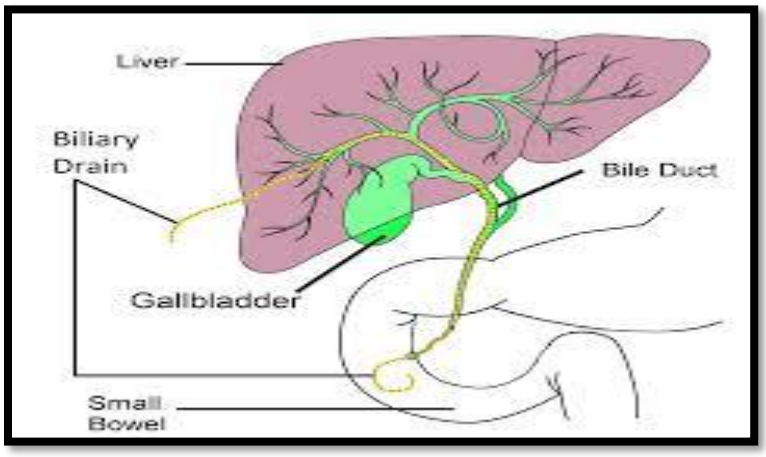
Percutaneous Transhepatic Cholangiogram (PTC) and drainage – Information for patients

This leaflet aims to answer some of the questions you may have about having a Percutaneous Transhepatic Cholangiogram (PTC). It explains the risks and the benefits of the procedure and what you can expect when you come to hospital.

What is percutaneous biliary drainage?

A percutaneous biliary drainage is a procedure in which a small plastic tube (drain) is inserted through the skin into the liver to drain the bile. It is combined with taking a picture of the bile ducts to see where the blockage might be. This is known as a PTC.



Why do you need a PTC and drain?

Biliary drainages are usually performed because you have become jaundiced (yellow) and extremely itchy. This is because bile cannot flow normally into the gut which can make you susceptible to infection. The most common causes for this are gallstones and pancreas or liver tumors, although there are other causes.

You may have already had other tests, such as an ultrasound scan or CT scan which have shown that your bile ducts are blocked. You may also have had an unsuccessful ERCP (endoscopic procedure) and the doctors looking after you have decided that you would benefit by having a drainage tube inserted. This may then be changed for an internal drainage tube at a later stage.

Who carries out the procedure?

A PTC or biliary drainage is carried out by an interventional radiologist, who will be supported by a radiographer and nursing team. All are trained professionals in this type of procedure.

What are the risks of having a PTC?

PTC is a safe procedure, but as with any medical procedure there are some risks and complications that can arise. The radiologist will explain these to you before the procedure. Below is a list of some possible risks:

- If the bile is infected, although you may be on antibiotics, there is a small risk that infection might be released into your bloodstream, making you unwell for a period.
- There is a risk of bleeding, though this is generally very slight. If the bleeding were to continue then it is possible that you might need a blood transfusion. Very rarely, an operation or another radiological procedure is required to stop the bleeding.
- If you are jaundiced you may have problems with blood clotting, causing slight bleeding from the wound site.

Contrast

- PTC and drainage may uses x-ray dye (contrast), and very rarely, a reaction may occur. If you have ever had a test that uses x-ray dye and you have had a reaction to it, you should tell the team before you have your PTC. A reaction may take the form of a rash or itching and very rarely, a more severe allergic reaction can occur. The team are trained to care for you and have measures in place to deal with this safely should this occur.
- If you have had a previous reaction, please let us know, and we can put measures in place to minimise risk from another reaction.

Antibiotics

You will be given a dose of antibiotics before the PTC procedure to reduce the chance of getting an infection of your liver or blood stream.

Radiation

A PTC uses X-ray radiation. Clinical staff consider both the risks and benefits when deciding what procedure is appropriate for you. The benefits of having the procedure outweigh any risk. Clinical staff are responsible for making sure that the dose you receive is kept as low as necessary to aid your diagnosis or treatment.

Pregnancy

If you are in the early stages of pregnancy there is a very small risk of x-rays harming your unborn child. If you think you could be pregnant, or you are trying to get pregnant, please tell us before your appointment. Individuals of ages 10-55 will be asked if there is any possibility of pregnancy by the radiographer before the procedure, and asked to sign a form.

Are there any alternatives?

Your referrer has decided that PTC would be the most useful in your case. The examination will help your referrer to assess you more fully and plan any further treatment that might be necessary. If you would like more information about alternative imaging tests, please speak to the doctor or health care professional managing your care.

