Mismatch nightmare

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ABSTRACT

Introduction: Mismatched transfusion of women in reproductive age group poses risk of intravascular haemolysis to the woman and haemolytic disease of fetus and newborn (HDFN) in subsequent pregnancies. We present two cases of mismatched transfusion for learning purposes for all. Both cases presented with ruptured ectopic pregnancy to the Emergency Department of Hospital Ampang. **Case Description:** Case 1: 28-year-old Gravida 3 Para 0+2 at 8 weeks POA, presented with worsening lower abdominal pain for four days. Ultrasound showed empty uterus with right adnexal mass of 6x6cm, organized clots in Pouch of Douglas and free fluid up to the Morrison's pouch. Intra-operatively, there was hemoperitoneum of two litres with ongoing bleed from ruptured left tubal ectopic pregnancy. She had hypotensive episodes with shock index of 1.3. Therefore, she was transfused with one pint O Rhesus positive blood and four units of fresh frozen plasma. Case 2: 32-year-old G1 P0 presented to emergency department with unsure of dates with abdominal pain dan anaemic symptoms. Ultrasound showed empty uterus with free fluid up till Morrison's Pouch. Intra-operatively, there was hemoperitoneum of 2 litres and ruptured left tubal ectopic pregnancy. She was hypotensive with shock index of 1.7. She was transfused with one pint O Rhesus positive blood and was informed later that she was Rhesus negative blood. Subsequently she was transfused with one pint of A Rhesus negative blood and 4 units of fresh frozen plasma. Following the Rhesus positive blood transfusions, both patients were given anti-D immunoglobulin and monitored closely for signs of red blood cell haemolysis. Both patients recovered well post-surgery without any signs of severe intravascular haemolysis or multiorgan failure. Short course of steroids, erythropoietin stimulating agent and also parenteral iron were prescribed for the second patient post-surgery. Monthly out-patient reviews with monitoring of full blood count, liver function and antibody titres were arranged for 6 months. She was seen by both Maternal Foetal Medicine and Haematology teams. There was no delayed haemolysis seen for both patients at 3 months post event. **Discussion:** Both patients were diagnosed with ruptured ectopic pregnancy on presentation to the hospital. They were unstable, in hypovolaemic shock and required immediate resuscitation with blood transfusion. In view of the patients' blood group was unknown at presentation and immediate procurement of rhesus negative blood was impossible, both patients were transfused with Rh-D positive blood as an emergency resuscitation management. It is important to have a protocol for management of inadvertent mismatch transfusion and the immediate and long-term follow-up involving multidisciplinary teams. Dose and timing of anti-D immunoglobulin is crucial in ensuring adequate removal of D-positive red cells while monitoring for complications of intravascular hemolysis. The couple must also be made aware of the risk of HDFN in subsequent pregnancies with the possibility of requiring in-utero transfusion and iatrogenic premature delivery. All future pregnancies are deemed high risk and will require Maternal Fetal Medicine follow-up. **Conclusion:** Mismatched transfusion should be a "never event". However, with shortage of rhesus negative blood, we will face situations whereby mismatched transfusion would be required as lifesaving measure.

Keywords: Blood mismatch, Rhesus negative, pregnancy