Uterine artery embolisation to treat obstetric haemorrhage (treatment to stop heavy bleeding following labour)

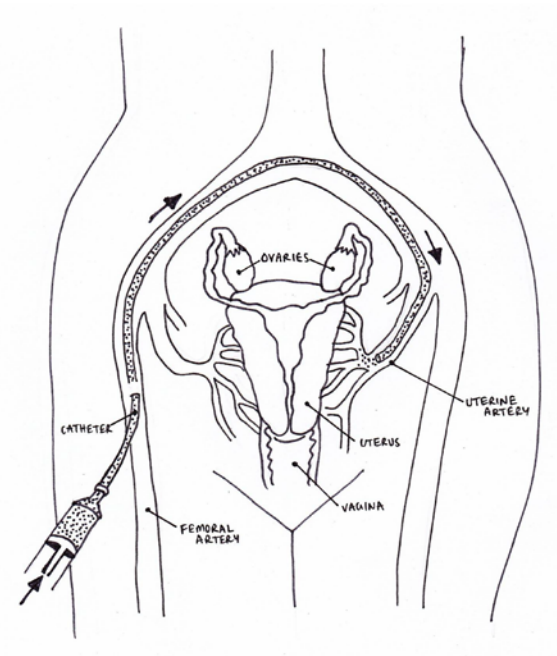
This information is about a procedure called uterine artery embolisation, which your doctor may have mentioned to you. It aims to give you an overview of the procedure and why it may be beneficial for you. It is intended for women who have given birth to their baby and have continued to bleed excessively from their uterus (womb) – called obstetric haemorrhage.
This leaflet may be given to you before or after the procedure to give you a better understanding of what has been done and why. If you have any questions or concerns, please speak to your midwife or doctor.

What is uterine artery embolisation?

Uterine artery embolisation is a process of blocking the blood supply to the uterus with small particles of medical sponge/plastic to stop the flow of blood.

How is it performed?

Uterine artery embolisation is performed by a specialist doctor called an interventional radiologist. The procedure takes place in the x-ray department and takes 1-2 hours to perform. You will be given an anaesthetic appropriate to the circumstance. This might include intravenous sedation, a spinal anaesthetic (injection into your spine to make you numb from waist down) or general anaesthetic (when you are asleep) prior to the procedure.



The blood supply for the uterus comes from two blood vessels called uterine arteries, which are connected to the major arteries in the groin. A long, thin, flexible plastic tube called a catheter is inserted into one of the main arteries in the groin through a very small incision in the skin. The catheter is very narrow, approximately 1.5mm wide.

Under x-ray guidance the catheter is moved forward so that the tip is placed within each uterine artery (right and left) in turn. At this point an angiogram is performed. This is when x-ray dye is injected into the catheter while taking x-ray images to give a 'road map' of the uterine artery. This allows the radiologist to determine the best position to block the uterine artery in order to stop the bleeding. Once the tip of the catheter is in the desired position, small fragments of medical sponge or tiny plastic particles (the size of grains of sand) are injected to stop the blood flow in the uterine artery. These fragments of sponge and plastic particles have been used in the human body for many years and have been proven to be very safe. The result is checked with a repeat angiogram. The catheter is then removed and pressure is applied on the entry wound in the groin for about 15 minutes to stop any bleeding. No stitches are required.

When should uterine artery embolisation be considered?

The aim of the procedure is to stop heavy bleeding from the uterus after the birth of your baby. This may be after a vaginal birth or a Caesarean section. The commonest reason for bleeding after delivery is an atonic (floppy) uterus. There are several types of medications that can be given to help contract the uterus, either through a drip in your arm, an injection or rectal suppositories (capsule in the back passage). However, if these drugs fail to stop the bleeding, other measures such as uterine artery embolisation may be required. This may avoid the need for an abdominal hysterectomy (surgical removal of the uterus through an abdominal incision).

What are the benefits of uterine artery embolisation?

Very rarely, after the birth of their baby, women continue to bleed very heavily. This may become life-threatening. In these cases, a hysterectomy may be required to stop the blood loss. However this involves a major operation and the woman cannot then have children in the future.

Uterine artery embolisation is a procedure that may avoid the need for a hysterectomy. It is a safe and effective procedure. It also avoids leaving a large scar and has a quicker recovery time than a hysterectomy.

What are the risks of uterine artery embolisation?

- It is generally safe and effective. It is considered a minimally invasive procedure.
- The most common complication is a low-grade fever after the operation, which is a normal response by the body's immune system. Bruising is also common.
- Technical failure (i.e. failure to insert the catheter or the procedure doesn't work). There has been a reported failure rate of about 10%. This means that 10 women in 100 who have had uterine artery embolisation may require a hysterectomy afterwards.
- Rarer complications include:
  - infection in the pelvis
  - a haematoma (collection of blood) in the groin

- temporary reduced blood supply to the bladder, buttocks and legs. This can lead to limb ischaemia (reduced blood supply) or limb loss in extreme cases.
- ovarian failure has been reported in 1% (1 in 100), with the women affected suffering premature menopause (premature ovarian insufficiency)

Difficulties of uterine artery embolisation

Uterine artery embolisation is not always considered due to several factors:

- It requires a specialised x-ray department and a highly trained interventional radiologist to be available.
- It takes time and planning to organise the procedure, so early consideration is necessary to ensure the appropriate team is in place. This is not always possible in an emergency situation. The patient must be well enough to be transported to the X-ray department.

What are the alternatives?

If drugs fail to stop the bleeding after the birth, other procedures may be performed before or after uterine artery embolisation. These include:

- Balloon tamponade – this is where a balloon is inserted into the uterus and filled with water. This can be done through the vagina. The filled balloon puts pressure on the uterus from the inside, compressing the blood vessels and stopping the bleeding. This is a temporary measure and the balloon is usually deflated and removed 24 hours later.
- B-Lynch suture – this involves a laparotomy (an incision in the abdomen) to gain access to the uterus. Large sutures (stitches) are placed over the top of the uterus, like braces, to manually compress the uterus and stop the bleeding.
- Hysterectomy – this is a major operation involving surgical removal of the uterus. This is only performed in life-threatening situations. Where there is a large amount of blood loss, a blood transfusion may be offered.

Other useful contacts

Iffley Ward: 0118 322 7323

Marsh Ward: 0118 322 7319

Or contact your midwife or community health visitor.

More information is available on the Trust website: www.royalberkshire.nhs.uk

References:

1. Wee L, Barron J, Toye R. Management of severe postpartum haemorrhage by uterine artery embolization. Br J Anaesth. 2004; 93: 591-4.

2. RCOG good practice 6 (2007): Role of elective and emergency interventional radiology in postpartum haemorrhage.

This document can be made available in other languages and formats upon request.

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