Peripartum Management of Progesterone Hypersensitivity: A Multidisciplinary Approach to Catamenial Anaphylaxis in Pregnancy

Kucharlapati S, Singh S, Derenzo J, Angelidis I, Smith CT

Background:

- Progesterone Hypersensitivity is a heterogeneous condition with cutaneous, respiratory, and systemic manifestations, but pregnancy-specific guidance remains sparse.
- Prior reports highlight diagnostic uncertainty, variable treatment strategies, and the potential for severe reactions during hormonal fluctuations [1–3].

- We report a case of a 30-year-old G1P0 at 39 weeks' gestation with a history of anaphylaxis to endogenous and exogenous progesterone who presented for delivery. Prior reactions included urticaria, bronchospasm, and angioedema.

1.Buchheit KM, Bernstein JA. *Progestogen hypersensitivity.* UpToDate.
2.Patrawala M, Lee G. Ann Allergy Asthma Immunol. 2018.
3.Lin K et al. BMJ Case Rep. 2018.

Peripartum Management of Progesterone Hypersensitivity: A Multidisciplinary Approach to Catamenial Anaphylaxis in Pregnancy

Kucharlapati S, Singh S, Derenzo J, Angelidis I, Smith CT

Antepartum

- During pregnancy, she experienced intermittent cutaneous and respiratory symptoms consistent with progesterone hypersensitivity.
- A multidisciplinary plan involving obstetric anesthesiology, allergy/immunology, and maternal–fetal medicine emphasized strict trigger avoidance, early recognition of symptoms, and immediate availability of rescue therapy.
- Prophylactic and rescue medications included diphenhydramine, famotidine, corticosteroids, an IgE-binding monoclonal antibody, and intramuscular epinephrine for airway involvement.

Intrapartum

- Elective induction of labor was initiated at 39 weeks.
- Early epidural analgesia was placed without complication to minimize the need for emergent general anesthesia should anaphylaxis occur.
- Despite adequate contractions and appropriate augmentation, labor arrested in the active phase, and the patient proceeded to cesarean delivery for failure to progress.
- The epidural was successfully extended for surgical anesthesia.

Postpartum

- Recovery Uneventful with normal recovery.
- Discharged POD 3.

Peripartum Management of Progesterone Hypersensitivity: A Multidisciplinary Approach to Catamenial Anaphylaxis in Pregnancy

Kucharlapati S, Singh S, Derenzo J, Angelidis I, Smith CT

Learning Points:

1. **Catamenial Anaphylaxis**: Is a rare life-threatening allergic condition characterized by recurrent multi-system reactions. It is associated with menstrual cycle and presents as cyclical anaphylaxis with severe allergic reactions such as hives, swelling and difficulty in breathing.

2. The exact mechanism is unknown and still needs further research; the two primary theories:
   - **Prostaglandin release induced allergy**: High levels of inflammatory prostaglandins are released by the uterus, causing mast cell activation, leading to allergic reaction.
   - **Hormone allergy**: Due to hypersensitivity to naturally occurring progesterone or external progesterone.

3. Pregnancy related symptoms may present as low-back pain, fetal distress, uterine cramping, or pre-term labor. Multi-disciplinary coordination is key, which should involve allergy & immunology, MFM and Ob anesthesiology.