Consent

We want you to be involved in all the decisions about your care and treatment. If you choose to go ahead, you will be asked to sign a consent form. This confirms that you agree to have the procedure and understand everything involved. Students/trainees may be present during the examination but only with your verbal consent.

Please remember that you can ask the Interventional Radiologist any questions you have at any time before, during or after your scan.

Pre-assessment

Pre-assessment is not required.

Fasting

Your stomach must be empty and so you will be asked not to eat or drink for 4 hours before the procedure.

What happens before the procedure?

You will receive a letter detailing your admission details, and when you receive your letter, please let us know if you have any of the following:

• Severe allergies?
• Have you had a previous adverse reaction to x-ray dye before?
• Asthma, which is poorly controlled?
• Renal impairment (poor kidney function)?
• Diabetes, which is treated with Metformin therapy?
• Are taking any anti-coagulants (blood thinners)?

A PTC is usually carried out under local anaesthetic. A blood test is also required to ensure your blood clotting level is within the normal range. If your blood clotting is abnormal, you may be given special blood transfusions to try and correct this. If you have any concerns about having blood transfusions, you should discuss these with you doctor.

You will have a cannula in your arm vein so that antibiotics, pain relief and possibly sedation to make you feel relaxed and sleepy can be given. You will be asked to change into a hospital gown and have a tube placed through your nose into your stomach.

You will be brought to the Interventional suite in your bed, where you will be met by a team of nurses, a Radiographer and Interventional Radiologist. The procedure will be explained to you by the Radiologist and you will be asked to sign a consent form. The Royal Victoria Hospital is a teaching hospital and as such university students may be in attendance, with your permission.

What happens during the procedure?

You will be helped to transfer onto the X-ray table and monitors attached to record heart rate and blood pressure. The procedure can be uncomfortable so most patients have sedatives and strong pain killers injected into the cannula in your arm at the start of the PTC procedure.

The procedure is performed under sterile conditions and the Interventional Radiologist and radiology nurse will wear sterile gowns and gloves to carry out the procedure. The skin at the side or front of your abdomen will be cleaned and covered with sterile towels. Local anaesthetic will be used to numb the skin and then a needle passed through the numbed area into the liver using an ultrasound scanner to show the right path to the liver. A small amount of x-ray dye will be injected to allow images to be taken of the bile ducts. Depending on what the X-ray reveals, one of the following will be inserted:

- **External biliary drain:** Is a catheter tube which passes through the skin and into the bile ducts in the liver. The end of the catheter that is in the bile ducts is placed above the blockage. At the end of the procedure, there will be a catheter to the outside of your body which is attached to a collecting bag.
- **Internal biliary drain:** Is a catheter which passes through the skin and into the bile ducts. It is guided across the blockage then one end of the catheter sits in the small intestine and the other end is outside your body and attached to a drainage bag. This lets bile flow in two directions. It can go out to the external collecting bag or into the small intestine. This is the most common type of drainage, however it is not always possible.
- **Internal biliary drainage or stenting:** Is where a metal or plastic stent is placed to hold the blocked area open.

Duration and Location

The procedure itself is performed in the Interventional Radiology Suite, should take approximately 1 hour.

Whilst we try to accommodate all patients at their appointed time, occasionally emergency patients arise which may delay procedure or result in an extend length of time in DSU prior to the procedure. Your procedure may be cancelled due to emergencies cases and you will be offered another appointment as soon as possible.

What happens after the procedure?

You will return to the ward for nursing staff to monitor you post procedure. You will probably stay in bed for a couple of hours. Your stomach may feel a little sore for a few days. Once the bile has drained into the bag your jaundice and itching will improve and you will feel much better.

What happens next?

This will depends on what the cause of your blockage is but it is likely that you will have a second picture taken of the bile ducts. This will be to check whether after draining all the bile the narrowing or blockage can be opened. This may be with a stent or you may have an endoscopy or operation. The doctors looking after you will be able to discuss this with you.

Results

You may be able to discuss your procedure with the performing interventional radiologist once it is complete. The performing interventional radiologist will dictate a formal report on your procedure, and it will be attached to your images on our Radiology Information System (RIS). A copy of the report will be sent by Radiology to the doctor looking after you on the ward. Any follow up will be arranged by that same doctor.

Image sharing

Your images will be electronically stored on the hospital picture archiving system. This data can be accessed throughout the Belfast Health and Social Care Trust and other doctors and health care professionals who are directly involved in your care. The ability to share images and radiological reports will improve the safety and quality of your care by ensuring that the right information is available in the right place at the right time.

To improve the medical services we provide we may also use your data as anonymously as possible for internal audit and medical education. If you would prefer that your data is not used for these purposes, please inform a member of staff when you attend for your examination.

