

PATIENT INFORMATION

Intraoperative Cell Salvage in Obstetrics

What is cell salvage?

Cell salvage is a method of collecting blood lost during an operation and giving it back to the same person.

When cell salvage is used, blood that is lost during the operation is collected into a machine that filters and washes the blood to remove any contaminants. The blood can then be given back to the patient during the operation or soon afterwards. The advantage of receiving your own blood means it reduces the small risks associated with receiving donated blood eg reactions to a blood transfusion or transmission of an infection.

Cell salvage use is well established and is used regularly at the West Suffolk Hospital for many different surgical procedures.

Can cell salvage be used for caesarean sections?

Yes it can. However, cell salvage has not always been used for caesarean sections, because when it was originally introduced several years ago, there were specific concerns about its use in pregnancy. One concern was that blood cells from the baby, which can potentially enter the cell salvage collection system during surgery, could be transfused back to the mother, causing haemolytic disease of the newborn in future pregnancies.

Secondly, the fluid which surrounds the baby may cause a rare and dangerous condition called amniotic fluid embolism if the blood is not adequately filtered prior to giving it back to the mother.

What is amniotic fluid embolism and haemolytic disease of the newborn?

Amniotic fluid embolism is caused when amniotic fluid (fluid around the baby) causes an allergic-type reaction affecting the breathing and blood pressure in the mother.

Haemolytic disease of the newborn occurs when mother and baby have different blood groups. The mother's blood reacts to the baby's blood and produces antibodies. This will not affect the current pregnancy but in future pregnancies antibodies from the mother may cross the placenta and attack the baby's blood cells causing harm.

How are complications prevented?

To prevent amniotic fluid embolism occurring, the blood is passed through a special filter before it is given back to the mother. Several studies have shown this is highly effective.

Haemolytic disease can be prevented by testing the mother's blood after the operation to see if blood cells from the baby have been transferred to the mother. If this is the case,

then a drug called Anti-D Immunoglobulin can be given to the mother to prevent antibodies forming. This can be given up to 72 hours after the operation.

How safe is it?

Various studies have looked into the safety of cell salvage in obstetrics. There have been no significant complications as a result of its use.

It is a procedure that is now commonly used during caesarean sections in many centres through out the UK and the world.

The National Institute for Clinical Excellence (NICE) has issued guidelines for its use in the UK and considers it a safe procedure. The Obstetric Anaesthetists' Association and the Association of Anaesthetists have also endorsed its use.

Is it acceptable for women of Jehovah's Witnesses faith?

This will depend on the views of the individual. Cell salvage is deemed acceptable by many women of Jehovah's Witnesses faith.

Why have I been offered this treatment?

This procedure will be offered to you if it is considered that the risk of bleeding during caesarean section could result in needing a blood transfusion. Bleeding more than usual tends to be associated with a low lying placenta, multiple caesarean sections and previous history of heavy blood loss.

It is also offered to those women who have low haemoglobin levels, rare antibodies in their blood or rare blood groups.

Will I need other blood?

Unfortunately a cell saver will not be able to collect every drop of blood lost. If you have a major haemorrhage you may need blood from other donors in addition to that processed by the cell saver. However, you are likely to need less donated from others.

Can I get further information?

Your anaesthetist or obstetrician will be happy to answer any further questions you might have.