

USEFUL INFORMATION

This patient has a ureteric stent, a temporary internal drainage tube, placed between the kidney and bladder.

Patient Name: _____

Patient Address: _____

Date of Birth: _____

Unit Number: _____

G.P. Name: _____

G. P. Surgery Address: _____

Diagnosis: _____

URETERIC STENT

Side of the stent: Right Left

Date of stent insertion: _____

Date of stent removal: _____

Type of stent: _____

Consultant: _____

Hospital: _____

📞 If you need urgent medical help please contact the GP or local Hospital on following numbers:

Telephone Number: (Working hours)

Telephone Number: (Out of hours)

HAVING A URETERIC STENT



WHAT TO EXPECT AND HOW TO MANAGE

INTRODUCTION

In patients who have, or might have, an obstruction (blockage) of the kidney, an internal drainage tube called a 'stent' is commonly placed in the ureter, the tube between the kidney and the bladder. This is placed there in order to prevent or temporarily relieve the obstruction.

The booklet contains general information about ureteric stents, explains the benefits to be derived from them and mentions some of the drawbacks that patients might experience.

Your urologist is planning to use such a stent for you.

The booklet is divided into two parts.

- The first part explains about the urinary system, obstruction of the kidneys and treatment of this obstruction using ureteric stents.
- The second part describes what to expect while the stent is in place and any possible side effects.

Your urologist will explain the specific details applicable to you.

The booklet is designed for use by patients who are going to have a stent inserted. It will also be of help to health care professionals involved in your care or anyone who wishes to know more about ureteric stents. At the end there is information about your kidney condition and stent.

The information provided in the booklet is also available on the Bristol Urological Institute's web site. The web address is <http://www.bui.ac.uk>

If you have any questions to ask about the stent or your kidney problem, please write them down below so that you can ask your doctor at the next meeting.

Further Reading:

If you would like to know more about ureteric stents here are the details of some relevant articles for further reading:

1. Ureteral stents- Materials; Endourology update: Mardis HK, Kroeger RM: Urological Clinics of North America, 1988, Vol. 15, No.3, 471-479.
2. Ureteral stents – indications, variations and complications: Saltzman B: Endourology update : Urological Clinics of North America, 1988, Vol.15, No.3, 481-491.
3. Self retained internal ureteral stents: Use and complications: Mardis HK: AUA update series, 1997, Lesson 29, Volume XVI.

When should I call for help?

You should contact a doctor or a hospital:-

- ◆ if you experience a constant and unbearable pain associated with the stent.
- ◆ if you have symptoms of urinary tract infection as mentioned above (e.g. a raised temperature, pain during passing urine and feeling unwell)
- ◆ the stent gets dislodged or falls out.
- ◆ if you notice a significant change in the amount of blood in your urine.

Authors: Mr. H. B. Joshi (Clinical Research Fellow in Urology), N. Newns (Staff Nurse), Mr. F. X. Keeley Jr. (Consultant Urologist), Mr. A. G. Timoney (Consultant Urologist) – Southmead Hospital, Westbury-on-trym, Bristol BS10 5NB.

Publication Month: February 2000.

Sponsorship (in part): Southmead Hospital Research Foundation

INDEX TO THE CONTENTS

Page

Part 1: The Urinary System and Ureteric Stents

- 4 The urinary system and ureters
- 5 How does a kidney become obstructed?
- 6 What is a ureteric stent?
- 7 How is a ureteric stent put in place?
- 8 How long will the stent stay in the body?
- 8 How is a stent removed?

Part 2: Living with a ureteric stent

- 9 Introduction
- 9 What are the possible side effects?
- 10 Duration of side effects - can they improve?
- 11 Can the side effects interfere with daily life?
- 13 What other complications are possible?
- 13 Is there a possibility of a urinary tract infection?

- 13 **What care do I need to take?**

- 14 **When should I call for help?**

- 15 **Further reading**

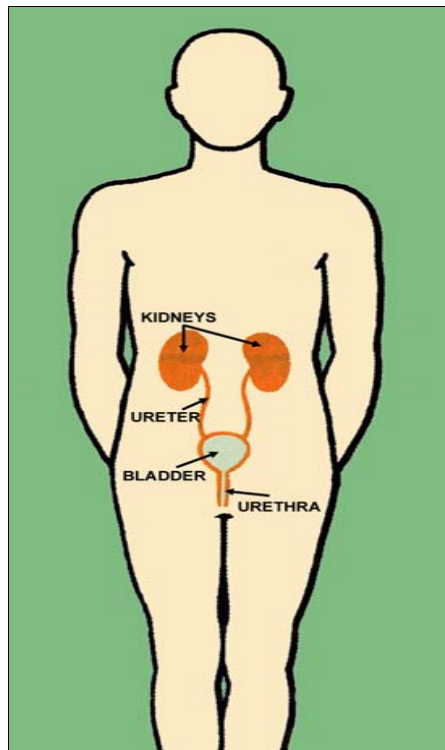
- 16 **Useful information and Contact numbers for help**

Part I: THE URINARY SYSTEM AND URETERIC STENTS

The Urinary System and the Ureter

The kidneys produce urine. Normally there are two kidneys situated in the upper part of the abdomen, towards the back. The urine formed in the kidney is carried to the bladder by a fine muscular tube called a ureter. The urinary bladder acts as a reservoir for the urine and when it is full it is emptied via the urethra (water passage).

