

Severe pancreatitis and necrosis

i Information for patients
Hepatobiliary



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SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



Acute pancreatitis is a serious condition where the pancreas becomes inflamed over a short period of time. The pancreas is a small organ located behind the stomach and below the ribcage.

Most people with acute pancreatitis improve within a week and experience no further problems, but severe cases can have serious complications and can even be fatal.

Acute pancreatitis is different to chronic pancreatitis, where the inflammation of the pancreas persists for many years.

The most common symptoms of acute pancreatitis include:

- suddenly getting severe pain in the centre of your abdomen (tummy)
- feeling or being sick
- diarrhoea

Hospitalisation is needed for almost every episode and sometimes intensive care is required for part of the hospital stay.

Management of severe pancreatitis

Severe pancreatitis should be managed by experts with specialist knowledge and experience in this condition. In Sheffield, the multidisciplinary team is usually led by a Consultant Hepatobiliary Surgeon. The nursing staff on Firth 9 ward are especially experienced in this condition and have the support of a dieticians, pharmacists and other dedicated healthcare professionals.

What causes it?

It's thought that acute pancreatitis occurs when a problem develops with some of the enzymes (chemicals) in the pancreas, which causes them to try to digest the organ.

Acute pancreatitis is most often linked to:

- gallstones - which accounts for around half of all cases
- alcohol consumption - which accounts for about a quarter of all cases

Gallstones

Gallstones are hard pieces of stone-like material that form in your gallbladder. They can trigger acute pancreatitis if they move out of the gallbladder and block the opening of the pancreas.

The blockage can disrupt some of the enzymes (chemicals) produced by the pancreas. These enzymes are normally used to help digest food in your intestines, but they can start to digest the pancreas instead if the opening is blocked.

However, not everyone with gallstones will develop acute pancreatitis. Most gallstones don't cause any problems.

Alcohol consumption

It's not fully understood how alcohol causes the pancreas to become inflamed. One theory is that it interferes with the normal workings of the pancreas, causing the enzymes to start digesting it.

Whatever the cause, there is a clear link between alcohol use and acute pancreatitis. A very large study found that people who regularly drank more than 35 units of alcohol a week were four times more likely to develop acute pancreatitis than people who never drank alcohol (35 units is the equivalent of drinking around 16 cans of strong lager or four bottles of wine a week).

Binge drinking, which is drinking a lot of alcohol in a short period of time, is also thought to increase your risk of developing acute pancreatitis.

Other causes

Less common causes of acute pancreatitis include:

- accidental damage or injury to the pancreas - for example, during a procedure to remove gallstones or examine the pancreas
- certain types of medication, such as some antibiotics or chemotherapy medication - acute pancreatitis can be an unexpected side effect of these in a small number of people
- a viral infection - such as mumps or measles
- a complication of cystic fibrosis
- certain rare conditions - including hyperparathyroidism, Reye's syndrome and Kawasaki disease

Severe pancreatitis

Little is known about why some people develop severe acute pancreatitis. Factors thought to increase your risk include:

- being 70 years of age or over
- being obese (a person is considered obese if they have a body mass index (BMI) of 30 or above)
- having two or more alcoholic drinks a day
- smoking

Researchers have also discovered that people with a specific genetic mutation, known as the MCP-1 mutation, are eight times more likely to develop severe acute pancreatitis than the general population. A genetic mutation is where the instructions (DNA) found in all living cells become scrambled, resulting in a genetic disorder or a change in characteristics.

How is it treated?

Acute pancreatitis is treated in hospital, where you'll be closely monitored for signs of serious problems and given supportive treatment, such as fluids and oxygen.

Many people are well enough to leave hospital after 5-10 days.

In severe cases, complications can develop that require specific additional treatment and you'll need to be admitted to a high dependency unit or intensive care unit (ICU). In these cases, recovery may take much longer, and the condition can be fatal.

Fluids

Your body can become dehydrated during an episode of acute pancreatitis, so fluids are provided through a tube connected to one of your veins (this is known as intravenous, or IV, fluid).

In severe cases of acute pancreatitis, IV fluids can help to prevent a serious problem called hypovolemic shock, which occurs when a drop in your fluid levels lowers the amount of blood in your body.

Nutritional support

Although the diet of many people with mild acute pancreatitis isn't restricted, some people are advised not to eat. This is because trying to digest solid food could place too much strain on your pancreas.

Depending on the severity of the condition, you may not be able to eat solid foods for a few days or longer.

