University Hospitals Dorset
NHS Foundation Trust

Oesophageal varices: screening, surveillance, and treatment

Endoscopy Department Patient information

Who is the leaflet for? What is its aim?

This leaflet is for people who are having a gastroscopy to screen for varices. It will explain:

- what varices are.
- why they are important.
- what a gastroscopy entails.
- what treatment will be recommended if you have varices.

What are varices?

Varices normally happen when there is liver cirrhosis. Liver cirrhosis is scarring (fibrosis) of the liver caused by long term liver damage.

Liver cirrhosis is most often caused by:

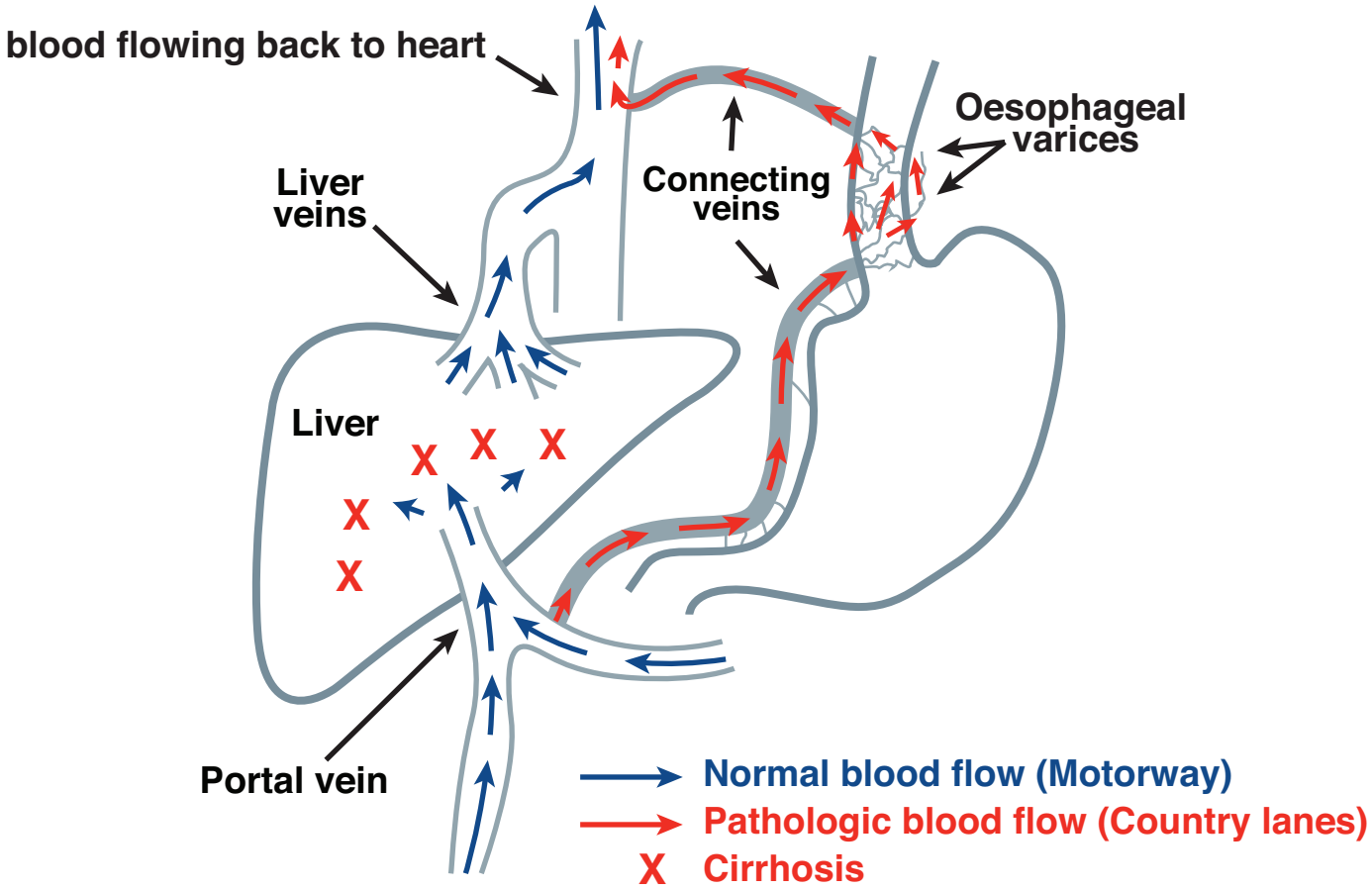
- excess alcohol consumption (alcohol-related liver disease, termed ALD)
- what varices are.
- excess fat within the liver, usually from being overweight (this is called metabolic dysfunction-associated steatotic liver disease (MASLD), previous termed NASH or NAFLD cirrhosis)
- a combination of both alcohol and being overweight (termed ‘METALD’ which is MASLD and increased alcohol intake)

Other causes include:

- chronic viruses (hepatitis B and C)
- autoimmune conditions (e.g. autoimmune hepatitis, PBC, PSC)
- genetic conditions (e.g. haemochromatosis)

Varices happen as a complication of the liver becoming scarred which affects the ‘plumbing’. Normally, blood from the intestines passes into a large vein, called the portal vein. This takes blood to the liver where it is then ‘processed’ (the liver stores nutrients and takes out toxins and waste products). The blood then travels back to the heart - this is the ‘motorway’ route for blood to get back to the heart.

