Cryotherapy for localised prostate cancer

Introduction
This leaflet is written for patients and their family. It provides information on prostate cryotherapy for prostate cancer which has not previously been treated. The leaflet goes through the indications, benefits, risks, technique and post-operative care associated with prostate cryotherapy.

What is cryotherapy for localised prostate cancer?
Prostate cryotherapy is a surgical technique that can be used to treat localised prostate cancer. Cryotherapy aims to use extremely cold temperatures to freeze and destroy the prostate cancer cells.

Who is suitable to have this treatment?
You may be suitable for prostate cryotherapy treatment if you have localised prostate cancer – that is, the cancer has been shown to be within the prostate only. We first need to perform scans to identify where the cancer is in your prostate and to ensure the cancer is confined to the prostate and has not spread outside it. We will then take a biopsy (a tissue sample) from your prostate to obtain definite evidence that there is cancer. We also take into account information from PSA (prostate specific antigen) measurements (PSA is a substance released into the blood by prostate and prostate cancer cells).

How can cryotherapy help?
The benefits of cryotherapy for localised prostate cancer include:
• The treatment can potentially cure the cancer
• It is a minimally invasive treatment (no incisions)
• A short hospital stay (you will either go home the same day or stay in hospital for one night)
• A rapid recovery, which means that you can return to daily living quickly
• A low rate of side-effects especially when used as a focal therapy (to treat just the tumour and not the whole prostate)
What are the risks of prostate cryotherapy?

All treatments and procedures have risks and we will talk to you about the risks of cryotherapy for localised prostate cancer.

Problems that may happen straight away

- A small number of men have difficulty in passing urine after the treatment and therefore patients have a tube (catheter) inserted at the time of the procedure to help with this. This is usually left in place for around two weeks, before it is then removed in the outpatient department.
- Some men will notice swelling of their penis or scrotum, which may happen in the first or second week after the procedure. This is temporary and will usually resolve within two months.
- A few men may develop tingling or numbness around the penis. This is a temporary side effect and will usually resolve within two to four months.
- Pain around or in the rectum (back passage) can occur in up to 18 out of every 100 men following treatment. This usually settles within three months.

Problems that may happen later

- Impotence/erectile dysfunction (problems getting or maintaining an erection): Many men may already have pre-existing impotence as a result of other health problems. However, because the nerves involved in creating an erection lie just behind the prostate gland, they might be affected during the freezing process. When cryotherapy is used to treat the whole prostate gland, like surgery and radiotherapy, the nerves on both sides of the prostate are affected and as many as 70 out of every 100 men may be impotent following whole-gland cryotherapy for localised prostate cancer. When cryotherapy is used to treat just the area of important cancer – this is called focal therapy – then the risk of impotence is lower at around ten to fifteen men out of every 100 men treated who have good erections. There are some treatments available on the NHS such as tablets and injections that can help to restore erections for some men, but not all.
- Urine incontinence (leakage of urine): Leakage of urine can occur in one to five out of every 100 men after treatment. This may improve with time. Some men may need to wear pads to protect their underwear. We teach pelvic floor exercises to help your urinary control.
• Sloughing of tissue in the urethra (the tube that conveys urine from the bladder to the tip of the penis) can occur in up to five out of 100 men. This may lead to pain or difficulty in passing urine. Occasionally an operation to remove this sloughed tissue may be required to improve the urinary flow.

• A rare complication of prostate cryotherapy is a connection forming between the back passage (rectum) and the tube which carries the urine (urethra). This is known as a fistula and is due to the back passage being frozen during the cryotherapy treatment. This complication occurs in less than one in 500 men treated. Although rare, this complication is serious and may require an operation to repair the hole. A “stoma”, where bodily waste is collected in an external bag worn on the body may occasionally be required.

How should I prepare for prostate cryotherapy?

