

# Antegrade stent

Radiology

## What is the aim of this leaflet?

The aim of this leaflet is to explain the procedure for patients undergoing an antegrade stent. This leaflet is not meant to replace informed discussion between you and your doctor, but can act as a starting point for outlining risks and benefits.

## What is an antegrade stent?

An antegrade stent is a small plastic tube that is inserted into the ureter, to help restore flow of urine from your kidney to your bladder. This is performed in the X-ray department.

## Why do I need an antegrade stent?

The kidney normally drains urine to the bladder through a tube called the ureter. An antegrade stent is performed when the kidney is no longer able to drain urine into the bladder or is not draining sufficiently. There are multiple causes for this such as a stone, infection or tumour. Inserting a stent will reduce the pressure in your kidney and may relieve any symptoms. If this is not done your kidneys will be unable to produce / drain urine and may stop working properly.

## Who has made the decision?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

## Who will do the procedure?

An interventional radiologist will perform the stent insertion. Interventional radiologists are doctors who have special expertise in interpreting the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

## Consent

We must seek your consent for any procedure or treatment beforehand. A written consent will be obtained from yourself by a doctor to give permission to have the procedure done.

Your doctor will explain the risks, benefits and alternatives where relevant before you sign the consent. A referral will be made and your appointment will be arranged. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

**The prevention of infection is a major priority in all healthcare and everyone has a part to play.**

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

## What are the benefits of having an antegrade stent?

- To improve the flow of urine from your kidney to your bladder
- May relieve or reduce symptoms making you feel better

## What are the potential risks of having an antegrade stent?

Serious complications from antegrade stents are uncommon, but a number have been described.

- There may be bleeding from the kidney or bladder after your procedure. If there is oozing from the wound or a small amount of bleeding it is suggested that you keep observing the wound site. If there is a large amount of bleeding a transfusion and/or embolisation (blocking of an artery) may be necessary to stop it
- There is always a chance that the procedure may not be successful. This could be due to the stent not being able to pass the blockage. If this happens, the radiologist and urologist will discuss further procedures to relieve pressure from the kidney. This may include surgery
- Irritative bladder symptoms remain the most common problem post stenting. When passing urine, you may find a change in frequency and volume
- Although a large number of patients do not feel any pain due to stent placement, a few patients, feel mild discomfort in the back or lower abdomen. Discomfort is often related to urination. Occasionally, this pain may warrant removal of the stents
- Sometimes, infection may pass into the blood stream at the time of stent placement. All patients are given antibiotics before the procedure to minimise the risk
- Urine may leak from the kidney causing a small collection of fluid inside the abdomen. If this becomes a large amount it may need to be drained. This is unlikely but cannot be ruled out
- Death as a result of the procedure is extremely rare
- **Radiation:** Ionising radiation may cause cancer many years or decades after the exposure. We are all at risk of developing cancer during our lifetime. 50% of the population is likely to develop one of the many forms of cancer at some stage during our lifetime. It has been estimated that undergoing this procedure may increase the chances of this happening to you to about 0.1 %. The requesting doctor and the doctor that will be performing your examination feel that the benefit of having the test or treatment outweighs the risk from the exposure to radiation. If you have further questions about the risk of exposure to radiation, please talk to your doctor during consent

**Please contact the X-ray Department as soon as you receive this appointment if you think you may be pregnant.**

- **Contrast agent:** The "dye" that is used to show the kidney, ureter and bladder can have side effects for a minority of patients:
- 3 in 100 patients experience nausea and hot flushes
- 4 in 10,000 may have more serious effects including breathing difficulties

If a side effect does occur the doctors, nurses and radiographers are trained to deal with it.

## Are there any alternative treatments and what if I decide not to have it done?

The Consultant in charge of your care will discuss the alternatives with you, which may include surgery. They will also discuss the consequences of no treatment.

## Are you required to make any special preparations?

- If you are arriving as a day case, it is standard procedure to have your bloods taken when admitted. If you are a patient on the ward, bloods are regularly taken and used to show any abnormalities with your kidney function or blood clotting
- This procedure is routinely done under local anaesthetic

- Depending on the difficulty of the procedure, you will most likely be asked to not eat or drink before the procedure. This decision will be made by the radiologist and will be discussed in consent
- If you have any allergies or have previously had a reaction to the dye (contrast agent), you must tell the radiology staff before you have the procedure

If you are taking the following medication and the doctor has not discussed them during consent please contact the X-ray Department when you receive this information:

Acenocoumarol, Apixaban, Aspirin, Bivalirudin, Dabigatran, Dalteparin, Danaparoid, Dipyridamole, Edoxaban, Enoxaparin (Clexane) Fondaparinux, Heparin, Phenindione, Tinzaparin, Warfarin.

