Comment to: Chemical components separation with botulinum toxin A: a novel technique to improve primary fascial closure rates of the open abdomen by Zielinski et al.

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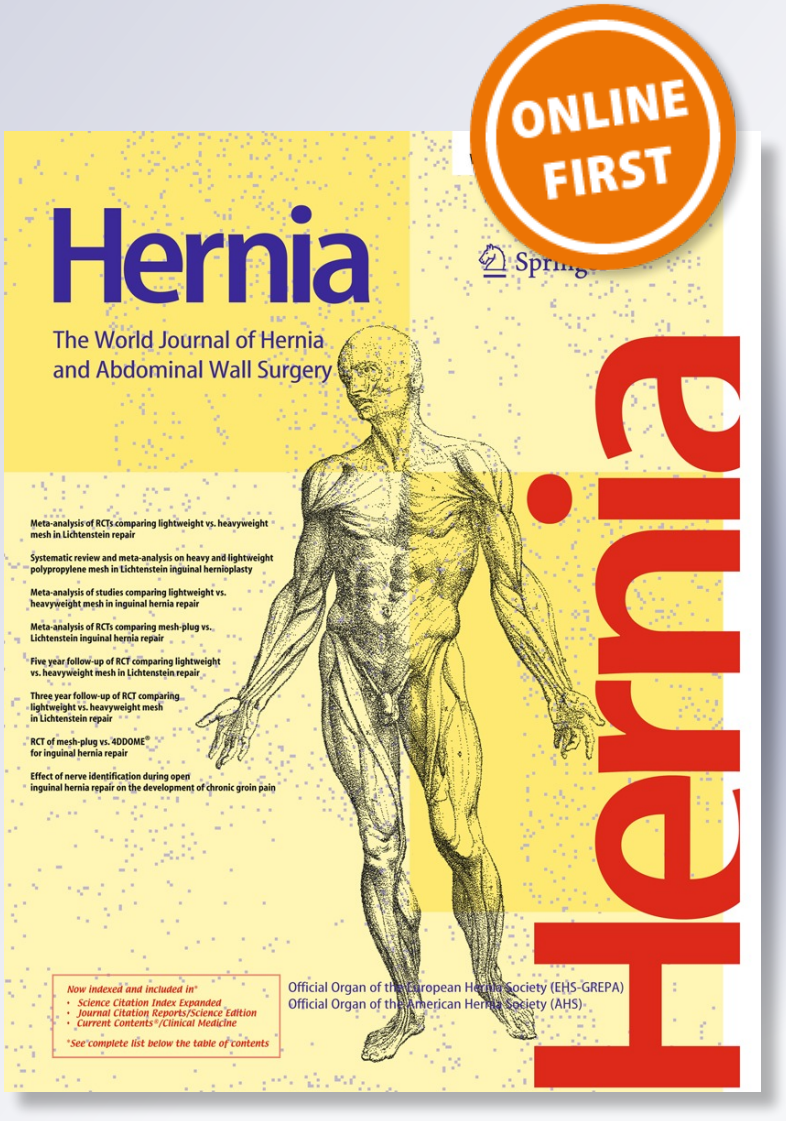

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COMMENT

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To the Editor

We read with great interest the article by Dr. Zielinski et al. [1]. The authors presented a retrospective review of their experience with botulinum toxin A (BTA) (Botox®, Allergan, Inc. Irvine, CA 92612) application into the lateral abdominal wall musculature of open abdomen (OA) patients, in order to describe the BTA injection technique and to determine its effects on the abdominal wall after OA, which is named by the authors "chemical components separation technique." A total of 18 patients were included. Indications for OA management included bowel viability (39 %), shock (33 %), feculent contamination (17 %), and loss of abdominal domain (6 %). A median of 3 serial abdominal explorations (1–8) after the initial OA management was required. Temporary abdominal closures with negative pressure dressings were applied. A primary fascial closure rate of 83 %, partial fascial closure rate of 6 %, and planned ventral hernia rate of 11 % are reported. The authors reported a BTA injection within 24 h of the initial OA procedure in 50 % of the cases, achieving an 89 % primary fascial closure rate, and 11 % partial fascial closure rate of these patients. An overall 67 % complication rate was found, with fascial dehiscence in 11 %.

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The clinical effect of botulinum toxin has been demonstrated as early as day 3 after intramuscular injection with a maximum effect at 2 weeks [2]. In a prospective study of twelve patients with abdominal wall hernia secondary to OA management, the maximal effect of BTA (Dysport, IPSEN, France) was observed at 3 weeks after injection. A significant reduction in the transverse hernia defect diameter was achieved [3]. The high overall primary fascial closure rate in patients with BTA injection within 24 h of the initial OA procedure achieved by Dr. Zielinski et al. [1] is particularly interesting.

We would like to ask Dr. Zielinski et al., at what time were the remaining patients injected with BTA and the time at which abdominal closure was performed.

Dr. Zielinski et al. reported 6 injection sites on the abdominal wall: right/left subcostal; right/left anterior axillary; right/left lower quadrants. Injection of 16.6 units of the BTA solution for each of external oblique, internal oblique, and transverse muscles is performed at each of the 6 injection sites (50 units per injection site, total of 300 units). Our group reported BTA application at 10 sites: two sites at the middle axillary line between costal margin and iliac crest level, and three sites between anterior axillary line and middle clavicular line between costal margin and iliac crest level, with similar sites on the opposite side, for a total of 50 units per injection site dosage [3].

A considerable range of 20–75 % of surviving patients managed with OA will have the abdominal fascia closed prior to discharge, while the remaining patients may undergo abdominal wall reconstruction afterward [4]. With no doubt, BTA injection will constitute an important adjuvant to abdominal wall closure in patients under OA management, planned ventral hernia or large abdominal wall hernias.

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Conflict of interest There are no conflicts of interest to disclose.

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