Your consultant has asked for your popliteal artery aneurysm to be treated with a stentgraft.

What is a popliteal artery aneurysm and why does it need treating?
The popliteal artery supplies blood to the lower leg and runs behind the knee where you may be able to feel it pulsating. Sometimes, as in your case, the artery may become enlarged forming a bulge or aneurysm. A clot can form along the inner walls of this aneurysm. In up to 29% of patients with aneurysms, this can either block off the whole artery (Thrombosis) or detach and block the smaller arteries towards the foot (embolisation). If this happens, your foot can suddenly become cold and very painful and there is a risk that you may need your lower leg removing (amputation) in up to 50% of these patients. These aneurysms can also burst (rupture) causing bleeding (in around 2% of patients). The aneurysm can also cause pain due to stretching or press on the popliteal vein causing further clots (deep vein thrombosis).

What is popliteal artery stentgraft repair?
A stentgraft is a special soft, flexible, metal reinforced, tube that is inserted from within the popliteal artery relining it and forming a new channel through the length of the aneurysm.

This procedure has received advice from the National Institute of Clinical Excellence (NICE)1. You should however be aware that clinical evidence is still evolving, particularly relating to its longer term effectiveness. We will be entering your data anonymously into a regional registry and auditing our own results as part of this process.

What does the operation involve?
The procedure is performed in the x-ray department under local anaesthetic. The groin area is cleaned and the skin numbed with local anaesthetic. The groin artery is punctured and a tube manipulated internally and across the aneurysmal artery behind your knee. The stentgraft can then be inserted and opened up further using a small balloon (this can produce brief discomfort in the leg). Sometimes we use 2 or more stentgrafts depending on the length and diameter of your arteries being treated.

We will inject some dye during the procedure that can give you an unusual brief hot feeling in your leg.

The whole procedure usually takes an hour.

What are the benefits of having a popliteal artery stentgraft repair?
The procedure is successful in over 98% of patients and will prevent the need for leg amputation due to aneurysm thrombus, emboli or rupture in 97% of patients2 & 3.
What are the risks of this procedure?
Most operations are safe and straightforward; however as with any surgical procedure there is a small chance of side-effects or complications. These occur infrequently in less than 10% of patients.

- Failure to insert the stent due to anatomical reasons - less than 2% of patients
- Blockage of stent due to early clot formation in up to 6% of patients
- Slippage or fracture of the stent after insertion in up to 7% of patients
- Fragments of dislodged clot moving to the lower leg arteries. Usually removed during the procedure but can worsen the condition of the foot, very rarely requiring an amputation
- Bleeding from damage to the access artery - rarely a blood transfusion or emergency surgery may be necessary - less than 10% of patients
- Very small risk of damage to kidney function due to the dye used during procedure

There have been no reported deaths attributed to this procedure.

Radiation risk
All x-ray procedures involve some exposure to radiation and so pose a degree of risk. Everyone is exposed to natural background radiation from the environment throughout their lives. One in 3 people will develop cancer at some point in their lives due to many various causes including environmental radiation. Radiation from a medical procedure involving x-rays can add very slightly to this risk. The length and level of exposure to radiation from x-rays in medical procedures is very strictly controlled and is kept to the minimum amount possible.

The added risk of cancer due to this radiation is extremely small. Your doctor has determined that the risk to your health of not having this procedure is considerably greater than the risk from the radiation used.

The consultant who requested your procedure is aware of all of these risks and feels that it is beneficial for you to have this procedure. This procedure will only be carried out with your consent and you will be asked to sign a consent form.

If you are concerned about any of these risks or have any questions, please speak to your consultant.

What are the long-term consequences of these devices?
The stentgrafts inserted can become narrowed or even block completely (occlusion). We try to avoid this by correctly sizing the stentgraft, monitoring your stentgraft and blood flow with ultrasound scan (duplex) and giving you some medication to reduce clotting (Clopidogrel). If we discover a narrowing we would treat this for you to avoid a blockage.

After 1 year we would expect 86% or more of stentgrafts to still be working and by 5 years 76%.

If the stentgrafts do block completely, you may not have any symptoms and may not require further treatment. However, if you develop foot pains, you may require a repeat procedure to clean the stentgrafts out or a bypass operation (see below).
What are the alternatives to having stentgrafts?
Your consultant has recommended this procedure as being the best option. The alternatives include arterial bypass surgery that carries different risks and can also block completely (95% without blockage at 1 year).

There is also the option of not receiving any treatment at all. The consequences of not receiving any treatment are a probable worsening of symptoms or amputation.

If you would like more information please speak to your consultant or one of the nurses caring for you.

Getting ready for the procedure
If you are not already in hospital, you will be admitted on the day of the procedure.

A nurse will discuss the procedure with you. You may need to undergo some routine tests before your operation eg. blood tests.

You may eat a light breakfast or lunch.

You will be asked some routine questions about your general health, the medicines you take at the moment and any allergies you have. You can continue most medications but must inform us if you are on Warfarin, Clopidogrel or Metformin (Glucophage).

You will be asked to sign a consent form to say that you understand what you have come into hospital for and what the operation involves.

If the area of surgery is particularly hairy, the nursing staff will clip it using specialised clippers (so as to not cut or damage the area before your operation). Please do not shave the area yourself.

You will be given a theatre gown to wear. A nurse or porter will take you on a trolley or chair to the x-ray department.

What sort of anaesthetic will I have?
Your operation will be carried out using a local anaesthetic. You may be offered a sedative to help you relax.

What should I expect after the operation?
A small dressing may be placed over the artery that has been punctured in the groin. There will be a small skin incision under this but no stitches.

You may have some mild discomfort. You can take simple painkillers eg. Paracetamol - follow the manufacturer's instructions and do not exceed the stated dose.

You should expect to have up to 8 hours bed rest. You will be monitored closely during this time.

We will arrange for you to start a new medication (Clopidogrel - Plavix) which will reduce the risk of clotting.

Going home
The operation can be performed as a day case, which means there will be no overnight stay but is more often performed during an inpatient stay.
DISCHARGE INFORMATION AND AT HOME ADVICE

Medication
You will need to take your new medication - Clopidogrel (Plavix). This will help to reduce the risk of clotting.

Returning to normal activities
You will be able to return to your normal activities after 48 hours. Please avoid driving or strenuous exercise during this time.

You should avoid prolonged periods of kneeling from now on as this can kink or block the stentgrafts.

Outpatient appointment
You will usually be seen again in outpatients by your referring physician.

We will also arrange appointments for you to attend for regular quick ultrasound scans of the stentgrafts (at 1, 6, 12 months and yearly thereafter).

Nurse to delete as appropriate
- No further appointment is necessary
- An appointment will be made for you for approximately ______________________ and if you are not given a date before you leave hospital, it will be posted to you.

Wound care
If you notice bleeding from the puncture site you should press firmly and seek medical help from either the ward staff if you are in hospital or the Accident and Emergency Department.

References

1 NICE Guidance at: http://guidance.nice.org.uk/IPG390

If you have any queries, or require further information please contact the X-Ray Department on 01332 783215 or your referring physician.

NHS Direct is a 24 hour nurse led, confidential service providing general health care advice and information.
Telephone 0845 4647 or visit the website at www.nhsdirect.nhs.uk

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