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## APPENDIX 2



# FIBROID EMBOLIZATION: INFORMATION FOR PATIENTS

*This leaflet explains the options for treatment of fibroids and, in particular, describes a technique known as fibroid embolization.*

### **WHAT ARE FIBROIDS?**

Fibroids are common benign growths of the muscle wall of the uterus (also called the womb), which can cause several problems depending on their size and position. Some women with fibroids have heavy, prolonged, and/or painful periods. In other women, fibroids may be associated with problems in becoming pregnant. There are many other possible causes of heavy menstrual bleeding and there are other more common causes for fertility problems. Before considering treatment for fibroids, it is important to make sure that there are no other conditions causing the symptoms.

Sometimes fibroids press on the surrounding structures and cause difficulty in passing water or give a feeling of fullness. Fibroids sometimes occur as single growths, but frequently women have several fibroids within the uterus. They can vary in size, from being the size of a cherry to the size of a watermelon.

It is not known why fibroids develop but they are known to be dependent upon the estrogen hormone in the body. After menopause (change of life), when there is much less estrogen in the body, fibroids should stop growing or may shrink, although larger fibroids tend to persist.

The majority of fibroids do not require treatment. However, when fibroids result in pain or heavy bleeding, there are many alternatives available to improve these symptoms. Many women go through life having fibroids without being aware of it and having no gynaecological symptoms. However, if treatment is necessary, it will be important to consider the choices carefully.

### **TREATMENT OPTIONS FOR FIBROIDS**

#### **MEDICATION**

Drugs will not cure fibroids but may relieve some of the symptoms. Talk to your doctor about the medications that may be helpful in your situation.

#### **GnRHa**

There is one type of hormone drug available that can temporarily reduce the size of fibroids: GnRHa. This drug fools the body into thinking that it is going through menopause, so the

fibroids shrink. However, as soon as the drug is stopped, the fibroids tend to grow back to their original size or sometimes larger than before within a short time. This drug can only be given for 6 months, as after that it can cause thinning of the bones. It is mainly used to reduce the size of the fibroids just before surgery to make the operation easier.

#### **SURGERY**

Two main types of surgery are performed to cure fibroids.

#### **HYSTERECTOMY**

Hysterectomy means removal of the uterus. This is the most effective treatment for fibroids as there is no possibility that the fibroids can regrow afterwards. Hysterectomy is a major operation and patients usually need to stay in hospital for a couple of days after surgery, depending on the type of operation and initial recovery. Rest afterwards is essential and in some cases up to 6 weeks of reduced activity will be recommended.

Following hysterectomy, women can no longer become pregnant. Hysterectomy is not suitable for people who have not completed their family, especially those seeking fertility treatment. If the ovaries are not removed, the hysterectomy will not cause hormonal changes.

#### **MYOMECTOMY**

Myomectomy is also a major operation as it involves cutting the fibroids out of the uterus but reconstructing the wall of the uterus to leave it in place. The advantage of this procedure is that, as the uterus is left behind, it is possible to become pregnant. There are 2 possible disadvantages. Firstly, this surgery can leave behind adhesions (scarring) inside the pelvis, which can, at worst, cause the fallopian tubes to become blocked. This would then prevent pregnancy from occurring. Secondly, as it is an abdominal operation and the fibroids carry much blood supply, there is a risk of complications including hemorrhage and organ injury, and the recovery time is similar to that of a hysterectomy.

#### **FIBROID EMBOLIZATION**

For many years, embolization (blockage of the arteries) of the

uterus has been performed for a variety of medical conditions. For the past 10 years, this technique has been used for patients with symptomatic fibroids. A group in Paris first reported it in 1995. This procedure does not require a general anesthetic or a major incision. This treatment is called *uterine fibroid embolization (UFE)*.

