

This factsheet is about Pelvic radiation disease

Pelvic radiation disease is a term used to describe a collection of symptoms that can arise as a result of radiotherapy to the abdomen or pelvis. Radiotherapy is used as treatment for cancers such as cervical, prostate, bladder and rectal (part of the colon) cancers.

Causes of Pelvic radiation disease

Pelvic radiation disease is caused by radiation to the abdomen or pelvis. Radiotherapy is a treatment that is directed towards destroying cancer cells. Despite the fact that the radiation targets the cancer, damage to nearby healthy cells can occur, causing a collection of symptoms known as pelvic radiation disease. These vary from person to person, and can range from little or no symptoms, to debilitating symptoms. They depend on the type of cancer, location and how much radiation is used. They can start during treatment or years after it has finished.

What are the usual symptoms?

The symptoms of pelvic radiation disease can be separated into which organ is affected - bladder, bowel or reproductive organs.

Bowel

Pelvic radiation can cause scarring to the lining of the bowel, which means the bowel content can pass through too quickly causing symptoms such as needing to rush to the toilet, having accidents and soiling underwear (incontinence) or being woken up at night to pass a stool. Some of these symptoms can also be attributed to the fact the muscles that hold stool in may become damaged. Sometimes the bowel is narrowed, which can cause constipation or cramping pain. The blood vessels in the bowel can become more fragile, causing bleeding.

Bladder

Pelvic radiation can cause scarring to the bladder and may weaken the pelvic floor muscles. This can cause symptoms including needing to rush to pass water, being unable to hold water in and having accidents (incontinence) and pain when passing water. Sometimes the blood vessels in and around the bladder and prostate can be more fragile, causing bleeding and blood can be seen in the urine.

Reproductive organs

Sometimes, patients can experience a loss of desire in sex. Women can experience changes in the vagina including drying and loss of elasticity (caused by formation of scar tissue), which can make intercourse painful. Increased vaginal discharge may be noticed. Some men may not be able to get or maintain an erection.

How is Pelvic radiation disease diagnosed?

Pelvic radiation disease can cause a wide range of symptoms. Many of these can also be caused by other problems that should be excluded first. For bowel symptoms, the main investigations include endoscopy, to look at the large bowel lining. This is where a small tube (the width of a small finger), with a camera on the end is inserted into the bowel via the back passage. To look at the small bowel, an MRI scan (Magnet Resonance Imaging) can be used. The stool can be tested for certain infections and the muscles that help stool to pass can be tested. For bladder symptoms, a urine sample will be tested and a cystoscopy performed. This is a procedure to look directly inside the bladder with a camera on a thin tube.

How can Pelvic radiation disease impact a person?

Pelvic radiation disease can impact a person in many ways. Symptoms can be long term and often occur daily or constantly and can be debilitating and embarrassing. It is recognised that ongoing symptoms can cause major upset, frustration and feelings of hopelessness amongst many patients. If any of these feelings are experienced, it is important to let the doctor know, so that appropriate support can be organised.

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What treatment is available for Pelvic radiation disease?

The treatment for Pelvic radiation disease depends upon the organ affected and the symptoms the patient is experiencing. The most important way to manage symptoms of bowel and bladder problems is to be in control and organised. Plan ahead when leaving the house to help avoid incidents. For example, know how long the outing will be, find out where toilets are, take a bag of spare clothes and wear products such as pads to help absorb any leakage. Protect the skin around the back passage by keeping it dry and clean.

Bowel

Treatment depends on the symptoms. For diarrhoea, anti-diarrhoeal medications can be used, and for constipation, laxatives can be used. A referral to a dietician may be necessary as certain changes in the diet can help with diarrhoea, constipation and wind. For example, altering fibre intake. For symptoms such as leakage and incontinence, pelvic floor exercises can help. The pelvic floor muscles support the bladder and bowel, and normally give control during urination and opening bowels. The exercises can help increase this support, improve coordination and helps give more control of the bowels and urination. Bleeding from the back passage may not need treatment if it is only a small amount. However, if causes a low blood count (anaemia) or is interfering with day-to-day activities, then medications or procedures can be used to help reduce or stop the bleeding. However, these may not be available everywhere and referral to a specialist Gastroenterology centre may be needed. Where these measures fail, surgery may be required.

Bladder

Pelvic floor exercises can help with urine leakage and incontinence. If these measures do not help, medications can be used. Sometimes, radiotherapy can cause narrowing (scarring) in the tube that drains the bladder to the outside. This can make passing urine difficult and can be treated using dilators to widen the narrowed area. Blood in the urine can be treated with heat to seal the bleeding, or if there are clots, the bladder can be washed out. A referral to a urine system specialist (Urologist) or a continence nurse specialist is likely to be needed.

Reproductive organs

For women who experience pain during intercourse, bleeding, vaginal dryness or symptoms of early menopause (mood swings, hot flushes, low sex drive) after radiotherapy, there are several treatment options. This may require referral to a specialist who can discuss different treatment options such as use of hormone replacement therapy, hormone creams or dilators. Men who have problems with erections can also be referred to an appropriate specialist.

How does Pelvic radiation disease behave over time?

Some symptoms can clear up on their own, but unfortunately some do not completely go away and may last for years after radiotherapy treatment has finished. The effects may be very mild with minimal impact on day to day living but sometimes, they may be very troublesome and interfere with daily activities.

What to ask your doctor when you see them?

May I be referred to a dietician to see if there are any changes to my diet that may help with my symptoms?
How often do I need follow-up? Is there a specialist I could be referred to?

What more research needs to be done on Pelvic radiation disease?

Further research into the underlying mechanisms that cause pelvic radiation disease could lead to discovery of a reversible factor. Treatment could then target the underlying changes, rather than just treatment of symptoms.

For more information about research in this area please contact Core.

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