Subcutaneous battery-powered catheter drainage system for ascites

Information for the public
Published: 1 February 2014
nice.org.uk

What has NICE said?

There is not enough evidence to be sure about how well this procedure works or how safe it is. For this reason, it should only be carried out as part of a research study.

What does this mean for me?

Your health professional can only offer you this procedure as part of a research study. Details of all procedures done will be collected.

The condition

Ascites is a build-up of fluid in the abdomen. It is most commonly caused by cirrhosis of the liver or cancer that has metastasised (spread) to the abdomen. The fluid causes swelling, and can lead to discomfort, difficulty breathing, tiredness, nausea and poor appetite.

Ascites can sometimes be treated by restricting salt intake, or using diuretics (drugs that increase water loss from the body in urine). If these options don't work, or the ascites comes back, fluid can be drained from the abdomen through a tube, in a procedure called large-volume paracentesis.

NICE has looked at using a battery-powered catheter drainage system as another treatment option. Click on to the next page to find out more.
The procedure

The aim of the procedure is to reduce fluid build-up in people with ascites that is difficult to treat or keeps coming back. It is done with the patient under a general anaesthetic, through 3 small cuts in the wall of the abdomen. A tube is placed in the abdomen where the fluid builds up, and connected to a small battery-powered pump placed under the skin of the abdomen. This pump in turn is connected to a tube that is fixed into the bladder. The fluid can then be pumped from the abdomen to the bladder, from where it can be passed in the urine. The pump is set up so that it only works when needed, and is programmed wirelessly by a doctor with a hand-held device. The hand-held device collects information, which is then downloaded to a computer for review by the doctor.

Benefits and risks

When NICE looked at the evidence, it decided that there is not enough evidence to be sure about how well this procedure works or how safe it is. The 1 study that NICE looked at involved 40 patients who had cirrhosis of the liver.

Generally, it showed the following benefits:

- Fewer large-volume paracentesis procedures were needed after the procedure, and after 6 months just under half the patients didn't need large-volume paracentesis at all.
- Blood pressure, liver function and kidney function were unaffected.
- The device was inserted successfully in all the patients.

The study showed that the risks of inserting a battery-powered catheter drainage system included:

- Bleeding into the bladder during the procedure.
- Problems with the tube into the bladder, which needed further procedures to fix.
- Problems with the tube leading from the fluid-filled space in the abdomen, which needed further procedures to fix or to replace the tube (in 1 patient it was not possible to fix the problem).
- The pump failing.
- Infections.
• Needing to remove the device because of infections, poor wound healing, and patients asking to have the device removed.

• The ascites fluid leaking through the wounds made to implant the pump.

NICE was also told that kidney failure in people with liver cirrhosis (hepatorenal syndrome) is another possible risk.

If you want to know more about the studies see the guidance. Ask your health professional to explain anything you don't understand.

Questions to ask your health professional

• What does the procedure involve?

• What are the benefits I might get?

• How good are my chances of getting those benefits? Could having the procedure make me feel worse?

• Are there alternative procedures?

• What are the risks of the procedure?

• Are the risks minor or serious? How likely are they to happen?

• What care will I need after the procedure?

• What happens if something goes wrong?

• What may happen if I don't have the procedure?

About this information

NICE interventional procedures guidance advises the NHS on the safety of a procedure and how well it works. This information applies to people who use the NHS in England, Wales, Scotland and Northern Ireland.

ISBN: 978-1-4731-0435-8
Accreditation

Health & care information you can trust

The Information Standard Certified Member

© NICE 2014. All rights reserved.