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NHS
St Helens and Knowsley Teaching Hospitals
NHS Trust

High Anterior Resection

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What is a high anterior resection?

This operation aims to remove a segment of your bowel known as the sigmoid colon with or without the upper rectum including the blood supply and associated lymph glands. It is recommended for certain diseases of the bowel such as bowel cancer and complication of diverticular disease and Crohn's disease.

Will I need a stoma (colostomy or ileostomy)?

Where possible, the two ends of the remaining healthy bowel and re-joined (an anastomosis) by stitching or, more commonly using a special stapling device. Most people therefore do not require a stoma. However some people benefit from having a stoma made depending on circumstances regarding:

1) Their general state of health (heart disease, lung disease, diabetes, vascular disease, smoking, steroid medications, being undernourished);

2) Factors which cannot be seen until the surgeon can see inside your tummy (more extensive disease than originally thought, extensive pelvic scarring from previous surgery or other treatment, excessive bleeding).

Most stomas are made to temporarily divert faeces away from the join (defunctioning) to give the best chance to heal if there is concern it may be slow to heal.

What alternatives do I have?

For most conditions where high anterior resection is advised, the only alternative to surgery is medical treatment with drugs. Where there is a cancer of the bowel, drug treatment alone will not cure the disease. If you were to decide against surgery for over months. This could result in bleeding, the development of a blockage in the bowel and eventually spread of cancer to other parts of the body.

Privacy and dignity

Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high-tech equipment and / or specialist one to one care is required.

Who can I contact if I have a problem when I get home?

If you experience any problems related to your surgery or admission once you have been discharged home. Please feel free to contact 4A, 4B or 4C ward for advice from the nurse in charge. They will assist you via the telephone, advise you return to your GP or ask you to make your way to the ED department at Whiston Hospital depending upon the nature of your concern.

4A Ward – 0151 430 1420

4B Ward – 0151 430 1637

4C Ward – 0151 430 1643

Information and support

If you have any further questions please contact one of the colorectal specialist nurses.

Important things you need to know

Patient choice is an important part of your care. You have the right to change your mind at any time, even after you have given consent up until you are anaesthetised. The only caveat to this if you are unable to make this decision for yourself either due to being extremely unwell or being confused or unconscious in which circumstances your doctors will make a decision in your best interests.

We will also only carry out the procedure on your consent form unless, in the opinion of the responsible health professional, a further procedure is needed in order to save your life or prevent serious harm to your health. Sometimes during the operation it becomes apparent that the disease is more complicated than was anticipated: the type of surgery may need to be altered to achieve the desired result. This may mean removing more bowel or part of a nearby organ.

There may be procedures you do not wish us to carry out, the reasons for which you are not obliged to provide. These specifically disallowed procedures should be recorded on the consent form. It is imperative that you are made aware of the risks and benefits of not carrying out certain procedures (as with performing intended procedures) so you can make an informed decision.

All information we hold about you is stored according to the Data Protection Act 1998.

What are the intended benefits?

The aim of the surgery is to remove the disease to provide a cure or significant improvement in your bowel problems. For cancer operations, surgery gives the best chance of cure, and the treatment may need to be combined with chemotherapy and / or radiotherapy. Even in cancer surgery, where certainty of cure is difficult to guarantee, the benefit s should be long lasting.

What happens before my admission?

You will need to attend a pre-admission clinic, which is usually run by specialist nurses. At this clinic, we will ask for your details of your medical history and carry out any necessary clinical examinations and investigations.

We will ask if you take any tablets or use any other types of medication either prescribed by a doctor or bought over the counter in a pharmacy. Please bring any packaging/ prescriptions with you.

You will have blood tests, possibly an ECG (heart tracing) performed, and also swabs taken to screen MRSA. This Trust takes infection control extremely seriously for the benefit of all its patients.

You will be asked to attend Bowel School where you are given information regarding your recovery. Where possible we make use of enhanced recovery principles to minimise the impact of surgery on the body and enable a rapid return to normal activity.