When the liver is scarred it becomes hard and knobbly. The pressure within the portal vein increases, this is called portal hypertension. Blood then struggles to travel via this motorway route and decides to ‘detour’. It uses other veins to travel back to the heart, bypassing the liver.



The Blood travels in veins that are like 'country lanes' back to the heart. Varices are in many ways like bypass roads, bypassing a congested town centre. They are the body's way of helping blood to flow. These veins are not designed to carry this amount of blood. This means they become enlarged and swollen. Varices can form anywhere. They become a problem when they occur in the food pipe (oesophagus) or stomach. This is because these veins can bleed and this is very serious.

How common are varices?

Roughly half of patients who have cirrhosis will develop varices over time.

Why are varices important?

Large varices in the food pipe have a one in three (1 in 3) chance of bleeding. Varices in the stomach have about a one in ten (1 in 10) chance of bleeding.

If your varices bleed, the bleeding can be life threatening. **Varices do not give any symptoms unless they bleed. It is important to find out if you have varices before they bleed. We can then treat them to reduce the risk of them bleeding.**

How do I know if I have varices or not?

To find out if you have varices you need to have a gastroscopy. This will look at the food pipe and the stomach. Scans including ultrasound, CT and MRI can sometimes detect varices but they do not tell us if the varices are pushing into the food pipe or stomach in a way that puts you at risk of bleeding.

Not all patients with liver cirrhosis need a gastroscopy to check for varices. The decision is based on the results of a fibroscan and blood tests. These act as markers of how 'hard/stiff' the liver is. We would also check for varices if your liver were struggling to work as this increases the risk of varices.

Treating the cause of liver disease can help to stop varices from forming. This may include avoiding alcohol or losing weight.

What is a gastroscopy?

During the gastroscopy a long slim tube with a camera on the tip is passed over the tongue to the back of the throat. It then goes down the food pipe, into the stomach and the first part of the bowel.

The gastroscopy takes 10 minutes. It is performed as a day case. Many people manage the test with throat-numbing spray, but you can be sedated. An information leaflet about the gastroscopy test will be sent with your appointment letter.

During the gastroscopy, the doctor will look for varices. They will grade them according to their size. Further treatment depends on the size and site of the varices. If you need treatment with the camera then you would be sedated.

If I have varices what treatments are available?

Grade 1 oesophageal varices (small varices in the food pipe) without "red signs". These are unlikely to bleed. They do not need treatment unless your liver cirrhosis is advanced and struggling to function properly.

Most patients with Grade 1 varices will be monitored with further gastroscopies. It will be stated on your report when the next procedure is due. The time frame between procedures depends on whether the cause of your liver disease is controlled or not. For example, if the cause is alcohol and you no longer drink it will be repeated at 3 years. If you are still drinking alcohol, then it will be 2 years. This is because the risk of varices increasing in size is higher.

Similarly, if your liver cirrhosis is due to being overweight with significant fat within the liver and you remain overweight and/or with poorly controlled type 2 diabetes then it would need repeating at 2 years. If you have made significant lifestyle changes, lost weight then the interval would be 3 years.

If your liver cirrhosis is due to Hepatitis C which has been successfully treated, then the interval would be 3 years.

If your varices have grown in size to become medium or large then we will offer treatment.

Grade 2 or 3 oesophageal varices (large varices in the food pipe), or grade 1 oesophageal varices with "red signs". Large varices in the food pipe have a one in three (1 in 3) chance of bleeding. We will recommend that you start treatment to reduce the risk of bleeding.

There are two methods of treatment. One is a tablet called a beta-blocker. The other is band ligation of the varices ("banding"). This is done during the gastroscopy. Both the betablocker and the banding are equally good at treating varices. They will reduce the chance of bleeding from one in three to one in ten.

Our first line treatment is to use beta-blockers. If someone is unable to have beta-blockers due to other medical conditions (e.g. asthma) then they will need band ligation.

