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Latex Anaphylaxis Masquerading as Fentanyl Anaphylaxis: Retraction of a Case Report

To the Editor:—In 1989 I (BZ-P) coauthored a case report of fentanyl anaphylaxis.¹ The report described the clinical events that led to this diagnosis and the later skin testing that seemed to support it. More recently, it has become clear that the events described were most consistent with intraoperative latex anaphylaxis, and were unrelated to fentanyl administration.

The case reported was a cesarean section for which I received epidural anesthesia with lidocaine 2% containing epinephrine 1:200,000. Since I received a test dose of these drugs 1 h before surgery and again over the 20 min before incision without problems, they were thought to be unlikely allergens. I have subsequently received both of these drugs without adverse reactions.

Coincident with skin incision, I was given 100 µg of fentanyl in the epidural space. Within 10 min, I developed the usual signs and symptoms of anaphylaxis, including injected conjunctivae, nasal congestion, facial flushing, generalized pruritis, hypotension, angioedema of the hands and face, and profuse bleeding in the surgical field. When ephedrine and diphenhydramine proved inadequate to restore blood pressure, anaphylaxis was recognized, and epinephrine was given with resolution of all symptoms. These recurred, requiring repeat boluses of epinephrine, and ultimately an epinephrine infusion for 3 h in the recovery room.

Since fentanyl was the only "new" drug given and since the reaction occurred shortly after its administration, it was assumed to be the trigger. Skin testing conducted 6 months later showed small wheal and flare reactions to extremely dilute solutions of fentanyl as well as to alfentanil and sufentanil. At the time, I also had a small wheal reaction to the 0.9% saline controls in at least one test, which I reported, but whose significance was misinterpreted. Subsequent testing has shown that I am dermatographic: my skin will form a wheal and flare reaction with mechanical stimulation, such as a needle

scratch, alone. Under these circumstances, great care must be taken when skin tests are used to demonstrate allergic sensitivity.

In the months following the initial events, I became aware that wearing gloves in the operating room was a problem. I developed hives with severe itching on my hands, and itching, redness, and swelling of my eyes if I touched them when I wore gloves. My daughter's rubber bathing cap produced angioedema of the eyelid on contact. Working in certain areas of the hospital also would provoke sudden wheezing. Allergy to latex was suspected, and after allergy evaluation and positive skin tests with a latex extract and appropriate negative and positive controls, it was confirmed. But what of the fentanyl?

When incremental test doses of fentanyl were eventually administered to me by the intravenous route (up to 10 µg), no allergic reaction occurred. Since the initial events, I have had a second cesarean section, as well as another abdominal procedure. Both were carried out in a strictly latex-free environment, and both went smoothly. For the latter, I received epidural fentanyl for postoperative analgesia without any allergic complications. With the retraction of my initial case report of fentanyl-induced anaphylaxis from the literature, one must reiterate that when opioid (specifically fentanyl) allergy is suspected, other causes or allergens must be aggressively sought for and investigated. True immunoglobulin E-mediated allergy to fentanyl has been convincingly demonstrated only rarely.

The essential error at the time of the original procedure, and even now, is that most of us do not consider latex a "drug" and do not realize that the placement of four latex gloved hands into the abdomen exposes our patients to a large dose of an extremely potent potential allergen. I cannot emphasize sufficiently the importance of suspecting latex sensitivity when severe allergic reactions occur in the operating room. A colleague of mine, Dr. Roberta Kahn, used to have a wonderful quotation over her desk, attributed to Ken Kesey, which read, "If I didn't believe it, I wouldn't have seen it." To identify correctly the triggering agent in cases of anaphylaxis, latex must be advanced to the front of our list of usual suspects.* And as I can tell by the blank or sometimes outright disbelieving looks I receive from fellow

* Parisian S: Latex causing more anesthesia problems. *ASPF News-letter* 7:1-3, 1992.

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anesthesiologists when I mention latex anaphylaxis, the level of awareness of the problem within our profession is far from adequate, despite recent articles, letters, and editorials on the subject.²⁻⁴ To improve this situation, I urge all anesthesiologists to reread thoughtfully the recent excellent review article on latex allergy.⁵ I also encourage departments to discuss this problem at grand rounds or other departmental functions and to post the article in the anesthesia workroom or other central location. Furthermore, it is crucial to discuss the problem of latex allergy with the nursing staff, to raise their awareness, and to ensure that the necessary items for caring for patients with this allergy (most importantly, nonlatex gloves and foley catheters) are available. With the increase in latex exposure in the general population and especially in the medical population, we will be seeing more latex-allergic patients.⁶ The burden is on all of us to understand latex allergy and manage it correctly.

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Catheter Location and Patient Position Affect Spread of Interpleural Regional Analgesia

To the Editor:—This is a report on the effect of catheter location and patient position on interpleural regional analgesia. Following institutional approval, informed consent was obtained from 17 patients with severe pain from multiple rib fractures. A radioopaque catheter was inserted toward the apex of the pleural space (apical catheter) in 12 patients, and in 5 patients toward the base (basal catheter) *via* a 16-G Tuohy needle inserted at the fourth intercostal space at the anterior axillary line. After catheter locations were confirmed by x-ray, 1% lidocaine 10 ml was injected through the apical or basal catheters with the patients supine, and the extent of hypesthesia assessed with an alcohol swab 15 min later. After 2 h, 10 of the patients with an apical catheter and who were able to sit upright received the same dose of lidocaine. They were kept sitting for 15 min while the extent of hypesthesia was assessed as above. In addition, ^{99m}TcO₄-370 MBq in 10 ml physiologic saline was injected through the apical or basal catheter. After 5 min, radioisotope images by gamma camera were obtained.

The mean hypesthesia range after injection through the apically located catheter of supine patients was T2.5-T10.3 (n = 12), whereas it was T5.5-T10.2 (n = 10) when these patients were sitting. When the injection was made *via* the basally located catheter in supine patients, the range of hypesthesia was T5.8-T11.0 (n = 5). Although there were statistically significant differences in the cephalad extent of hypesthesia between injections *via* the apical catheter in patients supine or sitting, there were no significant differences observed with

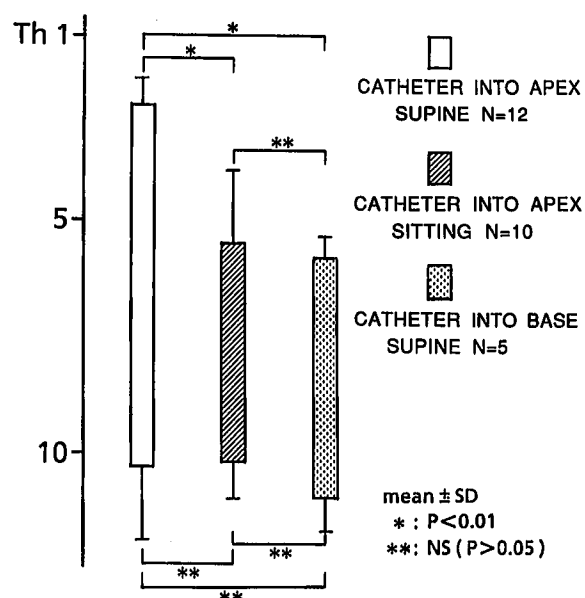


Fig. 1. Hypesthesia ranges (average number of dermatomes blocked) as measured in the anterior midclavicular line.