

## Introduction

1. Uterine Fibroid Embolization (UFE) may be used to relieve adverse symptoms due to uterine fibroids; which include heavy menstrual flow, menstrual pain, pelvic pain and pressure symptoms.
2. After UFE, both uterine arteries will be blocked, the fibroid may shrink 40-70% by volume and the symptoms may be relieved. With heavy menstrual flow and pain, about 80% have significant improvement, with pressure symptoms, 70-80% have satisfactory improvement.
3. This procedure is performed by a radiologist with special training in interventional radiology. It will be performed in the Department of Radiology under image guidance.

## The Procedure

1. The procedure is performed under local anaesthesia using aseptic techniques.
2. Your vital signs (blood pressure, pulse and oxygenation status) will be monitored throughout the entire procedure.
3. The femoral artery at the groin is punctured by the radiologist and an arterial sheath inserted via a small nick in the skin. It provide an access to the arterial system. An alternative access is from the upper arm.
4. The radiologist then inserts a thin plastic tube (called a catheter) into a blood vessel through the arterial sheath. An X-ray dye (called a contrast medium) will be injected into the blood vessel through the catheter to make the blood vessels visible on X-ray.
5. The catheter will directed deeply to each uterine artery in turn. Small particles will be injected to block the uterine arteries and its branches. Another smaller catheter (coaxial catheter) may be inserted through the original catheter if necessary.
6. Further analgesics will be given during the procedure if you experience pain.
7. The duration of the procedure is about 1 to 2 hours.
8. After the procedure, intravenous fluid and analgesics will be continued. Your vital signs will be monitored.
9. You will be discharged from hospital after Doctor's assessment and your pain is under control. You can eat adequately. Oral analgesics will be given to you.
10. The pain will usually subside in a few days to 2 weeks and your symptoms will improve gradually. In the next 2 to 3 cycles after treatment, the original symptoms may persist.
11. You will be regularly followed up by the gynaecologist, and also with MRI or ultrasound in the Department of Radiology.

## Before the Procedure

1. A written consent is required.
2. Inform medical staff before the examination if patient is or may be pregnant as the examination involves high dose of X-ray that is harmful to a foetus. Pregnancy test may be necessary in case of any doubt if the examination is to be proceed.
3. Inform doctor of history of allergy to food and drugs, and in particular any previous reaction to contrast medium, asthma, urticarial, eczema and allergy rhinitis etc. Oral or intravenous steroid premedication may be needed before injection of contrast medium.
4. Keep fasting for 4 hours prior to the examination.
5. For diabetic patients on Metformin medication, patient should inform medical staff before examination.
6. Check clotting profile for any bleeding tendency, to be corrected if abnormality detected.
7. Antibiotic cover prior to examination when necessary.
8. Set up venous access.



### Risk and Complication

1. Cramping or pelvic pain (very common).
2. Vaginal discharge (very common).
3. Post embolization syndrome: fever, pain, nausea, malaise, increased white blood cell (<40%).
4. Menstruation stops (Amenorrhoea) (2% - 9%). The incidence may be over 40% if you are over 50 years old. The average rate of permanent amenorrhoea is <2%. It is probably related to ovarian dysfunction or endometrial shrinkage.
5. Pelvic infection: may need intravenous antibiotics or hysterectomy (<2%).
6. Fibroid passed out through vagina: if there are submucosal fibroids (<10%). This may require emergent dilation and curettage. The expulsion of fibroid occurred 44 months after the procedure in one case report.
7. Sloughed-off subserosal fibroid (fibroid at the outer boundary of uterus) may lead to inflammation of the peritoneum.
8. Transient ovarian failure (rare).
9. Injury of uterine artery or adjacent arteries (rare).
10. Uterine necrosis (rare).
11. Nontarget embolization causing injury to other adjacent organs: bowel, buttock, bladder and nerves (very rare).
12. Procedure related death (very rare).
13. Allergic reaction to intravenous contrast medium.

#### General Risks:

- Mild reactions: For example, itching, mild skin rash, nausea, vomiting, feeling of warmth, arm pain, sneezing, coughing, and chest tightness. A few patients may experience delayed reactions usually within 24 hours, which include pain at injection site, itching, rash, painful or swollen salivary glands. The symptoms are usually transient, requiring minimal or no treatment.
  - Moderate reactions: These symptoms are more severe and last for longer duration. Patient may also experience rash or urticaria, fever and chills, an increase or decrease in blood pressure and palpitation. Specific treatment and close monitoring are required.
  - Severe reactions: The symptoms include shortness of breath, irregular heartbeat, chest pain, severe kidney failure, convulsion and unconsciousness. If these symptoms occur, the patient will require urgent medical treatment.
14. Effect on subsequent pregnancy and delivery: no long term study. Normal term delivery is documented in many medical literatures.

Should a complication occur, another life-saving procedure or treatment may be required immediately.

### Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

### Reference

1. The Hong Kong Society of Interventional Radiology Limited, Patient Information Leaflet: Uterine Fibroid Embolization (UFE) (2010)
2. Smart Patient Website by Hospital Authority: Uterine Fibroid Embolization (2008)
3. Smart Patient Website by Hospital Authority: Contrast Study of Computer-Assisted Tomography Scan (v2/2020)