

A rare case of lactation anaphylaxis

Pramod Durgakeri, Bianca Jones

Surgical Department, Central Gippsland Health Service, Sale, VIC, Australia

CASE STUDY

Please cite this paper as: Durgakeri P, Jones B. A rare case of lactation anaphylaxis. AMJ 2015;8(3):103–105. <http://doi.org/10.21767/AMJ.2015.2349>

Corresponding Author:

Pramod Durgakeri
155 Guthridge Parade
Sale, Victoria 3850, Australia
Email: pramzd@yahoo.com

ABSTRACT

Lactation anaphylaxis (LA) is an extremely rare condition with only five other cases having been previously reported in the literature. Patients will exhibit cutaneous symptoms, respiratory symptoms, gastrointestinal symptoms, and/or cardiovascular symptoms. Post-partum, the drop in hormones is thought to facilitate an exaggerated histamine response. An elevated serum tryptase level performed between 15 minutes to three hours of onset of symptoms will confirm a true anaphylactic reaction. It is important to be aware of this extremely rare medical condition and its management with antihistamines. Better awareness and education of medical staff on this very rare phenomenon can help to better manage these patients.

Key Words

Anaphylaxis, breastfeeding anaphylaxis, lactation anaphylaxis, lactation, breastfeeding

Implications for Practice:

1. What is known about this subject?

Lactation anaphylaxis is an extremely rare condition with only five other cases having been previously reported in the literature. In these cases, it is hypothesised that a drop in the hormones essential for lactogenesis trigger an exaggerated histamine response causing an anaphylactic reaction post-partum during lactation.

2. What new information is offered in this case study?

Long-term use of antihistamines during the period of lactation is essential for prevention of LA. Cessation of lactation using bromocriptine is an acceptable method of management. Elevated serum tryptase levels are useful to confirm a true anaphylactic reaction.

3. What are the implications for research, policy, or practice?

It is important to consider this extremely rare differential diagnosis in the lactating patient with recurrent anaphylactic reactions despite cessation of all medications. Better awareness and education of medical staff on this very rare phenomenon can help to better manage these patients.

Background

The post-partum lactating patient is a common sight in the emergency department. These patients commonly present with a variety of medical conditions, often requiring admission. While in hospital, a variety of medications may be administered; an anaphylactic reaction is a rare but ever present threat to patient safety. The primary suspects of any anaphylactic reaction in the acute hospital setting are antibiotics or analgesic drugs. An extremely rare phenomenon known as lactation anaphylaxis (LA) is seldom suspected in the lactating post-partum patient. Only five other cases of lactation anaphylaxis have been previously reported in the literature.

Case details

A 32-year-old female presented to our emergency department (ED) four days post-partum reporting an anaphylactic reaction. The patient described symptoms of respiratory stridor, urticarial rash, and pruritus. She denied any previous history of allergies, and could not identify any obvious trigger or cause. She had an uneventful natural delivery at full term and this was her first child. She was discharged home day two post-partum with ibuprofen for analgesia. She was not on any other medications.

While in the ED, she was managed with intra-muscular adrenaline, antihistamines, and corticosteroids, with good response. With no obvious trigger identified, she was referred to her GP for allergy testing and was due to be discharged home with an adrenaline auto-injector as a precautionary measure. Prior to discharge, the patient experienced another anaphylactic reaction, again devoid of any obvious triggers. She was immediately treated and transferred to the intensive care unit (ICU) for close observation. Another episode of anaphylactic reaction was reported approximately four hours later in the ICU. We could not explain why this patient responded so well to the antihistamines and adrenaline yet continued to have anaphylactic reactions without any obvious trigger(s).

