Period Pains and Epipens: a rare case of catamenial anaphylaxis

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Background: Catamenial or cyclical anaphylaxis is a complex and rare syndrome. It features recurrent episodes of multi-system allergic reactions at the time of menstruation. This allergic phenomenon is thought to be caused by hypersensitivity to progesterone or prostaglandins. However, due to a paucity of reported cases, the exact mechanism remains unclear. This poses challenges for the optimal managment of patients living with this life-threatening disease.

Case: We present the case of a 18 year old female who presented to the Emergency Department with facial itch, throat tightness and respiratory wheeze. These allergic symptoms occured within 1 hour of breakthrough vaginal bleeding. She was managed with IM adrenaline, and IV hydrocortisone, and was monitored in the Intensive Care Unit (ICU) overnight.

Prior to this admission, the patient was managed with Primolut 5mg daily and Morimin 1mg/35mcg daily, with no breakthrough bleeding or anaphylactic symptoms for 3 months. After this admission her primolut was increased to 10mg daily, and she was commenced on regular anti-histamines and given an anaphylaxis plan. At three-month follow-up she reported no further bleeding or anaphylaxis symptoms.

Diagnosis: Progesterone hypersensitivity is often diagnosed clinically. Women with hypersensitivity or anaphylaxis to endogenous progesterone often experience cyclical symptoms during the week before onset of menses where progesterone levels peak in the luteal phase. This can be confirmed using skin-prick testing in around 50% of women[2].

Acute Management[1]:

- Antiallergy medications: 2° generation antihistamines, topical or oral corticosteroids
- Epinephrine IM/IV

Prevention[2]:

- Oral contraceptive: constant progesterone dose
  - Oral progesterone should be slowly uptitrated
  - Progesterone should be prescribed continuously without stopping to allow for menstruation, as this may lead to resensitisation
- Depot Medroxyprogesterone Acetate or an injectable Gonadatropin Releasing Hormone Agonist.
- IgE monoclonal antibody

Discussion: Progesterone hypersensitivity and catamenial anaphylaxis pose unique challenges for clinicians and require a multi-disciplinary approach. Management options should consider women's goals for symptom control and fertility.

1. Lee JK, Vadas P. Anaphylaxis: mechanisms and management. Clinical & Experimental Allergy. 2011 Jul;41(7):923-38.
2. Foer D, Buchheit KM, Gargiulo AR, et al. Progestogen hypersensitivity in 24 cases: diagnosis, management, and proposed renaming and classification. J Allergy Clin Immunol Pract 2016;4:723–9.