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Bowel cancer

Introduction

Bowel (colorectal) cancer is an adenocarcinoma (cancer of the lining) of the colon or rectum. Roughly speaking two thirds of bowel cancer occur in the colon and one third in the rectum (lower bowel).

It is one of the most common types of cancer diagnosed in the UK, with around 40,000 new cases diagnosed every year. About 1 in every 20 people in the UK will develop bowel cancer in their lifetime.

Signs and symptoms

The three main symptoms of bowel cancer are blood in the stools (faeces), changes in bowel habit such as more frequent, looser stools and abdominal (tummy) pain.

However, these symptoms are very common and most people with them do not have bowel cancer. For example, blood in the stools is more often caused by haemorrhoids (piles), and a change in bowel habit or abdominal pain is usually the result of something you have eaten.

As almost 9 out of 10 people with bowel cancer are over the age of 60, these symptoms are more important as people get older. They are also more significant when they persist despite simple treatments.

Risk factors for bowel cancer

It's not known exactly what causes bowel cancer, but there are a number of things that can increase the risk as below:

- older age as most cases occur in people aged 60 or over
- diets high in red or processed meats and low in fibre
- being overweight
- inactive or sedentary life styles
- high alcohol intake and smoking may increase your chances of getting bowel cancer
- family history (having a close relative that is mother or father, brother or sister who developed bowel cancer under the age of 50)
- presence of other conditions such as inflammatory bowel disease such as ulcerative colitis or Crohn's disease, over a long period

Treatment

Bowel cancer can be treated using a combination of different treatments, depending on where the cancer is in your bowel and how far it has spread.

The main treatments are:

- Surgery which is the most effective way of curing bowel cancer and requires removing the cancerous part of the bowel, and is all that many people need
- Radiotherapy where radiation is used to kill cancer cells
- Chemotherapy and or biological treatments where medication is used to kill cancer cells or improve the effectiveness of chemotherapy

As with most types of cancer, the chances of a complete cure depend on how far it has advanced by the time it is diagnosed. If the cancer is confined to the bowel, surgery will usually be able to completely remove it.

Bowel obstruction from bowel cancer

Sometimes bowel cancer can block the bowel and cause bowel obstruction the symptoms of which are:

- severe abdominal pain, which may initially come and go
- not being able to pass stools when you go to the toilet
- noticeable swelling or bloating of the tummy
- vomiting

Bowel obstruction from bowel cancer requires emergency admission and operation.

Investigations (tests) for bowel cancer

- **Flexible Sigmoidoscopy** can diagnose most bowel cancers in the left side of the bowel. Patients need to prepare for the test with an enema or strong laxatives to clear the bowel so it is clean prior to the test.
- **Colonoscopy** is complete examination of bowel and requires good cleansing of the bowel and some sedation with and analgesia. However sometimes it might not be possible to complete a colonoscopy for various reasons and one might need a CT colonogram.
- **CT colonography** using a CT scanner and software to produce three-dimensional images of the large bowel and rectum. It is a less invasive test that can be used to diagnose bowel cancer and polyps in people who are not

suitable for a colonoscopy because of other medical reasons. However, it does not allow for any abnormal areas can be removed or biopsied.

- **CT scan of the abdomen and chest** is necessary to check if the cancer has spread within the abdomen and to the liver and lungs.
- **MRI** (magnetic resonance imaging) are used for more precise examination of the cancer in the rectum and sometimes to assess the liver.

Staging and grading

Staging refers to how far the cancer has advanced. Grading relates to how aggressive the cancer is and how likely it is to spread. This is important, as it helps the treatment team choose the best way of curing or controlling the cancer.

Surgery for colon cancer

- Local excision using endoscopy (colonoscope or flexible sigmoidoscope) can be used to treat colon cancer detected at a very early stage (early polyp cancer).
- Colectomy means the removal of part of the colon with the nearby lymph glands to treat bowel cancer the cancer spreads into muscles surrounding the colon. There are two ways a colectomy can be performed:
 - **Open colectomy** where the surgeon makes a large cut (incision) in your abdomen and removes part of the colon
 - **Laparoscopic (keyhole) colectomy** where the surgeon makes several small incisions in the abdomen and uses special instruments guided by a camera to remove a section of colon

It is usual to join the ends of the bowel together after bowel cancer surgery, but very occasionally this is not possible or is not safe and a stoma is needed. Sometimes a temporary stoma might be necessary to rest the join in the bowel and protect from complications from a leakage.

Laparoscopic colectomies are thought to be equally effective at removing cancer and have the advantage of a faster recovery time and less postoperative pain compared to open surgery.

Surgery for rectal cancer

There are several different types of operation that can be carried out to treat rectal cancer, depending on how far the cancer has spread. Some of the main techniques used are described below.

- **Local resection** can be used to remove early-stage rectal cancer with special equipment through the anus (back passage) which requires a general anaesthetic or by endoscopy.
- **Anterior resection** is an operation to remove part or most of the rectum with the mesorectum (fatty covering of the rectum that includes the lymph glands). Most often after an anterior resection, a temporary stoma is necessary to protect against the complications of a leakage from the join in the bowel.
- **Abdominoperineal resection** is an operation to remove the whole of your rectum and surrounding muscles to treat the cancer. It involves removing and closing the anus and removing its sphincter muscles, so there is no option except to have a permanent stoma after the operation.

Radiotherapy

Radiotherapy can be used to treat rectal cancer. It can be given before surgery to shrink rectal cancers and increase the chances of complete removal and reduce the risk of the cancer recurrence. It can also be used to control symptoms and slow the spread of cancer in advanced cases (palliative radiotherapy).

Radiotherapy can be performed in two ways:

- External radiotherapy where a machine is used to beam high-energy waves at the rectum to kill cancerous cells. This is usually given daily, five days a week for five weeks.
- Internal radiotherapy (brachytherapy) where a radioactive tube is inserted into the anus and placed next to the cancer to shrink it.

Chemotherapy

Chemotherapy for bowel cancer usually involves taking a combination of medications that kill cancer cells. They can be given as a tablet (oral chemotherapy), through a drip in the arm (intravenous chemotherapy), or as a combination of both.

Treatment is given in courses (cycles) that are two to three weeks long each, depending on the stage or grade of your cancer. The treatment can last up to six months.

Biological treatments

Biological treatments, including cetuximab, bevacizumab and panitumumab, are a newer type of medication also known as monoclonal antibodies.

Monoclonal antibodies are antibodies that have been genetically engineered in a laboratory. They target special proteins found on the surface of cancer cells, known as epidermal growth factor receptors (EGFR). These treatments are not suitable for all bowel cancers and certain tests are necessary to check if the cancer will be sensitive to treatment with these drugs. Biological treatments are usually used in combination with chemotherapy when the cancer has spread beyond the bowel (metastatic bowel cancer).

Screening for bowel cancer

Bowel cancer is the fourth most common cancer in the UK. If it's detected at an early stage, before symptoms appear, it's easier to treat and there's a better chance of surviving it.

NHS offers two types of bowel cancer screening to adults registered with a GP in England:

- **FOB (faecal occult blood) test** is available to all men and women aged 60-74. The home test kit every two years through the post and checks for the presence of blood in a stool sample, which could be an early sign of bowel cancer. If you are 75 or over, you can ask for this test by calling the freephone helpline on 0800 707 60 60.
- **Bowel scope screening** is offered to men and women at the age of 55. It involves a doctor or nurse using a thin, flexible instrument to look inside the lower part of the bowel and remove any small growths, called polyps, that could eventually turn into cancer.