There are many aspects to this process which includes a preoperative (before surgery), intraoperative (during surgery) and postoperative (after surgery) procedures.

If you smoke this should be stopped at least 2 weeks prior to your procedure. Your GP can help you stop smoking.

We aim to minimise pain; perform careful surgery; avoid unnecessary drips, tubes and drains; enable you to eat and drink straight after your operation; encourage early mobilisation to stimulate recovery and allow you to go home soon and safely. We want you to be involved with this and need your help and initiative to improve your recovery.

You will meet members of the team who are vital in your recovery.

You may also be given carbohydrate drinks to optimise your health and this will be discussed with you at Bowel School.

Please ask us any questions about the procedure, and feel free to discuss any concerns you might have at any time.

After certain major operations you may be transferred to the intensive care unit (ICU/ITU), high dependency unit (HDU). These are areas where you will be monitored much more closely because of the nature of your operation or because of certain pre-existing health problems that you may have. If your surgeon or anaesthetist believes you should go to one of these areas after your operation, they will tell you and explain to you what you should expect. If there is not a bed in the necessary unit on the day of your operation, your operation may be postponed as it is important that you have the correct level of care after major surgery.

Day of surgery

Most patients are admitted on the day of surgery. If you need to have a completely empty bowel you should take the bowel prep (given to you at bowel school) at home the previous day.

- Itching
- Aches, pains and backache
- Pain during injection of drugs
- Bruising and soreness
- Confusion and memory loss

Uncommon side effects and complications (1 in 1000 people)

- Chest infection
- Muscle pain
- Slow breathing (depressed respiration)
- Damage to teeth
- An existing medical condition getting worse
- Awareness (becoming conscious during your operation)

Rare (1 in 10,000 people) and very rare (1 in 100,000 people) complications

- Damage to the eyes
- Heart attack or stroke
- Serious allergy to drugs
- Nerve damage
- Death
- Equipment failure

Deaths caused by anaesthesia are very rare. There are probably about five deaths for every million anaesthetics in the UK. For more information about anaesthesia, please visit the Royal College of Anaesthetists' website www.roca.ac.uk

Operation-specific risks:

Failure of the bowel re-join to heal (anastomotic leak 5%) - this can be serious and may require further surgery to put right (which may include the need for stoma).

A temporary hold up of bowel function (ileus) 5-10% - this leads to bloating, nausea and sometimes vomiting. It is common but usually easily managed with a soft decompression tube passed gently through the nostrils down to the stomach, intravenous fluids and drugs to help to stop you feeling sick. There is some evidence to show that avoidance of morphine-based drugs and chewing gum help speed up recovery in this case.

A collection of blood or infected fluid (abscess) in the abdominal cavity—this is usually managed by the passage of a tube, with local anaesthetic, under x-ray or ultrasound guidance but sometimes requires further surgery to put right.

What are the risks of general or regional anaesthesia?

In modern anaesthesia, serious problems are uncommon. Risks cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure in recent years. Individual risks depend on your general health, surgery which is complicated , long or performed in an emergency.

Very common (1in 10 people) and common side effects (1 in 100 people.

- Feeling sick and vomiting after surgery
- Sore throat
- Dizziness, blurred vision
- Headache
- Bladder problems

Many patients simply need an enema on the ward when they are admitted to clear the lower bowel prior to surgery. You will see an anaesthetist before your procedure to discuss the best anaesthesia and pain relief options for you. To inform this decision, he/she will need to know about:

- Your general health including previous and current health problems.
- Whether you or anyone in your family has had problems with anaesthetics
- Any medicines or drugs you use
- Whether you smoke
- Whether you have had any abnormal reactions to any drugs or have ay other allergies
- Your teeth, whether you wear dentures, or have caps or crowns.

Your anaesthetist may need to listen to your heart and lungs, ask you to open your mouth and move your neck and will review your results.

