The Royal Liverpool and Broadgreen University Hospitals NHS Trust

Patient information

Endoscopic Ultrasound Guided Pancreatic Necrosectomy (EUSPN)

Division of Surgery Royal Liverpool Hospital and Broadgreen Hospital

PIF 1646 V2

Your Consultant or doctor has advised you to have an Endoscopic Ultrasound Guided Pancreatic Necrosectomy (EUSPN). There may be alternative treatments or procedures available. Please ask a doctor or nurse to discuss these with you.

What is Acute Pancreatitis?

This is an inflammation of the pancreas. It develops very suddenly and, in the majority of patients (about 75%) improves steadily with good hospital treatment over the course of a week or so. A blood sample usually shows the presence of a large amount of amylase (a pancreatic enzyme) in the blood.

Pancreatic Necrosis

In some cases of acute pancreatitis there may be death of the tissue (necrosis) of the pancreas or tissues surrounding the pancreas. One or more CT scans will be necessary to assess the state of the pancreas.

It is common to see one or more fluid collections in the abdomen. These are usually quite harmless and disappear without specific treatment. Only the CT can reliably show whether there is pancreatic necrosis (or gangrene of the pancreas). This usually does not fully appear until a week or so after the start of the illness.

If the necrosis is extensive or if there is evidence of infection of the necrosis, then surgery will be needed. The timing of the surgery and the extent of surgery are difficult decisions to make even for experienced pancreatic surgeons.

Once it is decided to operate for severe necrosis, the likelihood of success is anywhere between 20% and 80%, but this depends very much on individual cases.

The procedure used for removing extensive pancreatic dead tissue (necrosis) is called a ‘necrosectomy’.

What is a EUSPN?

You may be familiar with an ultrasound scan, one use of which is to look at babies in the womb of pregnant women by rolling a probe over the abdomen. An EUS combines an ultrasound scan with endoscopy allowing visualisation of internal structures outside the stomach.

A fine needle is passed through the endoscope and the EUS camera is used to guide the needle into the dead (necrosis) or infected pancreatic tissue. A wire is then passed through the needle into the pancreatic necrosis and the needle is withdrawn. A small hole is made between the stomach and the pancreatic necrosis using the wire to guide specialist equipment which can then be used to remove the dead tissue.

At the end of the procedure, either a short metal tube (stent) or one to three plastic stents are left across the hole to allow liquefied dead tissue to drain into the stomach. You will also be left with a fine plastic tube passing from the pancreas cavity via the stomach and food pipe through your nose. This is to allow the nurses on the ward to flush the pancreas cavity regularly to wash away loose dead tissue.

You should expect to have the procedure repeated at least once, and may require up to ten treatments before the pancreas cavity is clean and all dead tissue removed.

What happens during each visit?

After the initial drainage procedure subsequent visits would involve using a combination of normal camera or the ultrasound camera to remove the necrotic debris from the cavity by flushing it with saline. The aim would be to suck the debris with a suction device through the camera. It may also require placement of further stents into the cavity.

What are the benefits of EUSPN?

EUSPN avoids a big operation, which means you may not feel as poorly during your treatment. It is likely to reduce your time in hospital and there should not be any scars afterwards because the hole is on the inside.

What are the risks of EUSPN?

The main risks are related to the hole created between the stomach and pancreatic cavity and to the removal of dead tissue from inside the pancreatic cavity.

Bleeding can usually be avoided when making the hole as the ultrasound guides the needle away from blood vessels. There are many small blood vessels within and around the pancreas necrosis so minor bleeding is possible, occurring in up to 20% of procedures. Major bleeding from a larger blood vessel is less likely. If there is serious bleeding you may need a blood transfusion and an operation to stop the bleeding.

Perforation occurs in 15% of procedures, which is when air or liquid from the stomach or pancreatic cavity leaks into the abdominal cavity. This would usually be treated by insertion of a drain into the abdominal cavity, but may in rare instances require an operation to open the abdomen and repair the hole.

Carbon dioxide is injected into the pancreatic cavity to allow the endoscopist to see the pancreatic necrosis. The risk of some of the air or gas entering the main vein entering the liver is about 2%. If a significant amount of air enters the main blood vessels it may cause a heart attack or symptoms similar to a stroke.

Are there any alternatives to this procedure?

The alternative treatments for pancreatic necrosis are an open operation which involves cutting open the abdominal wall and removing the dead tissue from the front, or a minimally invasive procedure which is performed through a hole in the side.

The minimally invasive option involves removing the pancreatic necrosis through a hole in the left side, guided by a different sort of camera. As with EUSPN, repeated procedures are usually required before all of the dead tissue is removed.

The decision as to which of these procedures is carried will be made by your medical team who will discuss each patients care in a multi-disciplinary team.

What anaesthetic or sedation will I be given?

Both local anaesthetic spray and intravenous sedation will be given to you. The local anaesthetic spray is used to numb the throat, while the intravenous sedation involves an injection given into your arm, which will make you slightly drowsy and relaxed. You will not be unconscious.

Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used.

Like all medicines, local anaesthetics may sometimes cause side effects, as well as the effects that are needed. You may experience dizziness, blurred vision, drowsiness and occasionally loss of consciousness.

Serious side effects are rare, and include fits, low blood pressure, slowed breathing and changes in heartbeat, which may be life-threatening. If you have any concerns about any of these effects, you should discuss them with your doctor

The drugs used in sedation may affect your memory or concentration for up to 24 hours. Many patients remember nothing about the procedure or even what the doctor has said to them afterwards.

A side effect of these drugs is to slow your breathing – this should not normally happen but sometimes patients can be oversensitive to the drug. This is the main reason we do not give high doses of these drugs. We also give oxygen during the test.

If you are worried about any of these risks, please speak to your Consultant or a member of the team on the ward.

Getting ready for your procedure

You will not be given anything to **eat or drink** from midnight. This is to make sure that we can have a clear view of your stomach, and reduce the anaesthetic risks.

Your EUSPN procedure

The procedure will take place in the Gastroenterology Department. You will be given sedation. The entire procedure lasts between one to two hours.

After your EUS procedure

You will be returned to a recovery area on a trolley and the nurses will monitor you blood pressure and pulse. Once you have properly woken up you will be transferred to your own bed and returned to your ward or discharged home.

For next 24 hours you must not

- Travel alone.
- Drive any vehicle e.g. car, scooter or ride a motorcycle or bicycle.
- Operate machinery (including domestic appliances such as a kettle).
- Climb ladders.
- Make important decisions, sign any business or legal documents.
- Drink alcohol.
- Return to work within 12 hours of treatment. Your general health and any medicines you are taking may increase the time you need off work.

You should

- Take it easy for the rest of the day, avoid strenuous activity.
- Take your medications as usual.
- Let someone else care for anyone you usually look after, such as children or elderly or sick relatives.

Minor post procedure symptoms

You may or may not experience a sore throat. If you do, it can last for a couple of days but usually passes after a couple of hours.

Stomach ache is most likely due to the air inflated into your stomach during the procedure. This will pass in its own time.

Serious post procedure symptoms

Please tell the medical staff if you have severe pain in your neck, chest or stomach.

Further information:

Team Contact Details:
Pancreatic Lead Nurse
Tel: 0151 706 2654 Bleep 4639
Text phone number: 18001 0151 706 2654

Pancreatic Specialist Nurse
Tel: 0151 706 2654 Bleep 4089
Text phone number: 18001 0151 706 2654

Support Groups
Pancreatitis Supporters Network
www.pancreatitis.org.uk

Author: Division of Surgery
Royal Liverpool Hospital and Broadgreen Hospital
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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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