<td>.01</td>
</tr>
<tr>
<td>2 wk</td>
<td>16.6 (9.2)</td>
<td>4.1 (7.2)</td>
<td>.04</td>
</tr>
<tr>
<td>1 mo</td>
<td>13.1 (7.7)</td>
<td>4.3 (4.1)</td>
<td>.049</td>
</tr>
<tr>
<td>3 mo</td>
<td>66.3 (38.4)</td>
<td>30.6 (24.3)</td>
<td>.03</td>
</tr>
<tr>
<td>6 mo</td>
<td>90.7 (10.1)</td>
<td>56.2 (25.4)</td>
<td>.02</td>
</tr>
</tbody>
</table>

Abbreviations: BT-A, botulinum toxin, type A; BT-B, botulinum toxin, type B; NA, not applicable.

a Unless otherwise indicated, data are mean (SD) values.

b The scale score ranged from −4 to 4 and included patients’ description of a 0% reduction or increase in sweating (unchanged) or a mean (SD) reduction of 25% (1%), 50% (2%), 75% (3%), or 100% (4%).

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Statistical analysis:
and Vicentini.

Drafting of the manuscript:

sis and interpretation of data:

gets the autonomic nervous system, as happens in botu-

nervous systems and how long their action on both sys-

Comment. In all patients, although both toxins im-

improved axillary hyperhidrosis, BT-B proved more effec-

We therefore provide objective evidence that BT-B is safe 

effective for treating bilateral axillary hyperhidro-

Our finding that BT-B effectively reduces axillary hy-

is different from other studies probably because the 

BT-B blocks sweating better than BT-A. The subjective 

our at the same dose ratio of 1:50 used for the motor 

BT-B blocks sweating better than BT-A. The subjective 

Our finding that BT-B effectively reduces axillary hy-

Botulinum toxin type B merits increasing use in pal-

BT-B blocks sudomotor function effectively: a 6 month 


papulopustular, phymatous, and ocular. 1

Granulomatous rosacea, rosacea fulminans, and perioral 

tonized variants. 2

Herein we describe 14 patients with rosacea and promi-

Methods. Patients with prominent neurologic symp-

Twelve of the 14 patients were women, and 12 

prominent symptom triggers included heat (93% [13 of 

14]), sunlight (93% [13 of 14]), hot showers (79% [11 of 

14]), exercise (64% [9 of 14]), and alcohol consumption 

Alcohol consumption (57% [8 of 14]). Use of makeup 

(50% [7 of 14]), eating spicy foods (43% [6 of 14]), 

Touching skin (36% [5 of 14]), drinking hot beverages 

(29% [4 of 14]), cold weather (21% [3 of 13]), and 

humidity (14% [2 of 13]) were less reliable triggers. Notably, 71% 

of patients experienced relief from cooling via fans or cold 

compresses or ice applied to the face or held in the mouth 

(10 of 14). Figure 1 depicts typical examination find-

A notably high percentage of patients had neurologic 

43% [6 of 14]) or neuropsychiatric (50% [7 of 14]) con-

Clinical Subtype Requiring 
a Modified Approach to Treatment

Rosacea is generally categorized into 4 distinct 

clinical subtypes: erythematotelangiectatic, 

papulopustular, phymatous, and ocular. 1

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Figure 1

2. Naumann M, Lowe NJ. Botulinum toxin type A in treatment of bilateral pri-

tary axillary hyperhidrosis: randomised, parallel group, double blind, pla-

ceto controlled trial. BMJ. 2001;323(7313):596-599.
3. Dressler D, Adib Saberi F, Benecke R. Botulinum toxin type B for treatment 


2003;121(6):1312-1316.

toxin A (Botox) and sweating-dose efficacy and comparison to other BoNT 


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