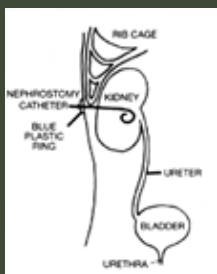


Nephrostomy / Biliary Drainage



What is a Nephrostomy / Biliary Drainage?

Nephrostomy /Biliary Drainage is a procedure in which a catheter is placed through your skin and into your kidney / bile duct to drain your urine / bile. X-ray imaging (fluoroscopy) is used to help guide the catheter into exactly the right place to drain your urine / bile.



Nephrostomy

Preparation for the Nephrostomy / Biliary Drainage

- If you are an outpatient, you need to come to the hospital at least 2 hours before your appointment for admission
- Do not eat for at least six (6) hours before the procedure. You may drink clear fluids.
- You may continue with your current prescribed medicine. If you are a diabetic, your insulin dose for the day of the procedure may be modified.
- If you are taking blood thinning medications, you must tell your doctor when the appointment is made so that it can be stopped at least 3-5 days prior to the procedure.
- Bring all your medications with you.
- Blood tests have to be done close to the day of the procedure.
- On the day of the procedure, an intravenous line (IV) will be placed into one of your veins. This line will be used to give you antibiotics (to prevent infections), other medicines and fluids during the procedure. Pain medication, if necessary, will be given through your IV.

What is the procedure like?

- The area where the needle is introduced will be cleaned.
- A local anaesthetic is injected to numb the skin and deeper tissues in the area where the catheter will be placed.
- A fine needle is inserted through your skin and into your kidney/liver.
- Following insertion, the needle will be inserted into the urine/bile drainage system under fluoroscopy or ultrasound guidance. The position of the needle will then be confirmed by aspiration of the fluid and the injection of x-ray contrast material (x-ray dye). X-ray images of your kidney / bile duct will then be taken. It may be necessary to make more than one pass of the needle in order to enter the kidney / bile duct. A guide wire is placed further into the kidney / bile duct.

- Depending on your condition, a drainage tube may be placed, a tissue sample taken, a stone removed, or a blockage of the kidney / bile duct opened with a balloon catheter or stent placement.
- If a drainage tube (this is about the same size as an IV tubing or a bit smaller) is placed, it will be inserted through the skin and secured in place. The tube will be connected to a drainage bag and your urine / bile will drain out of your body into the bag.
- If an area of blockage is discovered, an attempt to open the blockage may be performed with a balloon catheter. This involves the insertion of a special tube, which has a tiny deflated balloon. The balloon is positioned at the site of the blockage and is then inflated. Following this procedure, if there is still not enough urine/bile flow through the area of blockage, a plastic or metal tube (stent) may be placed at the site. The stent will improve the urine /bile flow.
- If a tissue sample is to be taken or a stone removed, either of these procedures can be performed through the needle access already created in your urinary/biliary system.
- The procedure will take about an hour or two.



Nephrostomy catheter



Biliary catheter

After the procedure?

- You will be transported back to your hospital room and the nursing staff will observe to make sure you are alright.
- If a drainage catheter is inserted, you may discuss with the referring doctor the length of time the catheter need to be present.
- You may eat and drink after the procedure, however, please consult your physician should there be other examinations that require fasting after your procedure.

Care of your nephrostomy / biliary catheter

Infection can occur in two ways. They are skin infection and kidney/biliary infection which occurs when the catheter is blocked.

To minimise skin infection:

- Keep the skin around your catheter dry. You can take showers, but cover the area with plastic wrap. If the area gets wet, dry the skin completely after your shower.
- Keep the skin around the catheter clean. Clean the area every day with cotton swab that has been moistened with peroxide. Always wash your hands before cleaning the catheter site.
- Keep the skin around the catheter covered. Change the dressing if it gets wet.

Skin infection can be recognized by redness, soreness and swelling of the skin around the catheter.

To minimize kidney /bile duct infection:

- For the biliary catheter, flush with sterile saline as recommended, usually once a day.
- If the nephrostomy / biliary catheter drains urine /bile into an external drainage bag, rinse the bag out with water everyday.
- Keep your appointments to have your catheter changed every 2-3 months. Changing the catheter helps to prevent catheter blockage.

Catheter blockage can be recognized by pain and leakage of urine /bile around the catheter onto your skin and catheter dressing. Signs of infection include pain, fever and chills.

Risks and benefits of the procedure

BENEFITS

- The nephrostomy /biliary drainage will relieve your symptoms such as pain, fever or chills.
- By relieving the obstruction, the renal/liver function is restored.
- Before this procedure was developed, patients with blocked ureters / bile ducts had to undergo surgery. In certain instances, surgery is not possible and this is the only method of treatment.

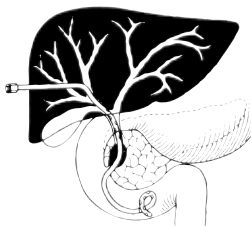
RISKS

The risks are generally extremely low as these procedures are minimally invasive and performed under strict image guidance and with sterile techniques. Nevertheless, as in any procedure in medicine, there are risks involved. These include:

- Pain or discomfort at the needle insertion site.
- Bleeding at the site, internal bleeding, injury to a blood vessel.
- The risk of developing an infection because a foreign body (drainage catheter or stent) is being placed into your body. The development of any infection may result in the need for intravenous antibiotics.
- Risks associated with the x-ray contrast material include an allergic reaction and reduced kidney function.
- Likelihood of other unpredictable risks including death.

Alternative

There may be other procedures that can be performed to further evaluate or manage your kidney / bile duct condition. If you are unsure about having this procedure, (along with a possible stricture dilation, stent placement, tissue sampling, or stone removal) please discuss these other alternatives with your physician.



Biliary Drainage

SERVICE IS AVAILABLE AT:

Radiology Department, Gleneagles Hospital

6A Napier Road Singapore 258500
Tel: (65) 6388 4333 Fax: (65) 6470 5749

Radiology Department, Mount Elizabeth Hospital

3 Mount Elizabeth, Level 2
Singapore 228510
Tel: (65) 6388 4333 Fax: (65) 6732 3368

Department of Radiology & Nuclear Medicine

Mount Elizabeth Novena Hospital
38 Irrawaddy Road, Level 2, Singapore 329563
Tel: (65) 6388 4333 Fax: (65) 6933 0526

www.parkwayhealthradiology.com.sg

BUSINESS REG NO. 32871800M