Completion Cytoreductive Surgery with HIPEC

Introduction

This patient information leaflet has been written to provide you and your family with some details of your proposed treatment and hospital stay. You may feel that there is a lot of information to take in but if any questions are not addressed here please do not hesitate to ask. Our aim is to help you be as prepared and informed as possible for your operation and recovery.

Completion Cytoreductive surgery with HIPEC

The surgery has been recommended as you may be in a higher risk category of recurrence of the cancer, the purpose of the surgery and HIPEC is to reduce this risk.

This highly specialised surgical technique is available at very few centres within the UK. It involves removing part of the bowel, lymph nodes, peritoneum(inner lining of the abdomen)and the omentum (a sheet of fat contained inside the abdomen) and the ovaries in women are often removed as they are common sites of cancer recurrence. This is a major operation, lasting an average of 4-8 hours.

Surgery is performed either keyhole (small incision's) or through a long incision down the middle of the abdomen. After the bowel has been removed the abdomen is filled with the heated chemotherapy and left to circulate for one hour before being washed out. This aims to destroy any remaining cancer cells and very small tumour deposits that cannot be seen by the surgeon. Heating the chemotherapy enhances the effect of the drug and can directly damage the tumour cells. The most commonly used chemotherapy drug is Mitomycin C.

Will I need a stoma (colostomy or ileostomy)?

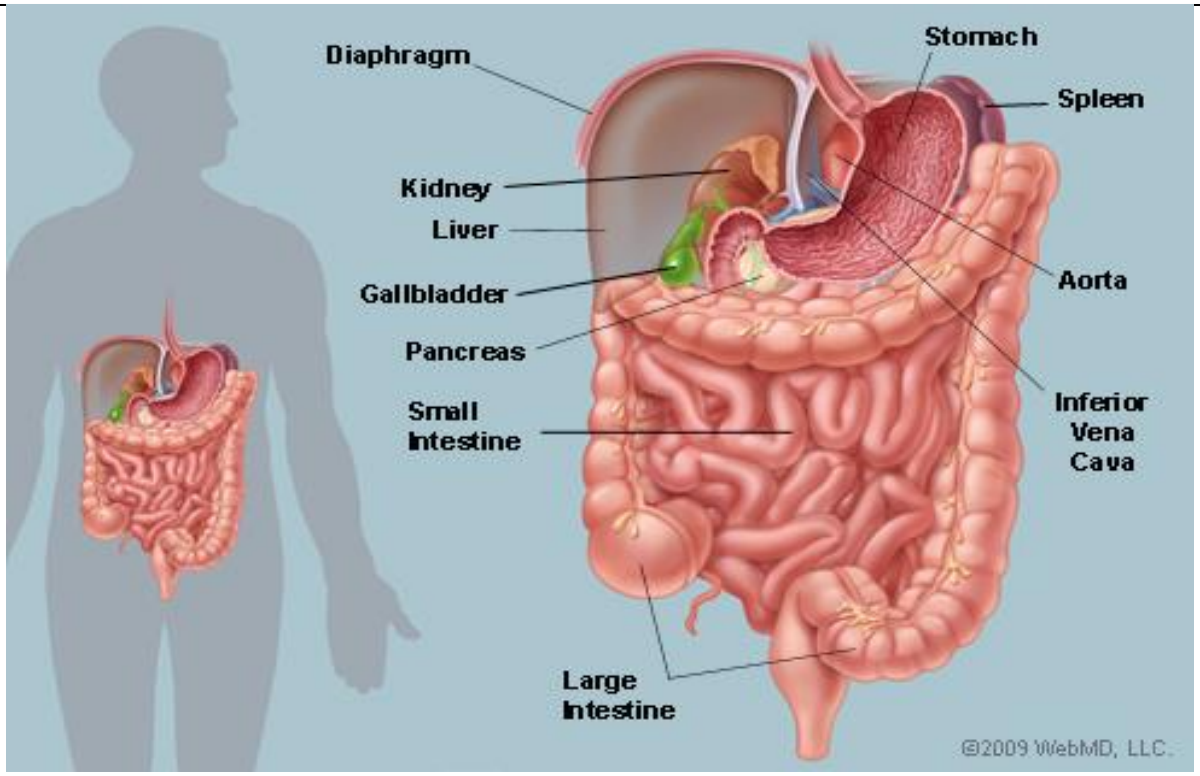
A stoma is formed during surgery when the end of the bowel is brought to the surface of the abdomen and the bowel empties into a specialised disposable pouch rather than in the usual manner. Approximately a quarter of all patients having this surgery will require a permanent stoma, while another quarter will need a temporary stoma, which can be re-joined a few months later. This means that half of all patients having this surgery will not need a stoma.