If you need to avoid solid food, a feeding tube may be used to provide your body with nutrients. This is known as enteral feeding and often involves using a tube inserted into your stomach through your nose (nasogastric tube).

Oxygen

To ensure your vital organs have enough oxygen, it will usually be supplied through tubes into your nose. The tubes can be removed after a few days, once your condition is improving.

In severe cases, ventilation equipment may also be used to assist with your breathing.

Painkillers

Acute pancreatitis often causes severe abdominal (tummy) pain, so strong painkilling medication will probably be required, such as morphine.

Some of the painkillers used can make you feel very drowsy. If you're visiting someone who is in hospital with acute pancreatitis, don't be alarmed or concerned if they appear drowsy or unresponsive.

Treating the underlying cause

Once the condition is under control, the underlying cause may need to be treated. Treatments for the most common causes of acute pancreatitis - gallstones and alcohol consumption - are outlined below.

Gallstones

If a gallstone is responsible for the pancreatitis, you may need a procedure called endoscopic retrograde cholangiopancreatography (ERCP), or your gallbladder may need to be removed.

Gallbladder removal surgery may be done while you're in hospital, or it may be planned for several weeks' time. Having your gallbladder removed should have no significant effect on your health, other than making it more difficult to digest certain foods, such as fatty or spicy foods.

An ERCP procedure is an alternative treatment for gallstones. It involves using a narrow, flexible tube known as an endoscope, which has a camera on one end.

X-rays guide the endoscope into your digestive system, and surgical instruments are passed down the endoscope to remove the gallstones.

Alcohol consumption

After recovering from acute pancreatitis, alcohol should be completely avoided for at least six months, whatever the cause of the condition. This is because alcohol can cause further damage to the pancreas during your recovery.

If you find this difficult, you'll probably need additional treatment. Treatment options for alcohol dependence include:

- one-to-one counselling
- self-help groups - such as Alcoholics Anonymous
- a medication called acamprosate - which helps to reduce your alcohol cravings

Although most people with acute pancreatitis recover without experiencing further problems, severe cases can have serious complications.

Possible complications

Pseudocysts

Pseudocysts are sacs of fluid that can develop on the surface of the pancreas. They're a common complication of acute pancreatitis, thought to affect around 1 in 20 people with the condition.

Pseudocysts usually develop four weeks after the symptoms of acute pancreatitis start. In many cases, they don't cause any symptoms and are only detected during a computerised tomography (CT) scan.

However, in some people, pseudocysts can cause bloating, indigestion and a dull abdominal (tummy) pain.

If the pseudocysts are small and not causing any symptoms, there may be no need for further treatment, as they usually go away on their own.

Treatment is usually recommended if you're experiencing symptoms or if the pseudocysts are large. Larger pseudocysts are at risk of bursting, which could cause internal bleeding or trigger an infection.

Pseudocysts can be treated by draining the fluid out of the cyst by inserting a needle into it through your skin. This can also be done by carrying out an endoscopy, where a thin, flexible tube called an endoscope is passed down your throat, and tiny tools are used to drain away the fluid.

Infected pancreatic necrosis

In around one in three severe cases of acute pancreatitis, a serious complication called infected pancreatic necrosis occurs.

In infected pancreatic necrosis, high levels of inflammation cause an interruption to the blood supply of your pancreas. Without a consistent supply of blood, some of the tissue of your pancreas will die. Necrosis is the medical term for the death of tissue.

The dead tissue is extremely vulnerable to infection from bacteria. Once an infection has occurred, it can quickly spread into the blood (blood poisoning) and cause multiple organ failure. If left untreated, infected pancreatic necrosis is almost always fatal.

Infected pancreatic necrosis usually develops two to six weeks after the symptoms of acute pancreatitis starts. Symptoms include increased abdominal pain and a high temperature. The infection is treated with injections of antibiotics, and the dead tissue needs to be removed to prevent the infection returning.

In some cases, it may be possible to drain away the dead tissue using a thin tube called a catheter, which is placed through the skin.

Alternatively, laparoscopic surgery (keyhole surgery) can be used. A small cut is made in your back and an endoscope is inserted to wash away any dead tissue. If laparoscopic surgery isn't possible, a cut can be made in your abdomen to allow the dead tissue to be removed.

Infected pancreatic necrosis is a very serious complication. Even with the highest standards of medical care, the risk of dying from organ failure is estimated to be around one in five.

Systemic inflammatory response syndrome (SIRS)

Another common complication of severe acute pancreatitis is systemic inflammatory response syndrome (SIRS). SIRS develops in an estimated 1 in 10 severe cases of acute pancreatitis.

