Penile Cancer

Penile cancer is rare in the UK. Most cases develop in men over the age of 50. The cause is not clear. There is a good chance of a cure if it is diagnosed and treated at an early stage (as many cases are). In general, the more advanced the cancer (the more it has grown and spread), the less chance that treatment will be curative.

What is penile cancer and what causes it?

Penile cancer is a cancer that develops on the penis. A cancerous (malignant) tumour starts from one abnormal cell. The exact reason why a cell becomes cancerous is unclear. It is thought that something damages or alters certain genes in the cell. This makes the cell abnormal and multiply ‘out of control’. See separate leaflet called What Causes Cancer? for more details.

In most cases, the reason why penile cancer develops is not known. However, there are factors which are known to alter the risk of penile cancer developing. These include:

- Age. Penile cancer is more common in men over the age of 50.
- Many cases of penile cancer are associated with an infection with certain types of human papillomavirus (HPV) - see below.
- Some skin conditions of the foreskin can increase the risk of having penile cancer in the future. These include a condition called erythroplasia of Queyrat and balanitis xerotica obliterans. These are both rare conditions.
- Phimosis in adults and poor hygiene around the foreskin can increase the risk of penile cancer. Phimosis describes a condition where the foreskin remains unusually tight and cannot be drawn back from the head of the penis.
- Having a circumcision as a baby or child seems to protect against penile cancer.

HPV and penile cancer

There are many strains of HPV. Two types, HPV 16 and 18, are involved in the development of many cases of penile cancer. Note: some other strains of HPV cause common warts and verrucas. These strains of HPV are not associated with penile cancer.

The strains of HPV associated with penile cancer are nearly always passed on by having sex with an infected person. An infection with one of these strains of HPV does not usually cause symptoms. So, you cannot tell if you or the person you have sex with are infected with one of these strains of HPV.

In some men, the strains of HPV that are associated with penile cancer seem to affect the cells of the penis. This makes them more likely to become abnormal which may later (usually many years later) turn into cancerous cells. Note: within two years, 9 out of 10 infections with HPV will clear completely from the body. This means that most men who are infected with these strains of HPV will never develop cancer.

See separate leaflet called Cancer - A General Overview for more general information about cancer

How common is penile cancer?

Penile cancer is rare in the UK. It occurs in less than 1 in every 100,000 men each year in Europe. However, it is more common in some areas of Asia, Africa and South America.

Penile cancer symptoms

Most penile cancers first develop on the head of the penis (the glans) or on the underside skin of the foreskin (if you are not circumcised). It is rare to develop penile cancer on the main shaft of the penis. Therefore, you may only notice an early cancer if you pull back your foreskin.

Typically, the first symptom is a change in colour of the skin of the affected part of the glans or foreskin of the penis. The affected skin can also become thickened or appear like a small red rash. The affected area of skin may then gradually develop into a small flat growth (often bluish-brown in colour) or a growth or sore which may bleed. It does not usually cause pain. In some cases the early cancer develops as small crusty bumps.

Left untreated, the cancer typically grows to involve the entire surface of the glans and/or foreskin. It then eventually spreads further to deeper parts of the penis and to other areas of the body to cause various other symptoms.

Penile cancer signs

Anyone who has an abnormal growth or sore on their penis will have a thorough examination by their doctor. This will usually include feeling for any enlarged lymph glands in the groin. You will then be referred to see a specialist in the hospital.
It is likely that further tests in the hospital will be arranged. These may include:

- **A biopsy.** This is a procedure which involves a small piece of tissue being taken from the cancer and sent to the laboratory. Sometimes biopsies are also taken from the lymph glands in the groin. Results of a biopsy can take two weeks.
- **An MRI scan of the penis may be performed to assess the size of the cancer.**
- **A CT scan of the chest, tummy (abdomen) and pelvis may be performed.** These scans can provide detail on the structure of the internal organs.

