Anesthetic Management of a Parturient with Alpha-Gal Syndrome

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Background

- Alpha-Gal Syndrome (AGS) is an IgE-mediated immune response to galactose-α-1,3-galactose (alpha-gal)
- Alpha-gal is an oligosaccharide found in mammalian products and pharmaceutical ingredients
- Recent increase in the prevalence and identification of AGS
- AGS is triggered by a tick bite; the "Lone Star Tick" or Amblyomma americanum is commonly responsible in the U.S.
- Reactions to products containing alpha-gal can range from pruritus and gastrointestinal symptoms to angioedema and hypotensive anaphylaxis
- Reaction can vary from person to person and with each exposure, making AGS rather challenging to identify in patients
- Given that medications commonly used in the obstetric and anesthetic management of parturients can contain alpha-gal, it is essential to understand AGS and its diverse presentations to apply the appropriate preventative measures

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Case Description

- 33 y.o. G1P0 female with AGS presented at 35 weeks gestation for high-risk obstetric anesthesiology consultation
- Previously diagnosed with AGS and reported abdominal pain, diarrhea, and urticaria with the consumption of gelatin products and food prepared near red meat
- Multidisciplinary planning was initiated with anesthesiology, obstetrics and gynecology, pharmacy, and nursing, where all possible medications were reviewed for delivery and peripartum care
- When patient presented for induction of labor at 37 weeks due to gestational hypertension, all medications available were reviewed with pharmacy before administration
- At that time, the propofol formulation at our institution was flagged as containing preservatives likely to cause a reaction. Compatible propofol was rapidly obtained from a nearby hospital in order to remain prepared for the possibility of general anesthesia
- Patient received a dural puncture epidural for labor analgesia without complication
- Standard epidural load with 10 mL of 0.125% bupivacaine and programmed intermittent epidural infusion of 6 mL of 0.0625% bupivacaine with fentanyl 2 mcg/mL every 30 minutes was administered without complication
- Patient had an uneventful vaginal delivery and postpartum course

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Teaching Points

- Parturients with AGS represent a vulnerable population in the perioperative setting
- Optimal management focuses on the prevention of immune reactions by avoiding the use of any products that may contain alpha-gal
- Comprehensive, proactive planning and a multidisciplinary approach between anesthesiology, obstetrics and gynecology, pharmacy, and nursing can allow for the provision of safe, effective care for parturients

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