## **INFORMATION FOR PATIENTS UNDERGOING FIBROID EMBOLIZATION**

### **WHAT IS FIBROID EMBOLIZATION?**

Fibroid embolization is a new way of treating fibroids by blocking off the arteries that feed them, the uterine arteries, and making the fibroids shrink. It is performed by a radiologist, rather than a surgeon, and is an alternative to an operation. Fibroid embolization was first performed in 1995 and, since then, many thousands of women have undergone the procedure worldwide.

### **WHY WOULD I CHOOSE FIBROID EMBOLIZATION?**

Other tests that you have had done show that you have fibroids and that these are likely the cause of your symptoms. Your gynaecologist and your family doctor will have told you all about the problems with fibroids and discussed with you ways of dealing with them. Hysterectomy, myomectomy, and embolization are possible treatments. Your doctor can address with you the risks and advantages of each so that you can make a decision regarding the most appropriate choice for your personal situation.

### **WHO WILL DO THE FIBROID EMBOLIZATION?**

A specially trained doctor called an interventional radiologist will do the fibroid embolization. Radiologists have special expertise in using X-ray equipment and also in interpreting the images produced. They look at these images during the procedure. Interventional radiologists are trained to insert needles and fine catheters into blood vessels and through the skin in order to perform certain minimally invasive treatments.

### **WHERE WILL THE PROCEDURE TAKE PLACE?**

Generally fibroid embolization takes place in the X-ray department, in a special "procedures room" adapted for such a procedure.

### **HOW DO I PREPARE FOR FIBROID EMBOLIZATION?**

You will probably be asked not to eat for 4 hours beforehand, although you may be told that it is all right to drink some water. You may receive a sedative to relieve anxiety. You will be asked to put on a hospital gown. As the procedure is generally carried out using the big artery in the groin, you may be asked to shave the skin around this area. If you have any allergies, you must let your doctor know. If you have previously reacted to intravenous

contrast medium, the dye used for kidney X-rays and CT scanning, then you must also tell your doctor about this.

### **WHAT ACTUALLY HAPPENS DURING FIBROID EMBOLIZATION?**

You will lie on the X-ray table, generally flat on your back. You need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers. Once in place, this will not cause any pain. You may also have a monitoring device attached to your chest and finger and may be given oxygen through small tubes in your nose.

The radiologist will keep everything sterile and will wear a surgical gown and operating gloves. The skin near the point of insertion, probably the groin, will be swabbed with antiseptic and then most of the rest of your body covered with surgical blankets and towels. The skin and deeper tissues over the artery in the groin will be anaesthetised with local anaesthetic, then a needle will be inserted into this artery. Once the radiologist is satisfied that this is correctly positioned, a guide wire is placed through the needle and into this artery. Then the needle is withdrawn allowing a fine, plastic tube, called a catheter, to be placed over the wire and into this artery. The radiologist will use the X-ray equipment to make sure that the catheter and the wire are then moved into the correct position, into the other arteries that feed the fibroid. These arteries are called the right and left uterine arteries. A special X-ray dye, called contrast medium, is injected down the catheter into these uterine arteries and this may give you a hot feeling in the pelvis.

Once the fibroid blood supply has been identified, fluid containing thousands of tiny particles is injected through the catheter into these small arteries, which nourish the fibroid. This blocks up these small blood vessels so that the fibroid is starved of its blood supply. Both the right and the left uterine arteries need to be blocked in this way. It can often all be done from the right groin but sometimes it may be difficult to block the branches of the right uterine artery from the right groin and so a needle and catheter may need to be inserted into the left groin as well.

At the end of the procedure, the catheter is withdrawn and pressure is firmly applied on the skin entry point for approximately 10 minutes, to prevent any bleeding.

### **WILL THE PROCEDURE HURT?**

When the local anaesthetic is injected, it will sting to start with, but this soon eases off and the skin and deeper tissues should then feel numb. The procedure itself may become painful. However, there will be a nurse, or another member of staff, available to administer painkilling medications through the IV in your arm if needed.

As the dye, or contrast medium, passes around your body, you may get a warm feeling, which some people can find a little unpleasant. However, this soon eases off and should not concern you.

