Indian Journal of Clinical Anaesthesia 2023;10(4):413–414

Content available at: https://www.ipinnovative.com/open-access-journals

Indian Journal of Clinical Anaesthesia

Journal homepage: www.ijca.in

Letter to Editor

The management of anaesthesia in pregnant patients with unknown drug allergies: A complex challenge for anaesthesiologists

Ruma Thakuria[1]*, **Rashmi Ramachandran**[2]

[1]*Dept. of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India*
[2]*Dept. of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi, India*

ARTICLE INFO

Article history:
Received 03-09-2023
Accepted 09-10-2023
Available online 28-11-2023

Anaphylaxis occurring during pregnancy is a serious medical condition that poses a significant threat to both the expectant mother and the developing fetus. Although studies have provided estimates of anaphylaxis incidence during pregnancy (ranging from 1.6 to 3.8 cases per 100,000 deliveries), there is a limited amount of research on its actual prevalence.[1] The primary preventive approach involves avoiding known allergens. However, when the specific allergens are unknown, healthcare providers face a challenging dilemma.

We recently encountered a case that exemplifies this complex situation. A 31-year-old primigravida, with a confirmed family history of allergies, a history of bronchial asthma treated with multiple inhalers, and a previous laryngospasm episode during her pregnancy at 16 weeks, sought delivery care at 30 weeks and 5 days of gestation. She experienced wheezing following her initial tetanus toxoid (TT) vaccination at 22 weeks, which was relieved only by a subcutaneous adrenaline injection, leading to the postponement of her second TT dose. Importantly, she had no prior history of cosmetic allergies, and autoimmune allergy tests returned negative results. Due to the potential risk, a skin prick test was deferred to prevent an allergic reaction.

However, at 33 weeks of gestation, her membranes ruptured prematurely, initiating labour. She was scheduled for a normal vaginal delivery under epidural analgesia. Unfortunately, there was no prior knowledge of which anaesthetic medications might induce an allergic or anaphylactic reaction in this patient. To mitigate the risk of an emergency, our team ensured the availability of all necessary emergency drugs for anaphylaxis, a difficult airway cart, and a defibrillator. Additionally, we followed standard monitoring procedures, including placing two large-bore cannulas for intravenous access.

Under sterile conditions and with the patient in a seated position, we conducted an intradermal sensitivity test by injecting 0.1 ml of 0.01% preservative-free lignocaine in the lumbar region. After obtaining a negative result, we proceeded to supplement the analgesia site with 1 ml of 0.01% lignocaine. Subsequently, we performed the epidural catheter placement procedure, securing it at a depth of 10 cm from the skin surface. A total of 5 ml of 0.1% preservative-free lignocaine was administered epidurally, with an additional 5 ml repeated after 15 minutes. The patient successfully delivered vaginally after 2 hours with adequate labour analgesia.

This case highlights the successful management of anaesthesia for a pregnant patient with an unknown drug allergy, enabling a normal delivery with the assistance of labour epidural analgesia. Previous reports have

* *Corresponding author*.
E-mail address: rumathakuria123@gmail.com (R. Thakuria).

https://doi.org/10.18231/j.ijca.2023.090

documented successful deliveries in known cases of multiple drug allergies, but these were conducted under general anaesthesia.[2] Therefore, it is crucial to consider comprehensive allergy diagnosis during pregnancy, using in-vitro diagnostic tests that are safe for both the mother and the fetus.[3] Given the potential risks of severe anaphylaxis, provocative skin tests should be postponed until after the baby's birth.[4]

Selecting appropriate anaesthetic drugs for labor and delivery in such cases can indeed be challenging. However, for patients requiring surgery or seeking relief from labor pain, sensitivity tests can be performed post-delivery, with precautions taken to manage potential anaphylactic reactions.[5] It's important to note that patients with a history of repeated hypersensitivity reactions to medications may have a higher risk of developing an allergy to local anaesthetics. Therefore, conducting skin prick tests and/or intradermal tests to confirm this susceptibility is advisable.[6]

Currently, there are no specific guidelines regarding the optimal gestational period for conducting sensitivity tests. In our patient's case, we delayed such testing until the fetus's growth reached its peak at 34 weeks of gestation due to her previous life-threatening reaction to TT at 22 weeks. To expedite this evaluation in urgent situations, we opted for an intradermal injection of lignocaine at the epidural site, saving valuable time while ensuring the safety of lignocaine administration as suggested in previous such case reports.[7,8]

In conclusion, it is crucial to be prepared for such challenges and recognize the inherent risks, including anaphylactic reactions. To prevent high-risk allergy patients from undergoing anaesthesia procedures without proper investigation, it is recommended that comprehensive research be conducted to establish sensitivity testing protocols for pregnant patients, accompanied by the development of comprehensive guidelines.[9] Nevertheless, it is essential to remain vigilant and well-prepared for potential tragedies, always mindful of the inherent risk of anaphylactic reactions in these situations.

1. Conflict of Interest

None.

References

1. Mccall SJ, Kurinczuk JJ, Knight M. Anaphylaxis in pregnancy in the United States: risk factors and temporal trends using national routinely collected data. *J Allergy Clin Immunol Pract*. 2019;7(8):2606–12.
2. Kim SS, Lim BG, Oh SK, Lee JH. Anesthetic Management in a Twin Pregnant Woman with Multiple Drug Allergies Undergoing Cesarean Section: A Case Report. *J Adv Med Med Res*. 2021;33(19):26–30.
3. Pali-Scholl I, Namazy J, Jensen-Jarolim E. Allergic diseases and asthma in pregnancy, a secondary publication. *World Allergy Organ J*. 2017;10(1):10.
4. Simons FE, Schatz M. Anaphylaxis during pregnancy. *J Allergy Clin Immunol*. 2012;130:597–606.
5. Takahashi M, Hotta K, Inoue S. Mepivacaine-induced anaphylactic shock in a pregnant woman undergoing combined spinal and epidural anesthesia for cesarean delivery: a case report. *JA Clin Rep*. 2019;5:84. doi:10.1186/s40981-019-0302-6.
6. Dewachter P, Kopac P, Laguna JJ, Mertes PM, Sabato V, Volcheck GW, et al. Anaesthetic management of patients with pre-existing allergic conditions: a narrative review. *Br J Anaesth*. 2019;123(1):65–81.
7. Browne IM, Birnbach DJ. A pregnant woman with previous anaphylactic reaction to local anesthetics: A case report. *Am J Obstet Gynecol*. 2001;185(5):1253–4.
8. Lee JM, Shin TJ. Use of local anesthetics for dental treatment during pregnancy; safety for parturient. *J Dent Anesth Pain Med*. 2017;17(2):81–90.
9. Simons FER, Ardusso LRF, Bilo MB, El-Gamal YM, Ledford DK, Ring J, et al. World Allergy Organization guidelines for the assessment and management of anaphylaxis. *World Allergy Organ J*. 2011;4(2):13–37.

Author biography

Ruma Thakuria, Assistant Professor https://orcid.org/0000-0001-5963-7549

Rashmi Ramachandran, Professor

Cite this article: Thakuria R, Ramachandran R. The management of anaesthesia in pregnant patients with unknown drug allergies: A complex challenge for anaesthesiologists. *Indian J Clin Anaesth* 2023;10(4):413-414.