You will be given instructions as regards what you should bring with you on the day of the operation, whether you should continue taking all your medications as normal, what time you should arrive on the day and for how long you should fast before your arrival. On the actual day of the operation you will be given an enema one to two hours prior to the procedure. This involves putting liquid in your back passage to empty it, which allows us to obtain a clear ultrasound picture during the cryotherapy treatment. The cryotherapy treatment takes approximately two hours under general anaesthetic (this means you will be asleep) and you will be able to go home the same day providing that there is someone to accompany you on the way home. Occasionally we may ask you to stay overnight if you do not have an escort to take you home or if you have medical problems that necessitate you having to remain in hospital.

Asking for your consent

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead with prostate cryotherapy, by law we must ask you to sign a consent form before proceeding with the treatment. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed treatment, please don’t hesitate to speak with a senior member of staff again.
What happens during a prostate cryotherapy procedure?

During cryotherapy, special needles or probes are passed through the skin in front of the anus (back passage) and behind the scrotum (this area is called the perineum) and placed into the prostate. The surgeon uses ultrasound images of the prostate to confirm that the needles are in the correct position. Argon gas is then circulated through these needles, which makes the needles very cold. The result is that the surrounding prostate tissue freezes and is destroyed. The temperature in and around the prostate is monitored by special needles, which are also inserted at the start of the procedure. During the treatment, a narrow ‘warming’ tube is in place in the urethra (the tube that carries urine from the bladder to the tip of the penis) to prevent it from being damaged by the freezing process. A catheter (a narrow, flexible hollow tube inserted through the penis into the bladder) for urine drainage is left in place for one to two weeks after the procedure. Sometimes we have to place a suprapubic catheter – this is a catheter that is inserted through the skin of your lower abdomen (tummy) directly into the bladder.

What should I expect after the procedure?

When you get home from the hospital after the cryotherapy treatment you should, at first, only perform small tasks and take plenty of rest in between. For the first six weeks after cryotherapy you should not lift anything heavier than a full kettle. You should drink at least 1.5 litres (about three pints) of fluid every day – water is best and fruit juice is also acceptable but tea and coffee do not count. This will prevent you from becoming dehydrated and developing a urine infection. Also, you should avoid constipation as this leads to straining. To help with this you will be given a gentle laxative syrup when you leave the hospital. The laxative softens the stool (bowel movement) making it easier to pass. As regards the cryotherapy needle puncture sites in the skin in front of your anus (back passage), you should simply aim to keep this area clean and dry (no dressings should be needed in this area once you leave the hospital).

You will be discharged from hospital with a urinary catheter which will be left in place for one to two weeks after the procedure. You will be given instructions when and where to go to have this catheter removed. Before leaving hospital, the nurses will show you how to empty and change the catheter bag. The catheter should not cause you any discomfort. Intermittently, you may have the sensation of needing to pass urine. This is normal and should be ignored. Occasionally, the catheter may become blocked. Symptoms include pain in the lower tummy and
inability to pass urine. This can be due to debris in the urine which in turn can be cause by a urine infection.

It is normal to expect some discomfort after your cryotherapy treatment particularly in and around the area that the cryotherapy needles were inserted. You will be provide with some simple pain killers on discharge from hospital and you can get more from your general practitioner if necessary.

- Bleeding – occasionally, there may be slight bleeding from the area in front of your anus (back passage) where the needles or probes used for cryotherapy were inserted (this area is termed the perineum). If this is happens, then you can apply a dry dressing. If the bleeding is heavier than slight, contact us or go to the nearest Accident and Emergency Department
- Urine infection – occasionally you may develop a urine infection following prostate cryotherapy. Symptoms may include fever, pain around your lower back or lower tummy, or pain on passing urine. If you develop any of these symptoms, you should contact us or contact your general practitioner or go to the nearest Accident and Emergency Department
- Bruising and swelling of scrotum – you may develop some bruising in the area that the cryotherapy needles were inserted (perineum) or you may get some swelling of your scrotum after the procedure. Both of these will settle without any treatment over a couple of months.

Further information

For all further information, questions or enquires please contact the Nuada Urology coordinator, she can be contact via the following methods:

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