Cancer of the Penis (Penile Cancer)
Introduction
You have been referred to Southmead Hospital because you have been diagnosed with, or there is a suspicion that you have penile cancer. There is a team of consultants and other health care professionals who specialise in the treatment of penile cancer. The hospital covers the whole of the South West of England.

Anatomy of the male reproductive system
The male reproductive system consists of a series of organs located outside of the body and around the pelvic region of a male that contribute towards the reproductive process. It consists of the penis, testicles, ducts and prostate.

The urinary component is also made up of the bladder, kidneys and tubes that connect these organs together. The ureters are the tubes carrying urine from the kidneys to the bladder, and the urethra is the tube which runs through the penis allowing urine to be passed from the bladder to the outside of the body.

The penis is actually made up of two parts: the shaft and the glans. The shaft is the main part of the penis and the glans is the tip (sometimes called the head). At the end of the glans is a small slit or opening, which is where semen and urine exit the body through the urethra. The inside of the penis is made of a spongy tissue that can expand and contract. All males are born with a foreskin, a fold of skin at the end of the penis covering the glans. Some boys are circumcised, which means that the foreskin has been cut away. This can be for either medical, cultural or religious reasons.
What causes Penile Cancer?

Cancer of the penis is a somewhat rare condition, which accounts for less than 1% of all the cancers in Europe. Every year in the UK approximately 400 men are diagnosed with this type of cancer. Penile cancer is more common in middle-aged men, but the disease also occurs in younger men.

The exact cause of cancer of the penis is not known. Some contributing factors are:

- Having a tight and unretractable foreskin. This can lead to chronic inflammation of the underlying glans penis. In the long term this can provoke the development of cancer. It therefore tends to be less common in circumcised men.

- Human Papilloma Virus - This causes penile warts which increases the risk of development of penile cancer.

- Smoking - This is due to the fact that smoking results in the excretion of chemicals in the urine, which promote the development of Penile Cancer.
What are the signs and symptoms?

Penile Cancer usually appears on the glans (head of penis) or foreskin, but occasionally can appear on the shaft of the penis. These lesions are not usually painful and tend to be confined to the penis on presentation. Typical signs are:

- A raw area, a sore or an ulcer on the penis, especially on the glans or foreskin
- A wart like growth
- Bleeding from under the foreskin
- A discharge from the penis that can be foul smelling
- A red velvet like area, small crusty bumps or a red rash
- Difficulty in pulling the foreskin back
- A firm swelling in the groin area

Often the cancer may only be visible when the foreskin is pulled back. Cancer of the penis is easiest to treat, and potentially curable if diagnosed early.
What examinations and tests may I need?

The consultant will examine your penis, and groin area, feeling for lymph nodes or swellings in your groin.

**Biopsy**

To make a positive diagnosis of penile cancer, a tissue sample or biopsy is usually taken from the suspected area. It may be necessary to remove your foreskin to reach the area. This is normally carried out under a general anaesthetic (you are asleep). It may have already been performed at your local hospital. The tissue is then examined under a microscope in the laboratory. This will give the team some of the information needed to suggest the best treatment for you. If the biopsy shows you have cancer, you may need some further tests to check whether or not the cancer has spread or has been completely removed.

**Lymph-node aspiration**

Penile cancer can spread in the body, either in the bloodstream or through the lymphatic system. The lymphatic system is part of the body’s defence against infection and disease. The system is made up of a network of lymph glands or nodes. If you have swellings in your groin area, this area will also need a biopsy. It is usually carried out by a consultant radiologist who will put a needle into the lymph node in order to retrieve some cells. You are not put to sleep for this and it may be carried out with the help of an ultrasound machine. The reason for this is to find out if the lymph glands in this area are enlarged due to infection or, are affected by the cancer.

Occasionally, if the needle sample does not show cancerous cells, but your consultant urologist is still suspicious, he may remove a whole lymph gland under a general anaesthetic.
CT scan (Computerised Tomography)

This takes a series of x-rays of a certain part of the body, which are then fed into a computer and a picture is built up. The scan can be used to show if cancer has spread to other parts of your body, in particular looking for any lymph nodes which could be involved.

PET-CT scan

A Positron Emission Tomography (PET) CT Scan is a more advanced form of CT Scan which can demonstrate the biological function of the body before structural changes take place. In some cases where lymph nodes may not be enlarged but where there is still a high suspicion of spread of cancer cells, your consultant may decide to arrange for you to have this further form of investigation. This is only suitable for a minority of cases, and if necessary, your consultant will discuss this with you. Like a normal CT scan, this is also a non-invasive test.

MRI scans (Magnetic Resonance Imaging)

This is similar to a CT scan but uses magnets instead of x-rays to produce an image of the part of your body that needs to be investigated further. MRI also produces good images of the structure of the penis; it can help the consultant determine how much of the penis is affected by the cancer.
What treatments are available?

