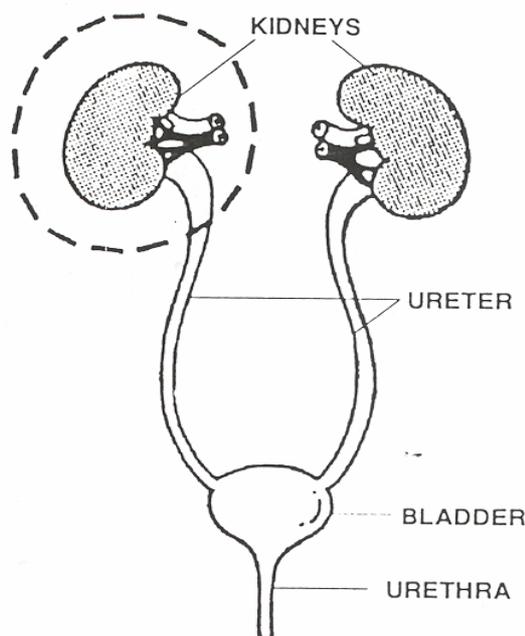


*KIDNEY (RENAL)  
EMBOLISATION  
PATIENT INFORMATION*

The information contained in this booklet is intended to assist you in understanding your proposed surgery; some of the content may or may not apply to you. Feel free to discuss any issues and questions you may have about your surgery with the medical and nursing staff looking after you. If required, your nurse will arrange for an interpreter to assist with explaining the contents of the booklet. The interpreter can also be present for doctors' consultations. Please bring this book with you to hospital as it is a useful guide.

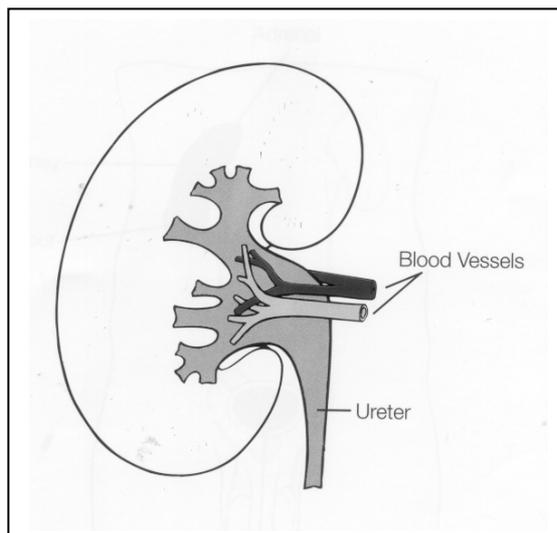
## *What are the Kidneys?*

The kidneys are bean-shaped organs approximately 12cms long and are partially protected by the lower part of the rib cage. The main function of the kidneys is to produce urine. Urine travels via hollow tubes (one per kidney) called ureters to the bladder where it is stored and later passed out of the bladder via the urethra. The kidneys also play a part in blood pressure control, the formation of red blood cells and the body's calcium balance.



# *What is a Kidney Embolisation?*

A kidney embolisation is the deliberate blocking of the blood flow to the entire kidney, or a portion of it, by the placement of a blocking agent in a blood vessel (artery). A variety of agents can be used to block the blood vessel including gelfoam, PVA granules or metallic coils.



## *How will it be performed?*

The embolisation procedure is carried out under x-ray control in the Angiography Department. Under local anaesthetic, the doctor makes a small cut (puncture site) in the groin and inserts a catheter (long, fine plastic tube) into a blood vessel in the groin.

The catheter is then moved into position using x-ray pictures viewed on a TV screen. The position of the catheter is checked using contrast (a dye able to be seen on x-ray). The embolisation 'agent' is then injected through the catheter into the selected blood vessel, blocking the blood supply to the area of the kidney that is to be embolised.

This procedure can take up to three hours and medications for relaxation and pain relief are given during this time. At the end of the procedure the catheter is removed and pressure is applied to the puncture site for approximately 10 minutes to stop any bleeding from the puncture site.

# *Why is an Embolisation Needed?*

Kidney embolisation is used to control bleeding from the kidney caused by trauma (injury), tumours and other conditions. In treating kidney tumours it is used for the following reasons:

- Before surgery to minimise the risk of bleeding when a kidney tumour and/or kidney is removed.
- Instead of surgery when removal of a kidney tumour is not possible. This is done to reduce the blood supply getting to the kidney tumour thereby slowing its growth and reducing the risk of bleeding.

## *Potential Complications*

### **Contrast (dye) reaction**

This is an allergic reaction to the contrast ranging from a mild reaction (eg. nausea, sneezing, coughing or a rash) to a more severe and even life-threatening reaction (eg. severe rash, lowered blood pressure, altered heart rate and difficulty breathing).

Contrast reactions are uncommon and severe reactions extremely rare. However, people with a history of previous reactions or severe asthmatics may be at an increased risk. If you fall into this group, you may be given a dose of steroid medication before your treatment. Please inform your nurse and the x-ray staff if you have any known allergies, particularly to previous injections of x-ray contrast.

### **Bleeding/bruising at the puncture site**

Most patients will have a mild degree of bruising at the groin puncture site after the procedure. Occasionally, blood loss from the puncture site causes a large bruise under the skin (haematoma). Very rarely it may be necessary to undergo further treatment for ongoing bleeding.

## **Pain/discomfort**

As the kidney reacts to having its blood supply blocked, you may experience pain. The amount of pain varies according to the amount of kidney that has been blocked. You will be given pain relief medications to minimise this (see section on pain relief later in this booklet).