What is HIPEC?

HIPEC stands for Hyperthermic Intraperitoneal Chemotherapy and is a heated chemotherapy solution that is given directly into the abdomen during surgery. It is used to treat certain tumours of the bowel and appendix that have spread within the abdominal cavity or are at high risk of doing so. Unlike traditional chemotherapy that is delivered by a drip into the bloodstream, HIPEC delivers the chemotherapy directly into the abdomen.

How does the treatment work?

HIPEC is usually combined with Cytoreductive Surgery (CRS) where the surgeon removes all visible tumour from the abdomen. The extent of this surgery will depend upon whether the tumour has spread within the abdomen and how much disease is present.



HIPEC is thought to be more effective than traditional intravenous chemotherapy for tumours which spread within the abdomen and affect the inner lining of the abdomen (peritoneum). With HIPEC, high concentrations of the chemotherapy drug can be given directly into the abdomen where it required. Only a small amount of this chemotherapy is absorbed into the body so there are fewer systemic side effects.

What are the risks and possible complications of the treatment?

Most of the risks and side effects are from the surgery rather than the intraperitoneal chemotherapy. Cytoreductive surgery with HIPEC is a major operation and there is the possibility of complications arising from surgery. Serious complications can occur and include the need for a second operation, sometimes as a matter of urgency. This is quite uncommon but is usually done for bleeding or for a leak in a join of the bowel. In some circumstances a colostomy or ileostomy may be necessary.

The administration of chemotherapy into the abdomen has been found to be safe and does not have the usual side effects which are sometimes associated with chemotherapy. There is a 2% (1 in 50) risk of neutropenia (a reduction in the number of white blood cells which normally fight infection). This can occur approximately 10 days following the operation and is treated with an injection which stimulates more white blood cells to be made by the body.

Some patients develop a collection of fluid inside the abdomen after the operation which needs a drain to be inserted into the abdomen. This is usually done using x-ray guidance under a local anaesthetic. More common complications such as wound, chest or urinary infections are usually treated with antibiotics.

Other risks include clots in the leg called “deep venous thrombosis” or to the lungs called “pulmonary embolus”. We take full precautions to reduce the risk of clots developing. This involves you wearing stockings on your lower legs while in hospital and also having blood-thinning injections both during and after your hospitalisation for a total of 4 weeks after the surgery. You will also have pneumatic calf compression stockings. These gently squeeze the

calf every few seconds to keep the circulation moving in the legs, further reducing the risks of clots. We also advise that you keep wearing the stockings for 4 weeks after you are discharged from hospital.

Some patients also experience hallucinations for a couple of days after the surgery. This can be in the form of seeing or hearing things which are not real. These experiences are temporary and will pass. The staff will be available to reassure you if you experience these.

If you require pelvic surgery, it is possible that your sexual function or your ability to pass urine may be affected following the surgery. This is uncommon but can occur particularly in people who have had previous pelvic surgery and are due to have repeated pelvic surgery. Your surgeon will discuss this with you, particularly if you are at risk of this problem.

There is approximately a 1% risk (1 in 100) of dying following the surgery.

Before your surgery

You will have the opportunity to the discuss the operation and the possibility of stoma formation with a specialist nurse.

Usually around a week prior to your surgery, you will be invited to the hospital to attend a pre operative assessment with a qualified nurse. Part of the assessment is to have blood taken and a heart tracing (ECG) performed. You will also be given a strong bowel cleansing preparation and instructions on how to take this at home prior to admission.

You will need to maintain a high intake of water during this period as the medication can leave you feeling dehydrated.

You will then be admitted to hospital on the morning of your planned surgery. It is important that we have a contact number for your family while you are in theatre. It is a very long and draining day for your family and your consultant will endeavour to contact them to inform them of the outcome of the operation when completed.