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### HOW LONG WILL IT TAKE?

Every woman's situation is different and it is not always easy to predict how complex or how straightforward the procedure will be. The procedure typically takes an hour, but depending on your anatomy, it may take 30 to 120 minutes.

### WHAT HAPPENS AFTERWARDS?

You will be taken back to a recovery room or to your ward on a stretcher. Nurses will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no untoward effects. They will also look at the skin entry point to make sure there is no bleeding from it. You will generally stay in bed for 6 hours. Most patients experience pain such that they need narcotics either by pill or intravenous for several hours following the procedure. You may be kept in hospital over night.

The day after the procedure, you may resume normal activities as your symptoms allow, but most women require some time off work as they continue resting and taking pain medication for the first few days. Some patients may feel very tired for up to 2 weeks following the procedure, although some people feel fit enough to return to work 3 days later. However, patients are advised to take at least 2 weeks off work following embolization.

### ARE THERE ANY RISKS OR COMPLICATIONS?

Fibroid embolization is normally a safe procedure but there are some risks and complications that can arise, as with any medical treatment. There may occasionally be a small bruise, called a hematoma, around the site where the needle has been inserted, and this is quite normal. If this becomes a large bruise, then you should contact your radiologist to ensure that no treatment is needed. Most patients feel some pain afterwards. This ranges from very mild pain to severe cramping, period-like pain. It is generally worst in the first 12 hours but will probably still be present when you go home. While you are in hospital, this can be controlled by powerful painkillers. If the pain is associated with nausea or vomiting, anti-nausea drugs will be prescribed. You will be prescribed further medications to take at home.

Most patients get a slight fever after the procedure, which may be due to degeneration of the fibroid. The painkillers you will be given will help control this fever. A few patients get a vaginal discharge afterwards, which may be bloody. This is usually due to the fibroid breaking down. Usually, the discharge persists for approximately 2 weeks from when it starts, although occasionally it can persist intermittently for several months. This is not in itself a medical problem. If necessary, wear sanitary pads rather than tampons.

If the discharge becomes purulent (has pus in it) and if you also have a high fever and feel unwell, infection may be present and *you should ask to see your gynaecologist immediately. Infection is the most serious complication of fibroid embolization.* This happens to perhaps 2 in every 100 women having the procedure. The signs that the uterus is infected after embolization include pain, pelvic tenderness, and a high temperature. Lesser degrees of infection can be treated with antibiotics. Once severe infection has developed, it is generally necessary to have an operation to remove the uterus—a hysterectomy. One patient has died after fibroid embolization because of severe infection. *If you would not want a hysterectomy under any circumstances, then it is probably best not to have fibroid embolization performed.*

Up to 15% of women spontaneously expel a fibroid, or part of one, usually 6 weeks to 3 months afterwards. If this happens, you are likely to feel period-like pain and have some bleeding.

A few women have undergone an early menopause after this procedure. This has probably happened because the blood supply to the ovaries has been affected. Early menopause is more common in women who are over the age of 40 when they have UFE.

### WHAT ARE THE RESULTS OF FIBROID EMBOLIZATION?

The results from most scientific series are very positive, with symptom relief in 50 to 90% of patients. Patients with fibroids and heavy bleeding as their reason for UFE typically have the best results. On average, shrinkage of fibroids is about 50% of the volume of each fibroid. The majority of women are pleased with the results. If having a baby in the future is very important to you, you need to discuss this with your doctor, as there are reports that there may be more complications in pregnancy following UFE. For women who are interested in future fertility, a myomectomy may be a better choice.

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This leaflet should answer some of your questions about fibroid embolization. However, this is only a starting point for discussion about your treatment with your doctors.

*Make sure you receive enough information about the procedure before you sign the consent form.*

Fibroid embolization is considered a safe procedure, designed to improve your medical condition and save you having a major operation. There are some risks and complications involved and, because there is the possibility of a hysterectomy being necessary to deal with complications, make sure that you have discussed all the options available with your doctors.