Beta-blockers

- Beta-blockers are used to help prevent bleeding by reducing blood pressure in the varices.
- Carvedilol is the beta-blocker that you are most likely to be started on. The ideal dose is 12.5mg daily and is continued long term. The doctor will start you at a lower dose (6.25mg daily). If you tolerate this, they will increase the dose in a few weeks. Propranolol is also a suitable choice.
- You may experience mild dizziness or fatigue (tiredness) in the first few days or weeks of taking a beta-blocker. If your symptoms are mild, the symptoms are likely to improve over time. It is recommended you keep taking the medication. If your symptoms are bad, you must stop taking the tablet and seek medical help. Splitting the dose across the day, or taking the beta-blocker at night, can reduce these symptoms. Your doctor or nurse may advise you to do this. Please contact the liver nursing team (**0300 019 5329**) if you need to stop taking the beta-blocker or if it is stopped by someone who is not part of the liver team.
- Beta-blockers have other possible side-effects. Carvedilol is normally well tolerated by people with liver disease.
- Beta-blockers may not be suitable for everyone. Beta-blockers can worsen asthma and may not be advised in some heart conditions. Your doctor will take your other health problems into account when discussing treatment options.

Variceal band ligation (banding)

- Banding is a procedure that is performed during the gastroscopy. It involves placing elastic bands on the varices. Banding works by causing scar tissue to form over the surface of the varices. This stops the blood supply so that they disappear. Banding is also used as a treatment for actively bleeding varices.
- You will have a normal gastroscopy to see if banding is needed. The gastroscopy tube will then be removed. A cap with the bands will be placed on the tip of the gastroscopy tube. You will swallow the tube for a second time to allow the banding to occur. This normally takes no more than 15 minutes.
- Banding is not a one-off procedure. You will have a gastroscopy every 2-4 weeks until the varices have been treated. About half of people will need more than three banding procedures to clear the varices. You will need further gastroscopies to make sure that the varices do not return. You will have one at 6 months and then yearly.
- **Most patients are sedated when they have banding as it can be uncomfortable, so if you have been told you will need banding, or if you are asthmatic, then please come prepared to have sedation and do not drive to your appointment**. You will not be able to drive for 24 hours. You will need someone to take you home and stay with you overnight.
- You should have a soft (semi solid) diet for the first 24 hours after banding.
- It is normal to have some mild discomfort in the chest after banding. You may also have mild difficulty in swallowing that lasts for a few days. If your symptoms are bad or last a long time, you should seek medical help. There is a slight risk of bleeding or perforation (hole in the lining of the food pipe) that can make you unwell. The risk of this is low. If you vomit blood or have black, purple, or bloody poo after banding, you should seek medical help.

Gastric varices (varices in the stomach):
The treatment for stomach varices is not as clear cut as for oesophageal varices. Depending on the size and site of your stomach varices, your doctor may advise you to take a beta-blocker. Rarely, the doctor may recommend you have injection treatment of glue into the varices during the gastroscopy.

How will I know if my varices are bleeding?

If your varices bleed, you will vomit blood or have black, purple, or bloody poo. You may also feel lightheaded or collapse. If you have any of these symptoms you should dial 999.

What happens if my varices bleed?

Variceal bleeding is a medical emergency and can be life-threatening. Seek urgent medical attention at the emergency department if you vomit blood, or pass black, tarry poo.

Variceal band ligation is the 'gold standard' of treatment for bleeding varices. Other treatments such as gluing or compressing the varices with a stent or an inflatable balloon (Sengstaken tube) may be needed to stop the bleeding. A procedure called TIPSS (transjugular intrahepatic portosystemic shunt) may be needed in certain cases. This will be for recurrent bleeding from varices or as a first line treatment for bleeding gastric (stomach) varices. Some patients need a blood transfusion.

Treatments such as antibiotics and medications to reduce risk of bleeding, will also be given via a drip and most patients stay in hospital for at least five days if their varices have bled.

If I have varices, are there any other precautions I should take?

1. Drinking alcohol increases the pressure in the varices and can cause bleeding. You should avoid alcohol completely.
2. If you have liver cirrhosis due to fat in the liver, we strongly advise you to lose weight. We would also advise you to exercise more. Make sure other factors linked with fat in the liver, such as diabetes, high blood pressure, and high cholesterol are well controlled.
3. There is a risk of bleeding from varices when flying (both short trips and long haul) due to changes in pressure during the flight. If you are planning on flying, please discuss this with your doctor or nurse. You may be advised not to fly until treatment is established. You will need to tell your travel insurance company about the varices.

Research

There are large multi-centre trials taking place in the UK. These are to help our understanding of how best to treat varices. You may be asked to take part in a research trial. This will by the doctor performing the gastroscopy or by our research nurses. You do not have to take part in the trial. This is your choice.

Further information

Please direct any questions to your regular doctor or nurse which is likely to be:

Liver nurse specialist team: **0300 019 5329** or email: **Liver.NursingTeam@uhd.nhs.uk**

Or the endoscopy team when you have your gastroscopy:

Royal Bournemouth Hospital Endoscopy Department:
0300 019 4668 (Monday - Friday 8am - 6pm)

Poole General Hospital:
0300 019 2772 (Monday - Friday 8am - 6pm)