In SIRS, the inflammation affecting the pancreas spreads throughout the body, which can cause one or more organs to fail. It usually develops during the first week after the symptoms start, with most cases developing on the same day.

Symptoms of SIRS include:

- a rise in body temperature to above 38°C (100.4°F) or a fall in body temperature to below 36°C (96.8°F)
- a rapid heartbeat of more than 90 beats a minute
- an unusually fast breathing rate (more than 20 breaths a minute)

There's currently no cure for SIRS, so treatment involves trying to support the body's functions until the inflammation has passed. The outcome depends on how many organs fail. The higher the number of organs affected, the greater the risk of death.

Chronic pancreatitis

If you have repeated episodes of acute pancreatitis, the damage to your pancreas may lead to chronic pancreatitis.

Chronic pancreatitis is a long-term condition that can have a serious impact on your quality of life.

Supporting you

Emotional support

Complicated acute pancreatitis is a difficult condition to manage and it is a long-haul. Hospital stay can be as long as six months or more. There may be psychological consequences of such a severe and long illness. If you or your family have any questions or concerns do speak to a member of the nursing team.

Family support

If you need to be in hospital for a long time, it important that your family are well informed about pancreatitis and how you are progressing. It can be very difficult for the team looking after you to know if each and every interested party has had an opportunity to find this out. There is also the issue of confidentiality. Do tell us if you would like us to speak to members of your family at any stage.

Your nursing care

Whilst you are a patient on Firth 9 you will be given good nursing care. Some of the nursing considerations are:

Bladder

You will probably have a urinary catheter to monitor your fluid balance. The recordings, may be hourly at first, and then every four hours. When medical and nursing staff feel that the time is right the catheter will be removed and we will continue to monitor your urine by asking you to use bedpans (and urine bottles for males).

Bowels

We will monitor when you have your bowels opened but try not to worry if this is not as frequent as normal.

Fluids

Sometimes there are reasons why patients with acute pancreatitis should be kept 'Nil By Mouth' but usually we encourage oral intake. If you are advised to avoid oral intake, please discuss the reasons with one of your doctors.

Patients on restricted fluids need fluid from an intravenous infusion and this will be given through a needle in the hand or arm using a machine that monitors amounts of fluid given.

Nutrition

If required, you will be fed either by a naso-jejunal feeding tube or total parental nutrition (TPN intravenous) feed. A naso-gastric tube is inserted up your nose and down into your stomach with a bile bag attached to the end, any drainage into the bile bag will be emptied and chartered as required.

A dietician will be involved in your care and you will be weighed twice a week. Once you are tolerating fluids, you may benefit from high protein drinks.

Mobility

Every patient is different but mobility can sometimes be restricted. If this is the case assistance will be given to you by physiotherapists and nursing staff. We will also encourage you to sit out of bed to help with breathing and to help to prevent developing a chest infection.

Hygiene

Assistance by nursing staff to have a wash will be needed at first, but when feeling stronger our patients enjoy a relaxing bath with lights, jacuzzi and a choice of calming music.

Blood sugar

We will monitor your blood glucose level as needed and explain any change in your blood glucose monitoring.

We have a diabetes nurse specialist who we can call on when needed.

Medication

We will continue to review your medications. Please ask if you have any queries regarding your medication.

Analgesia

If you feel that your pain is not controlled please inform the nursing or medical staff.

Breathing

The slightest amount of exertion can cause breathlessness. Some patients do require oxygen therapy and regular blood tests to ensure oxygen levels are appropriate.

Pressure areas

Some patients find it difficult to move around in bed. You will be assisted by nurses to ease you onto your side, but sometimes this may be difficult due to a swollen abdomen and/or discomfort. If required a **pressure relieving mattress** will be ordered to help reduce the risk of any sore or broken areas.

Observations

The nurses will carry out observations of temperature, pulse, blood pressure and respiratory rate. This will be undertaken every 4 hours or more frequently if required.

Physiotherapy

Some people find that a walking frame or stick can be helpful for feeling safe and to increase your confidence. If you need help with walking a physiotherapist will provide an assessment.

Occupational Therapist (OT)

If you need any aids or equipment prior to discharge, the ward occupational therapist will assess your needs and order any relevant items for you.

Tertiary hospital transfers

If you are not from Sheffield we will transfer you back to your local hospital when we think that it is safe to do so.

Contact details

Ward Firth 9

- **0114 226 6186**
- **0114 226 6185**

Consultant

The name of the consultant responsible for your care:



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