During a further consultation in the ICU, the patient mentioned that the rash seemed to worsen when breastfeeding. Could breastfeeding be the trigger? The patient was advised to avoid breastfeeding for a few hours while on antihistamines, and this in turn showed considerable improvement to her rash. When breastfeeding was recommenced the anaphylactic symptoms in-turn redeveloped. A diagnosis of LA was reached after a literature search for case reports of patients with similar symptoms. We established that this patient was indeed having an anaphylactic reaction during breastfeeding as her serum tryptase levels were found to be elevated up to 16mcg/L during the reaction. She was keen to continue with breastfeeding and was discharged on regular antihistamines and advised to remain on this during the course of her lactation. She was also educated on how to use an adrenaline auto-injector. Regular outpatient follow-up showed that her symptoms were well controlled on antihistamines and she denied any further anaphylactic reactions while taking her discharge medications.

Discussion

As mentioned, lactation anaphylaxis (LA) is an extremely rare condition. Patients will often exhibit cutaneous symptoms (urticaria, angioedema, itching, flushing),

respiratory symptoms (nasal discharge and congestion, choking, wheezing, dyspnea), gastrointestinal symptoms (nausea, vomiting, diarrhea), and/or cardiovascular symptoms (dizziness, tachycardia, hypotension, and collapse). The loss of mast cell stabilisation due to weaning levels of progesterone post-partum is thought to be a mechanism responsible in LA.¹

The female reproductive organs house an increased number of mast cells during pregnancy. The elevated progesterone levels present at this time are responsible for the stabilisation of histamine granules within these mast cells, with further stabilisation occurring during labour, due to the action of corticosteroid release. Post-partum, the drop in hormones is essential for lactogenesis, but this in turn is thought to facilitate an exaggerated histamine response.²

The clinical diagnosis of anaphylaxis is confirmed with clinical signs and managed accordingly. Elevated serum tryptase levels are useful to confirm a true anaphylactic reaction. Tryptase levels can be performed between 15 minutes to three hours after the initial clinical signs. The elevated level of serum tryptase signifies mast cell activation during an anaphylactic reaction.³ The normal reference range for serum tryptase is from 0 to 12 mcg/L. A history of lactation anaphylaxis is a risk factor for its recurrence.⁴ High doses of antihistamines are required while the patient is lactating and breastfeeding. A link between non-steroidal anti-inflammatory drugs and an exaggerated histamine response has also been published.⁵ Once lactation ceases, either naturally or by the use of medications such as bromocriptine, the symptoms of LA resolve.⁴

The occurrence of an anaphylactic reaction can be a frightening experience for both the patient and medical staff involved. Repeated anaphylactic reactions despite cessation of all medications and/or triggers can prove baffling to the treating unit. It is important to be aware of this extremely rare medical condition and its management with antihistamines.

Conclusion

Better awareness and education of medical staff on this very rare phenomenon can help to better manage patients with lactation anaphylaxis. These patients must avoid non-steroidal anti-inflammatory medications and will require long-term antihistamines for their management during the period of lactation. Cessation of lactation with bromocriptine is an option available for use in severe cases.

References

1. McKinney KK, Scranton SE. A case report of breastfeeding anaphylaxis: successful prophylaxis with oral antihistamines. *Allergy Net*. 2011;66(3):435-6.
2. Rudolph MI, Rojas IG, Penissi AB. Uterine mast cells: a new hypothesis to understand how we are born. *Biocell*. 2004 Apr;28(1):1-11.
3. Brown SG, Blackman KE, Heddle RJ. Can serum mast cell tryptase help diagnose anaphylaxis?. *Emerg Med Australas*. 2004;16(2):120-4.
4. Shank JJ, Olney SC, Lin FL, McNamara MF. Recurrent postpartum anaphylaxis with breast-feeding. *Obst & Gynecol*. 2009;114:415-6.
5. Villalta D, Martelli P. A case of breastfeeding anaphylaxis. *Eur Ann Allergy Clin Immunol*. 2007 Jan;39(1):26-7.

PEER REVIEW

Not commissioned. Externally peer reviewed.

CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

PATIENT CONSENT

The authors, Durgakeri P, Jones B, declare that:

1. They have obtained written, informed consent for the publication of the details relating to the patient in this report.
2. All possible steps have been taken to safeguard the identity of the patient.
3. This submission is compliant with the requirements of local research ethics committees.