

LEARNING OBJECTIVES

Recognize the perioperative risks and management strategies for patients with IgA deficiency undergoing cardiac surgery, with emphasis on transfusion-related complications and multidisciplinary planning.

CASE DESCRIPTION

43-year-old male with a history of recurrent infections and known selective IgA deficiency presented for elective triple coronary artery bypass grafting (CABG).

Preoperative evaluation identified the risk of severe allergic or anaphylactic transfusion reactions due to the potential for anti-IgA antibodies in the patient's serum.

A multidisciplinary team, including anesthesiology, cardiac surgery, and transfusion medicine, coordinated perioperative planning. Strategies included:

- Preoperative notification of the blood bank
- Preparation for rapid access to IgA-deficient or washed blood products
- Avoidance of unnecessary transfusion

The patient underwent uneventful CABG that did not require transfusion of blood products.

On postoperative day 5, he required a blood transfusion.

Patient was given a standard unit of packed RBCs

He developed chills, body aches, and hypotension during the transfusion. The transfusion was discontinued. He was treated with acetaminophen and IV diphenhydramine, after which his symptoms resolved.

He was discharged the following day.

DISCUSSION

Selective IgA deficiency is the most common primary immunodeficiency, with a prevalence of between 1 in 300 to 1 in 500 individuals.

IgA deficiency is associated with an increased risk of severe transfusion reactions, particularly in the presence of anti-IgA antibodies in the patient's serum.

Cardiac surgery patients are at high risk for blood product exposure, making preoperative identification and risk mitigation essential.

The literature emphasizes the importance of early recognition, communication with transfusion services, and contingency planning, including the availability of IgA-deficient or washed blood products.

In this case, despite careful planning, the patient was later given standard unwashed packed RBCs in the hospital and developed an acute transfusion reaction characterized by chills, body aches, and hypotension—symptoms consistent with an allergic or anaphylactoid response.

Prompt discontinuation of the transfusion and administration of acetaminophen and intravenous diphenhydramine resulted in rapid symptom resolution, aligning with standard management for mild to moderate transfusion reactions.

This case underscores the need for institutional protocols and education regarding transfusion risks in IgA-deficient patients, especially in high-risk surgical and postoperative settings, and demonstrates the value of evidence-based, multidisciplinary perioperative management

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