Stages of penile cancer range from stage 1 (where the cancer is confined to the skin of the penis) to stage 4 (where there is spread to lymph nodes deep in the pelvis or to other parts of the body).
Grading of the cancer cells

If a biopsy of the cancer is taken then the cells can be assessed. By looking at certain features of the cells under the microscope the cancer can be 'graded'.

- Grade 1 (low grade) - the cells look reasonably similar to normal cells. The cancer cells are said to be 'well differentiated'. The cancer cells tend to grow and multiply quite slowly and are not so 'aggressive'.
- Grade 2 - is a middle grade.
- Grade 3 - the cells look very abnormal and are said to be 'poorly differentiated'. The cancer cells tend to grow and multiply quite quickly and are more 'aggressive'.

Finding out the stage and grade of the cancer helps doctors to advise on the best treatment options. It also gives a reasonable indication of outlook (prognosis).

See separate leaflet called Staging and Grading Cancer for more details.

What are the treatment options for penile cancer?

Surgery is the main treatment for penile cancer. Chemotherapy and radiotherapy may also be used. The treatment advised for each case depends on various factors such as the stage and grade of the cancer, and your general health. A specialist will be able to give the pros and cons, likely success rate, possible side-effects and other details about the various possible treatment options for your type and stage of cancer.

You should also discuss with your specialist the aims of treatment. For example:

- In some cases, treatment aims to cure the cancer. (Doctors tend to use the word 'remission' rather than the word 'cured'. Remission means there is no sign of cancer following treatment. If you are 'in remission', you may be cured. However, in some cases a cancer returns months or years later. This is why doctors are sometimes reluctant to use the word cured.)
- In some cases, treatment aims to control the cancer. If a cure is not realistic, with treatment it is often possible to limit the growth or spread of the cancer so that it progresses less rapidly. This may keep you free of symptoms for some time.
- In some cases, treatment aims to ease symptoms. For example, if a cancer is advanced then you may require treatments such as painkillers or other treatments to help keep you free of pain or other symptoms. Some treatments may be used to reduce the size of a cancer, which may ease symptoms such as pain.

Surgery

An operation is advised in most cases. The type of operation depends upon the size of the cancer and its position on the penis. If the cancer is small and only on the skin of the penis then the cancer and a small amount of normal tissue can be removed. However, if the cancer is larger then either part of the penis or even the entire penis is removed.

Reconstructive surgery is an option for many men. Your surgeon will be able to discuss the different types of reconstructive surgery with you in more detail. The lymph glands in the groin are often also removed during the operation.

Chemotherapy

Chemotherapy is a treatment of cancer by using anti-cancer drugs which kill cancer cells or stop them from multiplying. See separate leaflet called Chemotherapy with Cytotoxic Medicines for more details. Chemotherapy may be given after having an operation. This aims to kill any cancer cells that have been left behind following the operation.

Sometimes chemotherapy is given to reduce the size of the cancer before surgery. This may make surgery easier and more likely to be successful.
Radiotherapy
Radiotherapy is a treatment that uses high-energy beams of radiation which are focused on cancerous (malignant) tissue. This kills cancer cells or stops cancer cells from multiplying. See separate leaflet called Radiotherapy for more details. Radiotherapy is sometimes used for smaller cancers in people who do not need an operation. This is less common though.

Other treatments
If the cancer is at an early stage and is only on the head of the penis (the glans), sometimes doctors prescribe a cell-killing (cytotoxic) cream that can be used on the cancer.

What is the outlook (prognosis)?
There is a good chance of a cure if penile cancer is diagnosed and treated when it is at an early stage (confined to the penis and has not spread to the lymph glands). In general, the later the stage and the higher the grade of the cancer, the poorer the outlook. Even if a cure is not possible, treatment can often slow down the progression of the cancer.

The treatment of cancer is a developing area of medicine. New treatments continue to be developed and the information about outlook given above is very general. The specialist who knows your case can give more accurate information about your particular outlook, and how well your stage and grade of cancer are likely to respond to treatment.

Most treatments for penile cancer will not affect your ability to have sex, even if you need an operation.

Further reading & references
- Penile cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up; European Society for Medical Oncology (Aug 2013)

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