## **Post-embolisation syndrome**

Post-embolisation syndrome consists of fever that may be accompanied by loss of appetite, general weakness and nausea or vomiting. These symptoms usually resolve within three days although can sometimes last longer and are the body's reaction to the blood supply to the kidney being cut off.

## *Length of Stay*

The length of time in hospital following kidney embolisation is dependent on the reason the procedure was performed, how quickly you recover and the need for ongoing treatments. Please ask your doctor or nurse for guidance on this matter.

## *Before your Embolisation*

### **Informed consent**

On arrival in the Angiography Department the doctor (radiologist) performing the embolisation will explain the procedure in detail and ask you to sign a consent form. This form indicates that you understand the information you have been given and consent to the treatment. Our expectation is that you feel fully informed about all aspects of this procedure before giving written consent. The following health professionals are available to help you with this process.

# Tests

## Blood tests

Samples of your blood will go to the laboratory to check your general health before the procedure.

## Midstream urine

If a urinary tract infection is suspected, a sample of your urine will be sent to the laboratory to check that there is no bacteria.

# Other measures

## Nil by mouth

You will have nothing to eat for four hours prior to the procedure. However, you can continue to drink clear fluids until **two hours before** the procedure.

*NB - This preparation will differ slightly if you are a diabetic.  
Your nurse will inform you of your restrictions.*

## Intravenous fluids (IV)

A small tube is placed into a vein to give you fluids directly into your bloodstream approximately 2 hours prior to the procedure.

## For people taking Warfarin or Heparin

These medications will be stopped prior to the procedure at a time decided by your doctor. You will be kept informed of these changes. Blood tests will be taken to assess your blood clotting times.

## *Wound site - What to expect*

There will be a small (2-3mm) puncture site in your groin. This is usually left uncovered or has a band-aid over it after the procedure so that your nurse can check it regularly for any swelling, bleeding or ooze.

# *After the procedure*

## **On the ward**

Initially you will lie flat in bed for four hours. Following this you may have the head of your bed slightly elevated for the next two hours.

During bed-rest your nurse will check the following regularly:

- Puncture site for any signs of swelling, bleeding or ooze
- Vital signs - your blood pressure, pulse and temperature
- Circulation - the colour, warmth, movement and sensation of the foot on the same side as the groin puncture site
- The severity and location of any pain or discomfort
- The amount of oxygen in your blood

These checks ensure that any complications from the embolisation can be detected early and dealt with promptly.

## **You may have**

### **Intravenous fluids**

The IV fluids started prior to the procedure may continue on the ward for several hours until you are able to drink enough fluid to enable your kidneys to flush the contrast out of your bloodstream.

### **Urinary catheter**

You may have a tube in the urethra that will drain the urine from your bladder while you are on bed-rest. This tube will allow the nurse to check that the kidneys are producing enough urine and that the amount of blood in the urine (if present) is reducing.

## **Pain relief after your procedure**

Your nurse will work alongside your doctors to keep your pain at a minimum.

The **PAIN SCORE** is a way of your nurse establishing how much pain you are experiencing by grading your pain from 0 - 10 where 0= no pain and 10= the worst pain you can imagine.

The following methods of pain relief may be used singly or in combination with each other.

### **Patient controlled analgesia (PCA)**

This infusion machine has a button you can press each time you need pain relief. It will help your pain by giving an immediate response to you pressing the button by delivering a specific amount of pain relief intravenously. The pump is programmed according to your anaesthetist's instructions.

### **Intravenous pain relief**

Pain relief can be administered into the veins to manage pain that is not controlled by tablets alone.

### **Oral pain relief**

When you are able to eat and drink you may have tablets orally.

### **Food and fluids**

You will be able to progress from sips to a full diet in a short period of time. Medications are available for the relief of nausea and vomiting if they occur. You will be encouraged to drink two litres (approximately eight cups) of fluid each day.

### **Mobility**

Once the six-hour bed rest period is complete and your nurse is happy with your condition, you can be up and about as tolerated.



## *Discharge Advice*

- Specific advice to assist your ongoing recovery at home will be related to the reason that your embolisation was performed. Your doctor and nurse will discuss this with you.
- In most situations, a high oral fluid intake of two litres per day is advisable to help you maintain good kidney function.
- See your GP promptly if you experience chills, fever or pain in your bladder or back, or your urine is cloudy and offensive smelling. These symptoms may be indicative of a urinary tract infection and require treatment.
- Avoid strenuous activity, heavy lifting and straining for four to six weeks post procedure. This includes such things as contact sports, mowing lawns, gardening, vacuuming and lifting heavy washing baskets.
- Sexual activity may be resumed when you feel comfortable to do so.
- Your hospital doctor will provide your first sickness benefit certificate/medical certificate and will advise you when you are able to return to work.
- **Cancer Society** - You may wish to contact the Cancer Society if you had this procedure to treat cancer. The Cancer Society can provide information, counselling and arrange help such as nursing care and involvement in support groups.

## *Follow-up*

### **Discharge letter**

You and your GP (and Oncologist if appropriate) will receive a copy of a letter outlining the treatment you received during your stay in hospital. This will be mailed to you if it is not completed by the time you leave hospital.

## **General Practitioner (Family doctor)**

When you are discharged from hospital you will be under the care of your family doctor (and the oncology team if the procedure was performed for cancer of the kidney) who will look after your general health and monitor any problems you may have. Your GP (and Oncologist) will receive a letter from your hospital doctors which describes your procedure and progress.

## **Outpatients appointment**

After discharge you will receive an appointment for Urology or Oncology Outpatients as appropriate. This will be mailed to you.



3 References: Mosby's Genitourinary Disorders, Clinical Nursing, Mikel Gray 1992  
Urological Nursing 3rd Edition, Urological Nursing' 2004  
Campbell's Urology 7th Edition, Urology, 1998