

BOTULINUM TOXIN AND ANTICHOLINERGICS IN THE TREATMENT OF COMPENSATORY HYPERHIDROSIS AFTER SYMPATHECTOMY

¹Anna Karlsson-Groth, ¹Alma Rystedt, ^{1,2}Carl Swartling*

¹Hidrosis Clinic, Stockholm, Sweden

²Department of Medical Sciences, Dermatology and Venereology, Uppsala University, Uppsala, Sweden

*Corresponding author: carl.swartling@svedkliniken.dk

Introduction and Objectives:

Compensatory hyperhidrosis (CH) is the most common adverse complication of sympathectomy, which often reduces quality of life considerably. Efficient treatment of CH is lacking. The results after treatment with botulinum toxin A/B (BTX) and anticholinergics in nine patients suffering from CH after sympathectomy is described here.

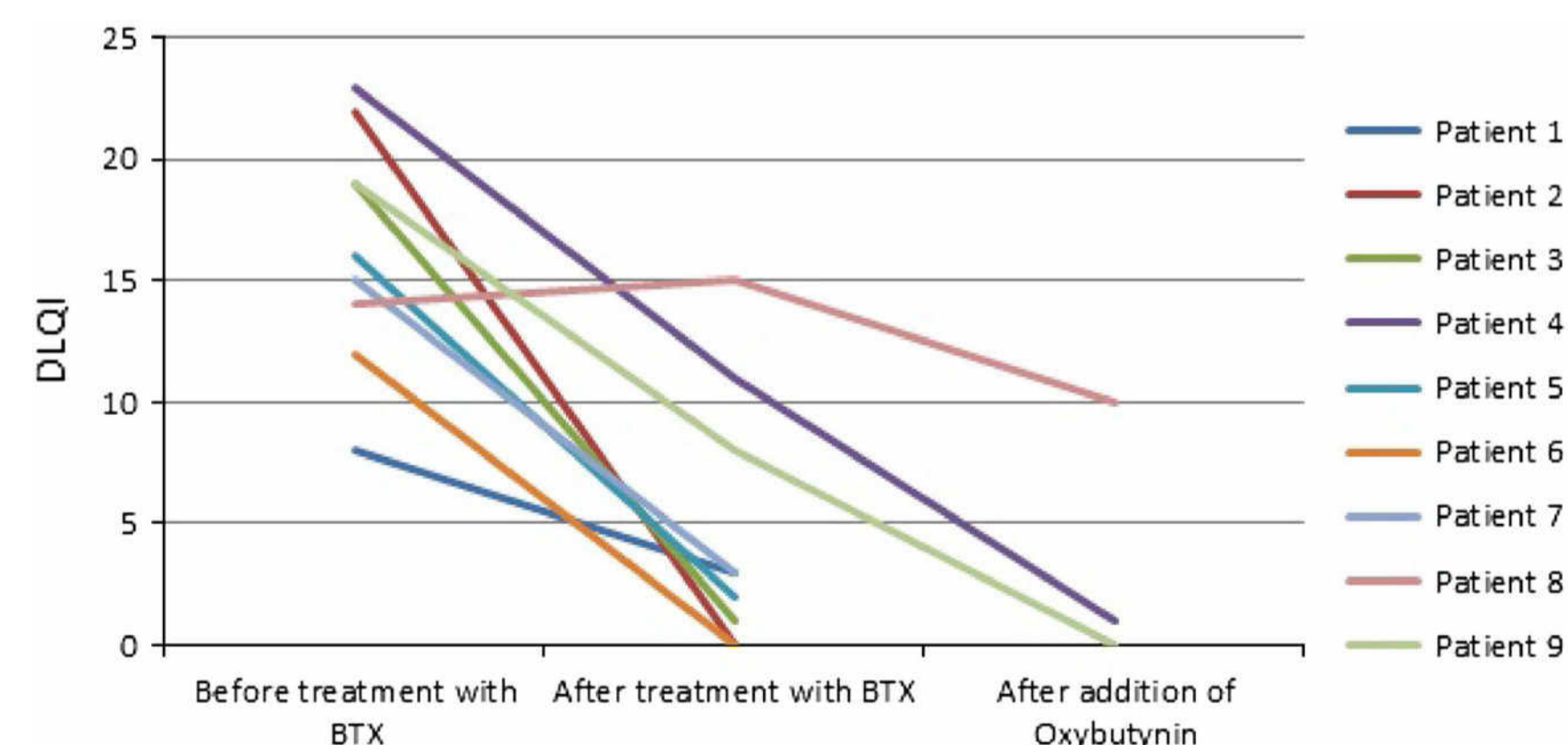
Methods:

The patients responded to Dermatology Life Quality Index (DLQI) before treatment with BTX and 3 weeks after the injections. At the follow-up visit the patients ranked the effect of the treatment on a 5-grade scale. Three patients had residual sweating after BTX treatment and therefore received additional anticholinergics at the follow-up visit and went through a third evaluation with DLQI.

Results:

Before treatment the average DLQI score was 16.4, decreasing to 4.8 after BTX injections. When patients with residual sweating (n=3) received additional anticholinergics, the average DLQI score decreased further to 2.2. Eight out of nine patients were satisfied with the treatment. Adverse events from BTX were mild and temporary, however, for one patient using anticholinergics dry mouth was substantial.