After the surgery

You may be transferred to the high dependency unit after your surgery.
Due to the type of surgery that you have had there will be a number of drips in place to allow for fluids, drugs and intravenous nutrition to be given, as you will not be able to tolerate food and drink for a period of time until your bowel recovers. A naso-gastric tube will be in place to prevent you vomiting whilst your bowel is not working and you may have drains in your chest and abdomen. You will also have a urinary catheter.

You will usually have an epidural for pain relief. This is a fine tube placed in your back which makes your abdomen more comfortable after the surgery. This is sometimes combined with other painkillers, including strong ones like morphine.

Once the surgeon and high dependency doctors are happy that you are stable, you will be transferred to a designated ward. The average stay in hospital after the operation is 1-2 weeks, although it may be shorter or longer for different people depending upon the extent of surgery and the recovery time.

Physiotherapy is an important part of your recovery. The role of the physiotherapist is to work with you to help maximise your lung function and to increase your mobility post-operatively.

Information for Patients

Will the treatment help me?

The aim of the surgery is reduce the risk of recurrence and increase your survival from cancer. The benefits of treatment depend on whether the surgeon can remove all the visible cancer within the abdomen and give intraperitoneal chemotherapy.

Research has shown that if this is possible, treatment can prolong survival beyond conventional treatments. However, although we hope that the surgery will be of benefit to you, we cannot guarantee this.

Are there any alternatives to cytoreductive surgery and HIPEC?

Another option is a 'watch and wait' approach. This means we monitor closely and if cancer grows we may suggest that you have chemotherapy or surgery. Each patient is assessed individually and a treatment or surveillance plan is put in place.

Discharge home

You will be discharged from hospital when you are deemed fit by your consultant, the physiotherapists and the colorectal nurse specialist. At this point you will be mobile, walking regularly when you get home. You should not do any heavy lifting for 3 months. Try to maintain a normal daily routine as much as possible, getting up in the morning, a nap after lunch and then up again until bed time. You will need to increase your mobility gradually, with daily walks in your local area.

You may find that your appetite is reduced when you are first discharged or that you feel full up quickly. This is normal and you should try to eat a balanced diet in small, regular portions. Your appetite should improve with time but you may need to have supplement drinks on prescription if your appetite is poor.

You should not drive for at least 6-8 weeks after your surgery. You need to be able to wear a seat belt and to safely perform an emergency stop.

If you have a stoma and live some distance away from the hospital, we will refer you to a stoma care nurse local to your home and make arrangements for your supplies before we discharge you from hospital.

Sexual intercourse may be resumed as soon as you feel comfortable. It may be advisable for women who have undergone a hysterectomy to wait until after their post- operative check-up (4 to 6 weeks) to make sure the area is completely healed.

The specialist nurse will telephone you following discharge. However, if you have any concerns or questions, please do not hesitate to contact us. A summary with the details of your operation, recovery and your medication will be sent to your GP practice a short time following your discharge. Contact your GP if you are unwell or if you have any worries regarding your recovery. Your own doctor will be able to advise you when to return to work.

A CT scan will be arranged one year from your operation date, either at university hospital Birmingham or at your local hospital.

It is normal to feel very emotional after surgery and when you return home. The specialist nurse can refer you to other professionals for emotional support, if this is something that you would like.

Information for Patients

Donations

If you would like to make a donation to our charity fund, which is used to fund education and research into peritoneal cancer, such donations can be made to the “Peritoneal Tumour Unit Trust Fund”. Further information can be provided on request.

Further information

If you have any further questions regarding your treatment then please contact either of the following:

Consultant Surgeons:

Mr Haney Youssef — Secretary — Tel: 0121 4249387
Mr Simon Fallis
Mr Umar Shariff

Colorectal Nurse Specialists: — Tel: 0121 4247429

Helpful Organisations

National Institute for Health and Clinical Excellence, Midcity Place 71 High Holborn London WC1V 6NA www.nice.org.uk

Ileostomy Association
Peverill House, 1-5 Mill Road, Ballyclare, Co Antrim BT399DR Tel: 0800 018 4724 www.the-ia.org.uk

Further Reading

Cytoreduction surgery followed by hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomas http://www.nice.org.uk/guidance/IPG331

Treating peritoneal carcinomatosis with surgery followed by direct, heated chemotherapy http:// www.nice.org.uk/guidance/IPG331 issue date February 2010

You tube:
Mr Umar Shariff: Appendix tumours/cancers for Cytoreductive Surgery (CRS) + HIPEC
https://youtu.be/kayyWJvHo-g