A pregnant Jehovah’s witness

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A 39 year old woman booked at 14 weeks’ gestation in her second pregnancy. Her first baby was delivered by vacuum without any complications. At the booking visit she reported that she was a Jehovah’s witness and made it clear that she would not accept blood products. Her antenatal course was complicated by polyhydramnios, fetal macrosomia, and abdominal discomfort. She presented at 40 weeks’ gestation with regular pains and was admitted to the labour ward. The cord prolapsed shortly after rupture of the membranes and she was transferred to the operating theatre for an emergency caesarean section. She gave birth to a healthy boy and the surgery was uneventful. She started to haemorrhage four hours after delivery on the postnatal ward. She was resuscitated by the on-call team without use of blood products. Mother and baby were discharged in good health on day five.

Questions

1. How would you counsel this woman?

2. What measures would you take to optimise her haematological status in the antenatal period?

3. How would you manage a postpartum haemorrhage in a woman who refuses blood products?

Answers

Short answers

1. Women who refuse blood products should see a consultant obstetrician early in the antenatal period and have a frank discussion about the issues that may arise. This should be followed up by completing a documented detailed advance directive after a period of reflection.

2. Oral iron supplements should be prescribed throughout the pregnancy with the option of additional intravenous iron in the third trimester should the haemoglobin and iron stores remain low.
3. The locally adapted postpartum haemorrhage protocol should be implemented at the earliest opportunity in the event of a haemorrhage with early use of effective uterotonic agents, adequate fluid replacement, and immediate recourse to senior obstetric, anaesthetic, and haematology personnel.

**Long answers**

1. **Counselling**

   Women who do not consent to transfusion with blood or blood products should be seen by a consultant obstetrician at booking or shortly afterwards. All discussions and decisions should be documented. The risk of haemorrhage and the implications of refusing transfusion should be discussed at length in a non-judgmental way. Establish which blood products or blood sparing techniques (if any) are acceptable to the woman. The woman should also be asked specifically about neonatal transfusion.

   The patient may already carry an advance directive with her. An advance directive that is specific to the hospital should be completed by the woman and co-signed by the lead clinician and a witness. The documents should only be completed after reflection and discussion with her family. One copy should be held by the patient with a further copy kept in her medical notes. Women should be reminded that they may revoke or modify the agreed care plan at any time. They should be made aware that it will remain in force even though the patient may lose consciousness or become incapable of expressing her wishes for other reasons.

2. ** Optimising the mother’s haematological status**

   At the booking visit, a full blood count, serum ferritin, and blood group and antibody screen should be performed. Thalassaemia, sickle cell, and glucose 6 phosphate dehydrogenase screening should be performed if clinically indicated. If anaemia is detected, serum B12 and red cell folate should be checked. A coagulation screen should also be checked if the woman has any history indicating excessive bleeding or bruising, or a relevant family history. Oral iron supplements should be recommended as first line prophylaxis. Parenteral iron should be used for treatment of anaemia when oral iron is not tolerated, absorbed or patient compliance is doubtful or if the haemoglobin and ferritin remain low despite oral supplementation.1 The advantages of parenteral treatment include a shorter duration of treatment and a quicker response,2 however, it is more expensive and more invasive.

   Autologous blood collection and storage for later reinfusion (predeposit) is not recommended in pregnancy as concerns exist about antenatal anaemia and placental insufficiency. Recombinant human erythropoietin is mostly used in the anaemia of end stage renal disease, but it has been used in patients antenatally and postpartum without end stage renal disease without any adverse maternal, fetal or neonatal effects.3 4

3. **Management of postpartum haemorrhage**

   The primary aim should be to avoid postpartum haemorrhage. Senior staff, including the consultant obstetrician and consultant anaesthetist, should be informed once the patient is admitted in labour. Active management of the third stage of labour has been associated
with a twofold reduction in risk of postpartum haemorrhage. Oxytocin or syntometrine can be used, depending on local practice. An additional prophylactic oxytocin infusion (40 IU oxytocin in 500 ml normal saline over four hours) should be started immediately after delivery of the placenta. Intravenous crystalloid and colloid should be given to replace volume loss. Dextran should be avoided as it may increase blood loss. The mother should be observed closely after delivery. Operative vaginal delivery and caesarean sections should be performed by senior staff.

With a caesarean delivery, intraoperative cell salvage—returning the blood lost during surgery to the patient—can be considered. However, only staff with experience and knowledge of the system should attempt this procedure.

Staff should be familiar with a clear locally adapted protocol on how to manage postpartum haemorrhage. The protocol should include early involvement of a consultant obstetrician, anaesthetist, and haematologist and notification of the blood bank. Recourse to surgical interventions, especially hysterectomy must be considered early in these patients as the option of transfusion does not exist.

The causes of postpartum haemorrhage are traditionally referred to as the 4 T’s: tone (70%), tissue (10%), trauma (20%) and thrombin (1%). Uterotonic agents increase the efficiency of uterine contraction and are used as first line treatment.

First line treatment (in addition to oxytocin) includes:

- Ergometrine 500 µg given intramuscularly
- Carboprost 250 µg given intramuscularly and repeated every 15 minutes to a maximum of 2 mg (eight doses)
- Misoprostol 1 mg given per rectum (5 x 200 µg tablets)

Second line treatments are used when the patient continues to bleed despite uterotonic agents. These include:

Surgical interventions:
- Bimanual uterine compression
- Uterine balloon tamponade or packing
- Uterine compression sutures
- Uterine artery ligation
- Internal iliac artery ligation
- Hysterectomy.
The choice of procedure depends on numerous factors which include the experience of the surgeon, parity, plans for future pregnancy, the extent of the bleeding and the general condition of the patient.

Radiological interventions:
- Embolisation. Selective radiological embolisation of the bleeding vessel may be an option in units where interventional radiologists are available and the bleeding is not life threatening. [10]

Haemostatic agents:
- Tranexamic acid 1 g given intravenously
- Recombinant activated factor VII.

These drugs may be used in the treatment of intractable haemorrhage under the guidance of a consultant haematologist.

Documents produced by the Royal College of Obstetricians and Gynaecologists, the Royal College of Surgeons (England), the Association of Anaesthetists of Great Britain and Ireland, and the Hospital Information Services for Jehovah’s Witnesses provide useful information on managing Jehovah’s Witness patients. [11, 12, 13, 14]

Cite this as: BMJ 2008;337:a1935

References

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