Figure 1: The Urinary System



slipping towards the bladder, and it may even fall out. ***If this happens, you should contact the hospital or your GP.***

Is there a possibility of a urinary tract infection?

The presence of a stent, along with the underlying kidney problem, makes it more likely that you could get a urinary tract infection. Some of the symptoms that you may experience if you get a urinary tract infection are raised temperature, increased pain or discomfort in the kidney or bladder area, a burning sensation while passing urine and feeling unwell. This usually requires treatment with antibiotics.

What care do I need to take?

- **It is essential that you drink at least 1½ to 2 litres (approximately four pints) of fluids, mainly water, a day.**
This will help to cut down the risk of getting an infection and will reduce the amount of blood in the urine. It will also help in the treatment of stones.
- If you experience bothersome pain you can take painkillers for relief, on the advice of a doctor.
- If you have got a stent with a thread coming down from the urethra outside the body, then more care will be needed so as not to dislodge the thread.
If in any doubt please seek medical help (contact your GP/Local Hospital).

significant way. In case you get urinary symptoms such as, increased frequency and urgency, you may need to use public toilets more frequently while taking part in outdoor activities. Occasionally you may need a little more help from family members or colleagues, because of any pain or tiredness you may feel.

- **Travel and holidays:**

It is possible to travel with a stent in place, provided the underlying kidney condition and your general health allows this. However, presence of significant side effects associated with the stent may make travel and holidays less enjoyable. Also there is a small possibility that you may require additional medical help while the stent is in place.

- **Sex:**

There are no restrictions on your sex life due to the presence of a stent. Few patients experience discomfort during sexual activities. Occasionally the side effects associated with the stent may have an effect on the sexual desire.

If you have a stent with a thread coming outside the body through the urethra, sexual activities may be difficult. Care will be required so as not to dislodge the thread, which could then in turn displace the stent.

Can a stent get displaced? What other complications are possible?

Occasionally a stent may develop a crystal coating on its surface although this is not a significant problem. Very occasionally a stent may get displaced, usually

How does a kidney become obstructed?

Common causes of obstruction of the kidneys and ureter are:

- a kidney stone or its fragment moving into the ureter, either spontaneously, or occasionally following such treatment as shock wave therapy.
- narrowing (stricture) of the ureter anywhere along its path. This can be due to various causes e.g. scarring of wall of the ureter, narrowing of the area where ureter leaves from the kidney (pelvi-ureteric junction).
- temporarily, following an operation or after an instrument has been inserted into the ureter and kidneys.

Occasionally, obstruction can occur because of diseases of the prostate or tumours of the urinary system. ***Your urologist will provide further details applicable to you.***

What are the effects of obstruction?

Whenever there is an obstruction, pressure builds up behind the kidney. Due to high pressure, the function of the kidneys starts to suffer over a period of weeks.

The obstruction can also cause stagnation of the urine, which can lead to infection and further damage to the kidneys. It is, therefore, important to relieve or prevent obstruction of the kidneys.

Temporary relief of the obstruction

It is not always possible to identify what has caused an obstruction and to treat this immediately. It is therefore essential to relieve the obstruction on a temporary basis before treatment is carried out.

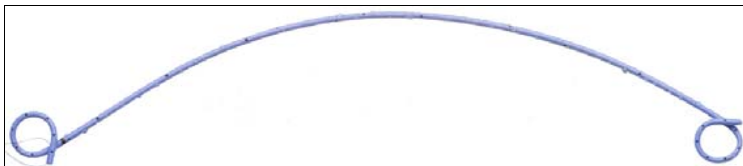
Also, following an operation on the ureters, it takes time for the ureters to heal and a temporary measure to prevent obstruction becomes essential. This is commonly achieved by inserting a ureteric stent to make a channel for the urine to pass and allow the kidneys to drain.

What is a Ureteric Stent?

A ureteric stent is a specially designed hollow tube, made of a flexible plastic material that is placed in the ureter. The length of the stents used in adult patients varies between 24 to 30 cm. Although there are different types of stents, all of them serve the same purpose (see Figure 2).

FIGURE 2 - A type of a ureteric stent

How does a stent stay in place?



The stents are designed to stay in the urinary system by having both the ends coiled. The top end coils in the kidney and the lower end coils inside the bladder to prevent its displacement. The stents are flexible enough to withstand various body movements.

Can the side effects interfere with my day to day life?

The stents are not expected to cause much disruption to your normal daily life. However, you may experience some side effects that can cause some problems, either directly or indirectly.

