Hyperthermic intraperitoneal chemotherapy (HIPEC)
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Information for patients

Chemotherapy given into the abdomen during surgery is called intraoperative chemotherapy. This information describes your treatment and answers commonly asked questions. Please read it carefully and ensure you fully understand what the treatment involves before making your decision. There are contact telephone numbers at the end of the leaflet, so please ring us if you would like to discuss any aspect of your treatment with the doctor or nurse.

HIPEC stands for Hyperthermic (or Heated) Intraoperative Peritoneal Chemotherapy. HIPEC is used to treat cancers that have spread to the lining of the abdominal cavity, such as those of the appendix, colon, stomach and ovaries. HIPEC is an alternative and innovative method of delivering chemotherapy, which is commonly used to treat many types of cancer. Unlike traditional chemotherapy that is delivered intravenously (through a needle into your vein), HIPEC delivers chemotherapy directly into the abdomen making it a good option for cancers that originated in or have spread to the abdominal cavity.

Why do I need this treatment?

If the surgeons are able to remove the entire tumour you will be given a heated chemotherapy drug called Mitomycin C. This is put directly in your abdomen while you are in theatre and the chemotherapy is left in for 90 minutes. In some situations, depending on the tumour type, we will use a combination of a drug that is given to you via an intravenous drip (5-fluorouracil) as well as heated chemotherapy put into your abdomen (oxaliplatin). We know that even after the surgeon has removed the entire tumour that can be seen, there may still be tumour cells that are not visible and chemotherapy is used to destroy these. The chemotherapy is heated because heat damages tumour cells more than normal cells and improves the effect of the drug. Circulating the fluid around your abdomen allows it to be filtered which also increases the effectiveness of the treatment.

What are the benefits of HIPEC procedures?

- HIPEC allows for a higher concentration of chemotherapy to be delivered into the abdomen more effectively and safely than standard chemotherapy, which is delivered intravenously.

- This type of chemotherapy is best at destroying cancer cells that are too small to be seen with the naked eye.

- Chemotherapy delivered through HIPEC causes fewer side effects than intravenous chemotherapy. This is because the high concentrations of chemotherapy solution are unable to cross what is known as the peritoneal plasma barrier.

- Experts say that pairing surgery and HIPEC together may be more beneficial than chemotherapy alone.
What does the treatment involve?

While you are in theatre, the surgeon removes the abdomen lining (peritoneum) and any areas affected by tumour. Other areas may also be removed because these areas are at risk of developing disease. This is a long procedure done while you are under the anaesthetic and can take several hours (sometimes up to 10 hours). Heated intra-peritoneal chemotherapy (HIPEC) is then used if the tumour can be removed. The surgeon puts tubes into the abdomen and a pump is used to circulate and heat the chemotherapy which is mixed with fluid. After 90 minutes the chemotherapy is washed out and the abdomen is stitched up. Routinely you will go to the critical care unit immediately afterwards.

What are the side effects?

Most of the side effects are from having the operation rather than directly having the chemotherapy. The surgery has serious complications reported in the international literature of around 30%:

Inflammation of the pancreas (pancreatitis), about six to seven patients in every 100 will develop this problem.

Post-operative bleeding or the development of a leak from your bowel through tissue damage, about four to five patients in every 100 will be affected.

Low white cell count in the blood and therefore risk of infection or bleeding will affect 1 in 10 patients.

The side effects from the chemotherapy agents may include:

- **Nausea and vomiting (sickness)** - The severity of this varies from person to person. Anti-sickness medication will be given if necessary. After the operation you will have a tube in your nose that goes into your stomach, which will also help to stop you being sick (although it may feel uncomfortable).

- **Prone to infection** - The chemotherapy in your abdomen will mean you will be more open to infection in that area after the procedure (peritonitis). Even without the chemotherapy you will be at risk of infection. However, this is greater with the chemotherapy.

- **Delayed healing** - The chemotherapy may slightly delay the healing process within your abdomen after the surgery.

- **Lethargy/tiredness** - Some chemotherapy may make you feel tired and lacking in energy. This, in combination with major surgery, will mean you will need plenty of time to rest and it will be a while before you reach your usual energy levels.

- **Diarrhoea** - This may become a problem. However, it is more likely to be from the surgery itself rather than the chemotherapy.

- **Sore mouth** - Following treatment your mouth may become sore, although this is unlikely. Ask your doctor or nurse for advice, as you may need a mouthwash.
All of these side effects listed are only possible side effects. You may not experience any of them. Most of the chemotherapy stays in the abdomen rather than going into the bloodstream. Therefore most of the potential side effects will relate to the abdomen, for example, being prone to infection in that area, and delayed healing.

We hope that this information will help you understand the procedure. If you have any questions about this treatment please contact:
Colorectal Nurse Specialist  0191 4453150
Stoma Care Nurse Specialist  0191 4453152
Colorectal Secretary  0191 4453151
Colorectal Support Nurse  0191 4453153

For out of hours advice contact NHS 111

**What’s next if HIPEC is not a suitable treatment for me?**

If you are not a candidate, you can continue to receive your care with your local hospital medical oncologist or can consult with a medical oncologist at Queen Elizabeth Hospital Gateshead to discuss the best next step for you.

**Helpful websites:**

www.surgicaloncology.com (gives more detailed medical information)

**Key worker:**

Your key worker (nurse) ........................................ can be contacted on .........................

If your key worker is not available, please leave a message on the answering machine with your name, date of birth and telephone number. All messages will be responded to as quickly as possible, but this may not always be on the same day.

**Helpful contacts at Queen Elizabeth Gateshead:**

If you have any problems after your operation, please contact:
Treatment Centre Level 2 on 0191 4453005
References


Complete cytoreduction for pseudomyxoma peritonei (Sugarbaker Technique). NICE Interventional Procedure Guidance IPG331 : February 2010


Data Protection

Any personal information is kept confidential. There may be occasions where your information needs to be shared with other care professionals to ensure you receive the best care possible.

In order to assist us to improve the services available your information may be used for clinical audit, research, teaching and anonymised for National NHS Reviews. Further information is available in the leaflet Disclosure of Confidential Information IL137, via Gateshead Health NHS Foundation Trust website or the PALS Service.