If the tests prove you have penile cancer then you will require further treatment. There are several different types of treatment and choosing the right treatment depends upon on many factors:

- Staging and grading of the cancer: Staging refers to the extent of the cancer or how far it has spread. How the cancer cells look under a microscope will give an idea of how the cancer can progress. This is known as the grade. High grade cancer cells usually grow more quickly and tend to spread, whereas low grade cancer cells tend to grow at a slower rate and are less likely to spread.
- The position and size of the cancer.
- Your general health and fitness.
- The advice from the Multi-Disciplinary Team. This is a team of experts in the diagnosis and treatment of penile cancer. Your case will be discussed at the Multi-Disciplinary Team Meeting. You do not have to be present for this meeting. Your Consultant will feedback the information to you, either in clinic or with a telephone call. You will also be able to obtain information and support from a specialist nurse whose name and contact details will be given to you. This specialist nurse maybe referred to as your “key worker”.
- Your preference or wishes are a very important factor. You will be able to discuss any possible treatment options, including the risks, benefits and side effects with your consultant. This will enable you to make an informed decision regarding your further treatment.

Treatment options

The treatment options for penile cancer may involve Surgery, Radiotherapy or Chemotherapy, either alone or in combination.
Surgery

It is most likely that you will need surgery as part of your treatment. With certain forms of surgery it can be possible to preserve the penis or to perform a reconstruction.

- Circumcision. If this has not already been carried out then a circumcision to remove the foreskin may be all that is required. This will only be the case if the cancer is confined to the foreskin. The operation is normally performed under a general anaesthetic, but it can be carried out under a local anaesthetic if required. You will be in hospital for one to two days and recovery from a circumcision is usually straightforward, although initially the penis can be sore and swollen.

- Wide Local Excision. Small tumours, confined to the glans of the penis can be adequately treated by removal of the cancer together with an area of normal tissue surrounding the cancer. The defect can then be closed with stitches. This will normally result in a stay in hospital for 3 to 5 days.

- A urinary catheter may also need to be inserted during the operation to ensure that urine can be passed immediately after the operation, but will be removed before you go home.

- Reconstructive Surgery. Certain types of penile cancer can be treated with what is known as “penile sparing” surgery. This involves removing the minimal amount of penile tissue and replacing it with a skin graft. If this is possible, it will be discussed further with you at your clinic appointment.

- Penectomy/Partial Penectomy. When the cancer has involved the deeper structures of the penis it may be necessary to remove the penis (Penectomy) or remove part of the penis (Partial Penectomy). See specific information sheet.

- Removal of lymph nodes. If there is a significant risk that the cancer could have spread to the lymph glands in the groin, or if a sample of tissue taken from the glands shows cancerous cells, it would be necessary to remove these glands. See specific information sheet.
Radiotherapy

In some cases radiotherapy can be used to kill the cancerous cells. This involves directing radiation at the cancer to destroy it. Radiotherapy is not a suitable treatment when the cancer is invading deeply, it can result in the skin on the penis becoming chronically inflamed. This can make it difficult to be certain if the abnormal skin is due to a recurrence of the cancer or a skin reaction to the radiotherapy, which can make follow up assessments difficult and make further sets of biopsies necessary. Radiotherapy can also be used to treat an area where lymph nodes were found to contain cancerous cells from the penile cancer. The most common area is the groin.

Chemotherapy

Chemotherapy is the use of drugs to destroy cancer cells. A chemotherapy cream may be used to treat a pre-cancerous growth or a cancer that is very superficial and confined to the glans or the foreskin. This cream is applied to the specific area of the penis as directed by the consultant dermatologist who supervises this treatment. Chemotherapy drugs can also be given by injection for more advanced cancer. A consultant oncologist (Cancer specialist) supervises this form of chemotherapy.

As stated at the beginning of this section, chemotherapy may be used together with surgery, with radiotherapy or with both treatments.

Emotional and psychological aspects of penile cancer

Although penile cancer can have a high probability of cure if detected early, it is associated with a high degree of side effects and associated psychological issues. Depending on the treatment offered, it can have a significant effect on quality of life. Not only can it affect health in general but it can also impact on psychological health, with problems with anxiety and sexual function being common after treatment. Previous research has shown that most patients who have received treatment for penile cancer adapt adequately and return to a good quality of life.
Total or partial penectomy tend to be the treatment for invasive cancers. The implications of the diagnosis, together with the fear of loss of sexual function can often be extremely distressing for patients. In partial penectomy, although there may be shortening in the length of the penis and changes in its appearance, erections and penetrative intercourse may still be possible, as is the ability to ejaculate and reach orgasm. Unfortunately, penetrative intercourse is not possible following total penectomy.

Feedback from patients demonstrated that the difficulties in the first few months following surgery, of reinitiating sexual activity was usually overcome with the encouragement of partners, together with the support from the medical team. Patients reported that their sexual drive remained normal or only slightly decreased; masculine self-image remained normal or only very slightly affected. There was no significant impact on social activity. In general patients who underwent surgery for penile cancer were found to be well adapted to their condition and were able to maintain their quality of life.

The quality of life after treatment, especially with regard to sexual activity is one of the main issues which is discussed prior to and during treatment. Expected outcomes and the consequences of the different treatments are also discussed fully.

We aim to provide support for the emotional and psychological problems that you and your partner may encounter while receiving treatment for your penile cancer. We have a dedicated team of nurses and doctors who have a good knowledge of these problems and who can offer useful advice and support.

Our cancer specialist nurses are usually the first and easiest point of contact and they have access to the medical team if they feel it necessary. This support will continue for as long as you feel necessary.
Where can I get further information?

The team of doctors and nurses looking after you will be able to give you information specific to your particular cancer and the treatment.

Macmillan Cancer Support 0808 808 0000
www.macmillan.org.uk

Many thanks to the Wirral University Teaching hospital for allowing the NBT access to their information leaflet and permission to adapt it to their locality.

References and further information


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