Fig. 2 Change in dermatology life quality index (DLQI) score during the study. About 3 weeks after their first botulinum toxin (BTX) injection, the DLQI was normal in six out of nine patients. Patients no. 4, 8, and 9 received additional Oxybutynin at the follow-up visit, which normalized the values of the DLQI in patients no. 4 and 9. The effect on quality of life from BTX alone or in combination with Oxybutynin was remarkably positive in eight out of nine patients



Conclusions:

BTX A/B alone or in combination with anticholinergics alleviated the hyperhidrosis with minor adverse events. This treatment seems effective, safe, and well tolerated.

Reference

Karlsson-Groth A, Rystedt A, Swartling C. Treatment of compensatory hyperhidrosis after sympathectomy with botulinum toxin and anticholinergics. Clin Auton Res. 2015; 25(3):161-167

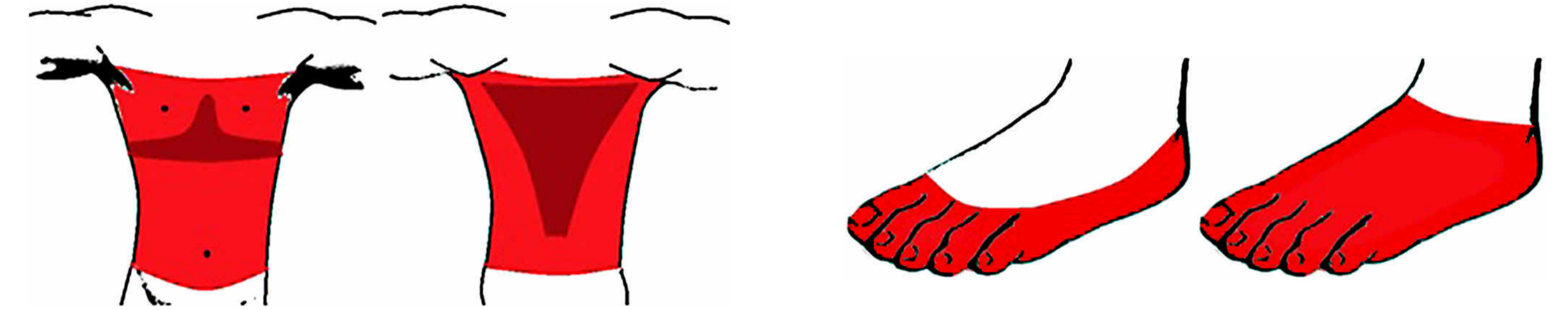


Fig. 1 Compensatory hyperhidrosis of the trunk. This was the most common hyperhidrotic area reported by the patients. The dark red areas shows punctum maximum of the hyperhidrosis

Fig. 3 Illustrative pictures of the difference between primary focal and secondary compensatory hyperhidrosis of the feet. In primary hyperhidrosis of the feet the typical pattern of the affected area is in the shape of a ballerina shoe. Sympathectomy often worsens an already existing primary hyperhidrosis, and widens the area, which results in a pattern of socks

Clin Auton Res

Table 1 Age, sex, indication of sympathectomy, location of compensatory hyperhidrosis, and location and doses of the first botulinum toxin (BTX) treatment

Patient	Age (years)	Sex	Indication of sympathectomy	Location of compensatory hyperhidrosis due to sympathectomy	Location and doses at the first BTX treatment
1	40	Female	Palms facial blushing	The trunk (at the level of the axillae and down to the hip, T3-T12), groins, the back of the thighs and knees, shins and feet (the soles, in between the toes and dorsum of the foot up to the ankle)	Trunk: 1250 U neurobloc/myobloc
2	36	Male	Palms	Palms, feet, axillae, and back	Palms: 240 U xeomin and 250 U neurobloc/myobloc Trunk: 1000 U neurobloc/myobloc
3	43	Male	Palms	Chest and back at the level of the axillae and down to the hip (T3-T12)	Trunk: 2375 U neurobloc/myobloc
4	69	Male	Axillae	Axillae, chest and back at the level of the axillae and down to the hip (T3-T12), groins, legs and feet	Trunk: 2500 U neurobloc/myobloc Axillae: 750 U neurobloc/myobloc
5	54	Male	Facial blushing	Axillae, chest and back at the level of the axillae and down to the umbilical (T3-T10)	Trunk: 4000 U neurobloc/myobloc
6	48	Female	Axillae	Axillae, under the breasts, back (at the level of the axillae and downwards), groins, back of the knees and feet (the soles, in between the toes and dorsum of the foot up to the ankle)	Axillae: 750 U neurobloc/myobloc Soles: 310 U xeomin
7	36	Male	Palms	Palms and feet (the soles, in between the toes and dorsum of the foot up to the ankle)	Trunk: 80 U xeomin Soles: 280 U xeomin
8	56	Female	Palms	Chest and back at the level of the axillae and down to the hip (T3-T12)	Trunk: 3375 U neurobloc/myobloc
9	45	Male	Axillae palms	Chest and back at the level of the axillae and down to the hip (T3-T12) and the front of the thighs, knees, and shins	Trunk: 4000 U neurobloc/myobloc

The trunk was the most commonly reported area exhibiting compensatory hyperhidrosis in the study. Four patients (no. 2, 4, 6, and 7) still suffer from hyperhidrosis from the areas on which they originally underwent surgery

