

Do we worry about latex allergy during cesarean delivery under spinal anesthesia?

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To the Editor:

The occurrence of latex allergy is increasing in the obstetric patient population (threefold higher than in non-obstetric patients) [1] and the incidence of anaphylactic reaction due to latex during cesarean section (C/S) is 1:310 per year [2]. We report a latex anaphylactic reaction that occurred after oxytocin infusion in a patient who had undergone C/S under spinal anesthesia.

A 30-year-old healthy parturient (166 cm height, 90 kg weight), an operating nurse, at 38 weeks gestation, received spinal anesthesia with bupivacaine 12 mg, fentanyl 10 µg, and morphine 100 µg for an elective C/S. After a healthy baby was born, intravenous oxytocin infusion (20 IU in 1000 mL of Ringer's lactate) was initiated. The parturient started to complain of severe pruritis, and showed swelling around her eyes, marked flushing on her face, dyspnea, hypotension, and bronchospasm 22 min after skin incision. Oxytocin infusion was discontinued and intravenous ephedrine 5 mg was given. Pheniramine maleate (50 mg), adrenaline (1 mg), methylprednisolone

(250 mg), and aminophylline (240 mg) were also administered. Upon progressive peripheral oxygen desaturation, tracheal intubation was done under cricoid pressure with propofol-suxamethonium anesthesia. The anaphylactic reaction resolved completely with intensive treatment, and the trachea could then be extubated after C/S. Diagnosis of latex sensitization was confirmed postoperatively by a high level of specific anti-latex IgE, 10.8 kUA/L (normal range <0.35 kUA/L). She was discharged uneventfully on the 3rd postoperative day.

We report the present case not only because of the recently increased rate of latex sensitization in the obstetric population but also because there is a greater risk of a latex anaphylactic reaction in parturients who have frequent occupational exposure to latex. Indeed, reaction to latex has been reported recently in a Japanese dental assistant scheduled for C/S under spinal anesthesia [3]. We have also reported 3 patients with latex allergy among 902 parturients undergoing C/S under spinal anesthesia [4].

A putative cross-reaction between latex antigen and oxytocin might be speculated in our patient. It has been reported that a parturient without a known latex allergy suffered from anaphylactic reaction after oxytocin administration during C/S [2]. In our patient, latex-specific IgE in the serum and the presence of homology between two patatin latex antigens and six (oxytocin) contiguous amino acids were determined postoperatively. According to the above hypothesis, oxytocin might have compromised part of the epitope of a latex antigen and the complement antigenicity resulted in sudden uterine contractions due to the released free latex particles that had been deposited in the uterus into the bloodstream [2, 5]. However, we were unable to prove whether oxytocin had a cross-reaction to latex antigen, because a test for comparing protein sequences of human oxytocin is not available at our

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institution. The origin of the allergen might have been either surgical gloves or medical apparatus such as the intravenous line or urine catheter that contained latex.

In the light of our findings specific laboratory examinations are highly recommended in the preanesthetic evaluation. The possibility of a cross-reaction between latex and oxytocin might be taken into account, particularly in parturients having an increased risk of occupational latex exposure.

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