Moving to the operating room/theatre

You will change into a gown before your operation and we will take you to the operating suite. Before you leave the ward and when you arrive in the anaesthetic room the medical team will perform a check of your name, personal details and confirm the operation you are expecting.

Once that is complete, monitoring devices may be attached to you, such as blood pressure cuff, heart monitor (ECG) and a monitor to check your oxygen levels (a pulse oximeter). An intravenous line (drip) will be inserted.

Anaesthesia and pain relief

General anaesthesia

During general anaesthesia you are put into a state of unconsciousness and you will be unaware of anything during the time of the operation. Your anaesthetist remains with you at all times he or she monitors your condition continuously throughout surgery and gives you drugs and fluids to optimise your wellbeing.

Regional anaesthesia

Regional anaesthesia includes epidurals, spinals, caudals or local anaesthetic blocks of the nerves to the limbs or other areas of the body. Local anaesthetic is injected near to nerves, numbing the relevant area and possibly making the affected part of the body difficult or impossible to move for a period of time. Regional anaesthesia may be performed as the sole anaesthetic for your operation, with or without sedation, or with a general anaesthetic. Regional anaesthesia may also be used to provide pain relief after your surgery for hours or even days. Your anaesthetist will discuss the procedure, benefits and risks with you.

If you are having an epidural/spinal as well this may be put in before you go to sleep in the anaesthetic room. You will need to have a catheter inserted into your bladder so we can measure urine output. This will be removed with the first few days after the operation.

Local anaesthesia

In local anaesthesia drug is injected into the skin and tissues at the site of the operation. This area of numbness will be restricted and some sensation of pressure may be present, such as stitching a cut, but may also b injected around the surgical site to help with pain relief. Usually a local anaesthesia will be given by the doctor doing the operation.

Check up and results

Before you leave hospital, we will give you details of when you need to return to see us, for example outpatients clinics or for the results of your surgery. At this time, we can check your progress and discuss with you any treatment we recommend. You may be contacted by a specialist nurse if you need to know your results sooner this may help with your expectations of whether further treatment is necessary.

What are the significant risk of this procedure?

Most people will not experience any serious complications from their surgery. The risks increase for the elderly or overweight and for those who already have heart, chest or other medical conditions such as diabetes or kidney failure. There is a *very* small risk of death. We cannot get rid of all risk but we take patient safety very seriously and take every possible precaution to minimise risk. You will be cared for by a skilled team of doctors, nurses and other health care workers who are involved in this type if surgery on a daily basis. Any problems that arise can be rapidly assessed and appropriate action taken. These include the risks of surgery in general, the risk particularly associated with bowel surgery and the risks of anaesthetic described in more detail later.

General risks

- Wound problems—infection, bleeding, fluid / abscess collection, dehiscence (opening up)
- Breathing problems—chest infection
- Heart problems—abnormal rhythm, angina, heart attack
- Kidney problems—low urine output, blood salt abnormalities, kidney failure
- Blood clots—in the legs (DVT) or occasionally in the lung (PE).

Typically, you will be helped into a chair the following day. If you have any mobility problems, we can arrange nursing or physiotherapy help.

Pain control

This is usually with either an epidural, spinal injection or by a pain killer pump which you control in the first 48 hours. You will be given regular simple painkillers as well.

Special measures after the procedure

Most people will feel fine after their operation. Some people may feel dizzy, sick or have general aches and pains. Others may experience some blurred vision, drowsiness, a sore throat, headache or breathing difficulties. You may have fewer of these side effects after local or regional anaesthesia. If you feel sick, please tell a nurse and you will be offered medicine to make you more comfortable.

Resuming normal activities including work

Most people who have had this procedure can get back to normal activities within a few weeks. Initially you will feel more tired than usual but thus should not stop you from doing anything, because activity is beneficial. For driving you nee to feel safe and to be able to brake in an emergency—this often takes two to four weeks. When going back to work see if you can start half days or work from home until your energy levels are improved.

