Life Threatening Cromer Antigen in Pregnancy Causing Consideration of Intra-Operative IVIG

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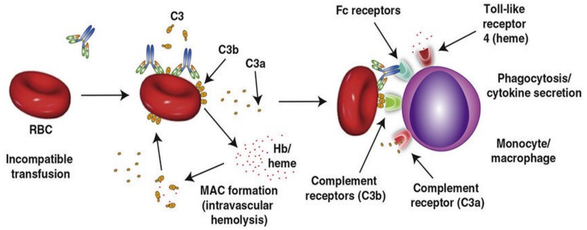
Introduction

- Antibody-mediated hemolysis is mainly caused by ABO incompatibility.



- Cromer Blood Group
  - 10 high incidence antigens
  - Polymorphism[1]
  - Protein in complement cascade and role in hemostasis[2]

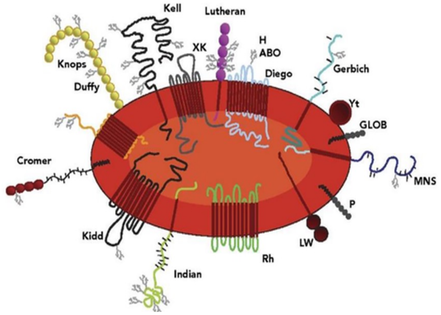
Data from the Literature[3-6]

Case Reports

- Disappearance of antibodies on subsequent pregnancies
- Hypothesis that the antibody is absorbed into the placenta

Effects on the Fetus

- Not associated with hemolytic disease of the newborn



Case Presentation

34-year-old female G4P3003

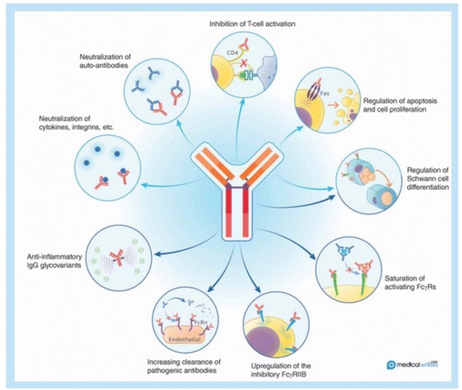
Scheduled C-section and bilateral salpingectomy

History of 3 prior C-sections, known dense adhesions, anemia

History of alloimmunization with Cr[a]

No compatible blood available in the country

Use of IVIG



Management and Clinical Decision Making

Consult Services

- Blood Bank
- Perfusion
- Pharmacy
- Hematology
- Anesthesiology
- Maternal Fetal Medicine

Questions to Address

- Should IVIG be given preemptively or wait until there is a need for a blood transfusion?
- Should IVIG be stopped if blood is needed and there is a reaction to the medication?
- What will be done if either the blood transfusion or IVIG must be stopped due to an adverse reaction?

Management

- Albumin and TXA pre-operatively
- Unmatched O negative blood
- IVIG at 1g/kg
- CSE

Hypo/hypertension	Renal complications
Headache	Thromboembolic events
Post-infusion headache	Viral transmission (rare)
Rashes	Prion transmission (rare)
Flu-like symptoms	Inflammatory reactions
Rigors	Hemolysis
Severe back and leg pains	
Anaphylactoid reactions	

Conclusion

This case demonstrates that transfusion support in the setting of rare antigens requires preparation and collaboration amongst a multidisciplinary team with careful consideration of treatment options and an algorithmic approach to the management of possible adverse reactions.

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