Case Report – Management of a Massive Postpartum Haemorrhage in a Jehovah's Witness

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Background

Postpartum haemorrhage (PPH) is a life-threatening emergency, and its management in patients who decline blood products presents significant clinical challenges and increased mortality risk. International studies have shown these patients have up to a 130 times increased risk of mortality from PPH.[1]

Aims

This case highlights the potential severity of bleeding and associated complications in such patients, emphasising the need for consideration of early definitive management and access to multidisciplinary care.

Case

A multiparous woman (two previous vaginal births) presented in spontaneous labour at 37+6 weeks with severe polyhydramnios (amniotic fluid index 43). Her pregnancy was complicated by gestational diabetes requiring insulin and an elevated BMI of 42. She was a Jehovah's Witness with an advanced care directive (ACD) declining packed red blood cells (PRBCs). In the setting of her PPH, cell salvage, fresh frozen plasma, albumin, clotting factors and platelets were accepted.

Results

She had a precipitous vaginal birth with active management of third stage with syntometrine. She suffered a PPH despite administration of uterotonics including carboprost and was transferred to the operating theatre (OT) after 875mL blood loss. Initial surgical interventions including vaginal wall tear suturing and Bakri balloon insertion failed to control the haemorrhage with ongoing bleeding, primarily seen from the vaginal walls. She developed **disseminated intravascular coagulation** (DIC) and became haemodynamically unstable. In the setting of DIC and instability, she was resuscitated with crystalloids, colloids and fractionated blood products and a bilateral uterine artery gel foam embolization by interventional radiology was performed rather than hysterectomy. **Bleeding was controlled after an estimated 4L PPH**, with 475mL returned via cell salvage with a **subsequent haemoglobin drop from 124 to a nadir of 23g/L**).

She was admitted to intensive care for supportive management including vasopressors, fractionated blood products, antibiotics, haematinics and erythropoietin. Postpartum she developed pneumonia and multiorgan failure (see table 1) and her prognosis was very guarded. Her Bakri balloon was removed on day three postpartum and she was extubated on day five without neurological injury. On day six postpartum she requested PRBCs due to the severe symptoms and prognosis associated with her profound anaemia and was transfused eight units over subsequent days. She was discharged home on day 14 postpartum, clinically well. The patient and her family were thoroughly debriefed.

	Prior	Day 0	Day 1	Day 3	Day 4	Day 5	Day 6-10	Day 14
Haemoglobin (g/dL)	124	36	22-26	**23**	26	27	8 units PRBCs transfused	98
Creatine (micromol/L)	99	109	284	**379**	347	297		97
AST/AST (units/L)	6/24			**404/731**	247/334	188/184		52/56
Lactate (mmol/L)		3.3-4.1	2.8-**5.9**			1.7		

Table 1: Investigations from patient prior to and after PPH

Discussion and Conclusion

Risk minimisation for these patients should begin in the antenatal period with clarification of their beliefs and understanding surrounding declining blood products. Whilst an ACD is legally binding, this case also demonstrates that patients may also change their wishes surrounding blood products depending on the clinical situation. Antenatal care should be led by a clinician with expertise in the area and involve optimisation of haemoglobin levels and PPH risk factors. [2] Birthing location should be considered, with some literature suggesting transfer to a level four or higher obstetric unit. [2] Although it should be noted that this may a significant burden/barrier to care for regional and rural women.

The role of interdisciplinary care in optimising outcomes was demonstrated with involvement by anaesthetic, intensive care, haematology, infectious disease and renal medicine teams.

Early transfer to OT and definitive management is crucial. As highlighted by this case, complications such as DIC can occur which will further increase surgical risks and limit opportunity to peripartum hysterectomy. Cell salvage and fractionated blood products (if acceptable to the patient) may also be lifesaving. [2]

References

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