Leaving hospital

Most people who have this type of procedure will need to stay in hospital for 3 to 6 days. Sometime complications arise and these will delay discharge. When you go home we would expect you to be mobile, comfortable and able to eat safely. The actual time that you stay in hospital will depend on your general health, how quickly you recover from the procedure and your doctor's opinion.

Should I remove any body hair before an operation?

If you need hair removal from the surgical site this will be done using an electric hair clipper with a single-use disposable had, after you have been anaesthetised.

Please do not shave the hair yourself or use a razor to remove hair, as this can increase the risk of infection.

It may be necessary during the procedure to shave other areas of your body to allow equipment and/or monitoring devices to stick to you skin to achieve the best and safest performance.

What position will I be in during surgery?

Your body needs positioning during surgery usually with your head down and legs up. Your body is supported throughout the procedure whilst you are asleep using protective soft pads and great care is taken to move you gently. This is particularly important for people with joint problems and delicate skin.

Who will perform my procedure?

We are unable to guarantee that a particular person will perform the procedure. However your surgery will be performed by a surgeon with particular skills and training in bowel surgery. This is usually a consultant surgeon or senior specialist registrar, under consultant supervision.

Will I have keyhole surgery?

Surgery can be performed by a standard 'open' operation with an incision in the abdomen or by laparoscopic 'keyhole' approach to their procedure this is not the case for all and the best approach for you will have been discussed with you in the clinic by the surgeon.

The choice of method depends on a number of factors including the size and position of the bowel disease, your build and co-existing medical conditions, any previous operations on your abdomen, and surgeon's technical preference. Please feel free to discuss with your surgeon if you need clarification.

Conversion from keyhole to an open procedure is sometimes necessary for your safety. This is not failure' rather an important surgical decision made to achieve the safest possible successful treatment for you bowel disease.

What does the operation involve?

At the start of the operation we take a look inside your tummy at the rectum and colon (bowel) and other parts of the abdomen — for example the liver, stomach, small intestine, as well as uterus and ovaries in women.

The rectum and colon above it are then mobilised (freed up from the surrounding attachments) so that the diseased segment can be safely removed along with some of the fatty tissue that carries the blood vessels and lymph drainage to the bowel. Special care is taken to avoid damage to neighbouring structures (e.g. Other organs, the tube carrying urine from the kidney to the bladder (ureter), nerves and blood vessels).

The end of the bowel are then joined together (unless there are factors which prevents this) as explained before. At the end of the operation the abdominal wall is stitched up and then the skin is closed, usually with absorbable sutures (so there is no need for stitches to be removed after the operation) or with skin clips (which do need to removed at about 10 days after the operation).

After the procedure

Once your surgery is complete you will be transferred to the recovery ward where you will be looked after by specially trained nurses, under the direction of your anaesthetist.

The nurses will monitor you closely until the effects of any general anaesthetic have adequately worn off and you are conscious. They will monitor your heart rate, blood pressure and oxygen levels. You will be given oxygen via a facemask, fluids via a drip and appropriate pain relief until you are comfortable enough to return to your ward. You will also have a tube (catheter) in your bladder to drain away urine – this enables careful measurement and avoids the need for you to get out of bed to urinate.

After certain major operations you may be transferred to the intensive care unit (ICU/ITU), high dependency unit (HDU).

Enhanced recovery

Most people who have this type of procedure will need to stay in hospital for three to six days after the operation. Those patients with medical problems, special needs or complications from the operation may need to stay in hospital longer.

Eating and drinking

It is safe drink and even eat after surgery providing you feel the desire to do so. You should not eat or drink if it makes you feel sick or bloated.

Getting about after the procedure

We will help you to become mobile as soon as possible after the procedure. This helps improve your recovery and reduces the risk of certain complications. You will have daily injections and will usually wear special stockings which reduce your chance of blood clotting in your legs (DVT).