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Life-Threatening anaphylaxis to tranexamic acid in obstetric Surgery: Should routine skin testing be considered?

Abstract:

Tranexamic acid (TXA) is a widely used antifibrinolytic agent with a well-established safety profile. It is routinely administered in surgical procedures with anticipated major blood loss to reduce transfusion requirements. In obstetric practice, TXA is recommended both prophylactically and perioperatively to manage postpartum haemorrhage and to lower maternal mortality. Although rare, hypersensitivity reactions to TXA have been reported, but such events remain poorly documented in obstetric surgical settings.

We describe the case of a 30-year-old woman with polycystic ovarian syndrome scheduled for elective laparoscopic sterilization under total intravenous anaesthesia (TIVA) without muscle relaxants. In the immediate postoperative period, following intravenous administration of TXA, the patient developed angioedema and anaphylactic shock. She was stabilized with three doses of intramuscular epinephrine and required a continuous epinephrine infusion for 24 hours. Subsequently, the patient developed stress cardiomyopathy, likely related to epinephrine use and/or the anaphylactic event, resulting in reduced cardiac contractility and heart failure. With continuous inotropic and diuretic support, full recovery was achieved by postoperative day six. The patient was advised to undergo skin prick or intradermal testing for TXA sensitivity after three months.

Conclusion: Although TXA is a cornerstone therapy in the prevention and management of surgical and obstetric haemorrhage, clinicians should remain vigilant for the possibility of hypersensitivity reactions, including life-threatening anaphylaxis. In elective procedures where TXA administration is anticipated, preoperative allergy testing may be considered to mitigate the risk of life-threatening adverse events

Biography

Swetha is a Professor in the Department of Anaesthesia at SRM Medical College & Research Centre. She earned her MD in Anaesthesiology from the prestigious Madras Medical College, graduating with a Gold Medal. With over 17 years of clinical and academic experience, Dr. Swetha has a special interest in Paediatric and Obstetric Anaesthesia, as well as Airway Management. She has actively contributed to the development of learning aids and innovative anaesthetic equipment designed to simplify the teaching and practice of anaesthetic techniques. Dr. Swetha remains deeply committed to advancing both patient care and anaesthesia education.