## Where will the procedure take place?

The procedure will take place in the angiography suite; this is located within the radiology department. This is similar to an operating theatre in which specialised X-ray equipment has been installed.

If you are on a different ward, the angiography suite will liaise with your ward nurse and porters to arrange transport to your procedure.

## What actually happens during an antegrade stent?

You may already have a drain in place in your kidney called a nephrostomy. If you have, then the first part of the procedure will already have been done and a guide wire will be passed through the tube that is already there.

You may be asked to change into a hospital gown and once in the room, lay on your back. Observations of your heart rate and blood pressure will be taken during and after the procedure. This is routine. A team of nurses and radiographers will assist the radiologist during the procedure. Local anaesthetic (a medication used to numb an area of the body to reduce pain) is injected at the procedure site. This may sting for a few seconds but will then go numb. If you have not had a nephrostomy then the radiologist will need to make a small incision in your back to gain access to your kidney at the start of the procedure. The interventional radiologist uses an ultrasound probe and X-rays to move various wires and the stent into the correct position.

You may feel your bladder getting full as the radiologist injects contrast to guide the procedure. Once the stent is in place, all wires will be removed but the stent will remain in place. Occasionally the radiologist may also leave a nephrostomy (an external drain from your kidney) in the short term. If both kidneys require a stent, the same procedure will begin on the opposite side.

## How long do the stents stay in my body?

This depends on the original cause of the disease process and your consultant. Stents may be temporary but most are permanent and require changing to prevent any blockage. An average time frame is around 6 months but this may be longer. You will be able to discuss this with your urologist.

## Will it hurt?

You may be able to feel the procedure but there should be no pain once the local anaesthetic given at the access site has taken effect. During the procedure you may feel discomfort due to the wires touching the bladder.

There will be a nurse next to the X-ray table to look after you. Pain relief may be given at the time of the procedure if appropriate. You should discuss this with the Dr doing your procedure on the day.

## How long will it take?

Every patient is different, and it is not always easy to predict; however, expect to be in the radiology department for about 60 minutes.

## What happens afterwards?

- You will be transferred to a bed and escorted back to your ward with a nurse and porters
- You will need to stay on bed rest for a few hours after the procedure
- Your blood pressure and pulse will be monitored closely. Your urine output may also be monitored
- You may eat and drink normally unless you are nil by mouth for any other reason
- You may feel sore when the local anaesthetic wears off. Ask your nurse if you require any painkillers
- The Radiologist or nurse in charge of your care will be able to let you know when you can go home (unless you are an inpatient for any other reason)

## Going home advice

- Strenuous activities may be uncomfortable for the next 48 hours
- It is not unusual to see some blood in your urine after the procedure. This should decrease in the days after the stent insertion. If the blood becomes darker in colour and you are worried, visit your GP or call 111
- You will need somebody to come and collect you when the ward is happy for you to go home
- Driving after surgery – It is your responsibility to make sure you are fit to drive after any surgical procedure. Information can be found on the DVLA website: <https://www.gov.uk/guidance/renal-and-respiratory-disorders-assessing-fitness-to-drive#all-other-renal-disorders>
- A follow up appointment will be made and sent to you in the post in the near future
- Any concerns should be reported to your GP, the Interventional Radiology Department or your local Emergency Department

## Trainees

A Radiology trainee (qualified experienced doctors training in Radiology) or occasionally a student may be present during the examination. If you would prefer them not to attend, please let a member of Radiology staff know.

## How to contact us

If you have any personal access needs, require wheelchair access or wish to speak to a member of staff for further information please contact the interventional radiology department on 01902 307999 ext. 6344 between 08:30 and 16:30 as the department cannot help with queries outside of these hours.

### **Angiography Suite / Interventional Radiology**

Second floor Radiology A2  
New Cross Hospital  
Wolverhampton  
West Midlands  
WV10 0QP

### **Patient Advice and Liaison Service**

New Cross Hospital  
01902 695362  
Email: [rwh-tr.pals@nhs.net](mailto:rwh-tr.pals@nhs.net)

## Further information

Further information about your examination is available from The British Society of Interventional Radiologists at: <http://www.bsir.org/patients/ureteric-stenting/>

## English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

## Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

## Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

## Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

## Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

## Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。