If your data is to be used for research, then a separate consent process will be used. You will be asked for your consent, should this be the case.

Contact us

If you have any queries, we will be happy to answer any questions before or after your procedure and you can contact us on the number given on your appointment letter.

Feedback

We hope you found the information in this leaflet helpful. If it did not tell you what you needed to know or you would like to provide any feedback on your experience, please let us know so that we can make any necessary improvements.

You can provide feedback on your experience:

Telephone: **028 9504 8000** (Monday-Friday: 9am-4pm)

Textphone: **18001 028 950 48000**

By email: compliments@belfasttrust.hscni.net

By email: complaints@belfasttrust.hscni.net

By completing an online form: https://belfasttrust.hscni.net/contact-us/compliments-and-complaints/feedback-form/

Care Opinion

We invite you to share your experience by clicking the following link: https://www.careopinion.org.uk/

or by scanning the following QR code on your smartphone or tablet:

Language and accessible support services

Deaf/ Hard of Hearing

If a Sign Language interpreter is required, please either telephone **028 9615 8900** via the Sign Video remote interpreting service https://signvideo.co.uk/deaf-community/ or email us at MPHAdminFOH@belfasttrust.hscni.net and we will arrange one for your appointment. Please have your H&C number ready when calling or include it in your email. This can be found at the top right corner of any Health and Social Care letters you may have received.

If you are unable to hear on the phone and need to contact us with regards to your appointment you can email us at MPHAdminFOH@belfasttrust.hscni.net

Do you need this information in another format or language?

The Trust has access to interpreting and translation services. If you need this information in another language or format, including Braille, large print, CD, audio tape please contact the telephone number 028 9615 8900 or e-mail address MPHAdminFOH@belfasttrust.hscni.net, and we will do our best to meet your needs.

Polish - Czy potrzebujesz tych informacji w innym formacie lub języku?

Fundusz ma dostęp do usług w zakresie tłumaczeń ustnych i pisemnych. Jeśli potrzebujesz tych informacji w innym języku lub formacie, w tym w piśmie Braille'a, dużym druku, na płycie CD, kasecie magnetofonowej, skontaktuj się z nami pod numerem telefonu lub adresem e-mail 028 9615 8900/ MPHAdminFOH@belfasttrust.hscni.net, a my dołożymy wszelkich starań, aby spełnić Twoje potrzeby.

هل تحتاج هذه المعلومات بصيغة أو بلغة أخرى؟ - Arabic

تستطيع الجمعية توفير خدمات الترجمة الفورية والتحريرية. إذا احتجت هذه المعلومات بلغة أو بصيغة أخرى، بما فيها صيغة برايل Braille أو صيغة بالأحرف الكبيرة، أو في سي دي CD أو في شريط مسموع، يُرجَى الاتصال برقم التليفون أو عبر البريد الإلكتروني 028 9615 8900 / MPHAdminFOH@belfasttrust.hscni.net{،
وسوف نبذل قصارى جهدنا في تلبية احتياجاتك.

Lithuanian - Ar jums reikia šios informacijos kitu formatu ar kalba?

Tarnyba gali suteikti vertimo žodžiu ir raštu paslaugas. Jei reikia šios informacijos kita kalba ar formatu, įskaitant Brailio raštą, didelį šriftą, kompaktinį diską, garso įrašą, skambinkite telefonu arba susisiekite el. paštu 028 9615 8900/ MPHAdminFOH@belfasttrust.hscni.net ir mes padarysime viską, kad patenkintume jūsų poreikius.

Romanian - Aveți nevoie de aceste informații într-un alt format sau altă limbă?

Trustul are acces la servicii de interpretariat și traducere. Dacă aveți nevoie de aceste informații într-o altă limbă sau într-un alt format, inclusiv Braille, tipărire cu caractere de mari dimensiuni, CD, înregistrare audio, atunci vă rugăm să ne contactați la numărul de telefon sau la adresa de e-mail 028 9615 8900/ MPHAdminFOH@belfasttrust.hscni.net, iar noi vom face tot posibilul pentru satisfacerea necesităților dumneavoastră.

Tetum - Ita presiza atu informasaun ida ne'e iha formatu ka lian seluk ka lae?

Fidusiáriu ida ne'e iha asesu ba servisu durubasa no tradusaun. Se Ita presiza informasaun ida ne'e iha lian ka formatu seluk, inklui letra Braile, letra boot, CD, kasete audio, entaun favór telefone númeru ka enderesu e-mail 028 9615 8900/ MPHAdminFOH@belfasttrust.hscni.net, no ami sei halo esforsu tomak atu kumpre Ita-nia nesesidade sira.