Let us look at this in relation to various daily activities:

- **Physical activities and sports:**
You can carry on with various physical activities while the stent is in place provided the underlying kidney condition and your health allows you to do it. However, you may experience some discomfort in the kidney area and passing of blood in your urine, especially if sports and strenuous physical activities are involved. Sometimes side effects associated with a stent can make you feel more tired than normal.
- **Work activities:**
You can continue to work normally with the stent inside your body. However, if the work involves lot of physical activities, you may experience more discomfort. Occasionally side effects, such as urinary symptoms and pain associated with the stent, may make you feel tired. If the stent causes significant problems, you can discuss it with your manager and colleagues so that possible temporary adjustments can be made at your work place.
- **Social life and interactions:**
The presence of a stent should not affect this in a

complete emptying of the bladder.

- very occasionally, especially in women, there is a slight risk of episodes of incontinence.

These effects are possibly due to the presence of the stent inside the bladder causing mechanical irritation. These effects should disappear when the stent is removed.

- **Discomfort or pain**

Stents can cause discomfort or pain, commonly in the bladder and kidney (loin) area, but sometimes in other areas such as the groin, urethra and genitals. The discomfort or pain may be more noticeable after physical activities and after passing urine.

Complete understanding of these side effects and their causes is not clear at present. It has also not been possible to predict, before placement of a stent, which patients are likely to experience side effects and what they will be.

Duration of side effects associated with a stent – can they improve?

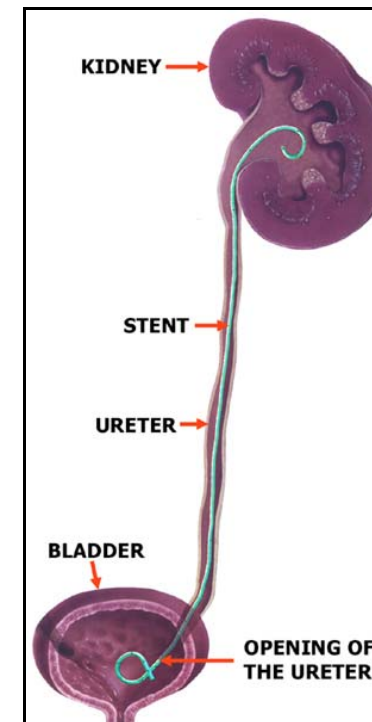
There is some evidence that some of the symptoms, such as pain while passing urine and blood in the urine, may improve with time. However, this remains unpredictable. It has been reported that around 20-70% of patients with stents experience one or more of these side effects.

Medical science and the stent manufacturers are working to develop a stent that will cause the least possible side effects.

How is a ureteric stent put in place?

Usually a stent is placed under a general anaesthetic using a special telescope (cystoscope) which is passed through the urethra into the bladder. The stents are then placed in the ureter and kidney via the opening of the ureter in the bladder. The stent may be inserted as an additional part of an operation on the ureter and kidney (e.g. ureteroscopy). Occasionally they are placed from the kidney down to the bladder using special x-ray techniques. The correct position of a stent is checked by taking a x-ray.

FIGURE 3 - A stent placed inside the urinary system



How long will the stent stay in the body?

There is no hard and fast rule about this. The stent has to be kept in place as long as necessary, i.e. until the obstruction is relieved. This depends on the cause of obstruction and the nature of its treatment.

In the majority of patients, the stents are required for only a short duration, from a few weeks to a few months. However, a stent in the right position can stay in for up to three months without the need to replace it. When the underlying problem is not a kidney stone, the stent can stay even longer. There are special stents, which may be left in for much longer time.

Your urologist will tell you how long he expects your stent to remain in place.

How is a stent removed?

This is a short procedure and consists of removal of the stent using a flexible cystoscope, usually under local anaesthesia. Sometimes a stent can be left with a thread attached to its lower end that stays outside the body through the urethra. Doctors can remove such stents by just pulling this thread.

Is there an alternative option to the use of a stent?

There is no simple alternative option. In some patients, a tube draining the urine to the outside called a 'nephrostomy tube', may be placed in the kidney. However, this involves carrying a urine collection bag attached to your back, which requires proper care.

If you need this treatment your urologist will explain in detail what is involved.

Part 2: LIVING WITH A URETERIC STENT

Introduction

Ureteric stents are designed to allow people to lead as normal a life as possible. However, they may not be without side effects. In placing a stent, there is a balance between its advantages in relieving the obstruction and any possible side effects. Most side effects are not a danger to your health or your kidneys, although they can be a nuisance. Below, we have described all the possible side effects associated with a ureteric stent.

What are the possible side effects associated with a stent?

Many patients do not experience problems with the stents. In the majority of the patients experiencing side effects they are minor and tolerable. However sometimes they can be moderate to severe in nature.

Commonly noted side effects are:

- The majority of patients with a stent in place will be aware of its presence most of the time.

- ***Urinary symptoms***

There might be:

- an increased frequency of passing urine
- the need to rush to pass urine (urgency)
- a small amount of blood in the urine. This is quite common and the situation can improve with a greater fluid intake.

- the stents can also result in a sensation of in-