



Information on Percutaneous Nephrostomy (PCN)

Introduction

1. Percutaneous Nephrostomy (PCN) is an interventional procedure for external drainage of renal collecting system. It is also performed to create tract for inserting devices, which can be used for stone removal, taking tissue for microscopic examination, dilatation of ureteric narrowing and ureteral stenting.
2. This procedure is performed by radiologists with special training in interventional radiology or by urological surgeons.
3. Percutaneous Nephrostomy is usually performed in the Department of Radiology under image guidance, such as X-ray and ultrasound. The procedure can also be performed in operation theatre if there are imaging facilities available.

The Procedure

1. The patient is lying face down or slight slanting position.
2. The puncture site is at the flank region. After injection of local anaesthesia, a needle is advanced under image guidance (either X-ray or ultrasound). When the needle tip is in the collecting system, contrast medium is introduced through the needle in order to show up the collecting system.
3. By means of exchange over guidewire and tract dilatation, the PCN catheter is placed and is connected to a urine bag. Patients should take care not to dislodge the drainage catheter.
4. The procedure usually requires 1 hour.
5. Before, during and after the procedure, your vital signs (like blood pressure and pulse rate) will be monitored. Diet can be resumed if the vital signs are stable.
6. The duration of catheter insertion depends on your clinical condition and the subsequent management of your disease.

Before the Procedure

1. A written consent is required.
2. Please inform our staff before the examination if the patient is or may be pregnant.
3. Check bleeding parameters, to be corrected if problem detected.
4. Except medication, fast for 4 hours before examination.
5. Antibiotic cover prior to examination when necessary.
6. Check history of allergy to contrast medium and steroid cover if necessary.
7. For diabetic patients on Metformin medication, patient should inform medical staff before examination.
8. Set up venous access.
9. Inform doctor if the patient is on anticoagulant or antiplatelet drugs.

Patient's Label

Patient Name: _____
Hospital No: _____
Episode No: _____



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Risk and Complication

1. Small amount of blood in urine (very common, but is self-limiting).
2. Wound pain.
3. Infectious complications.
4. Injury to adjacent organ, including perforation of gastrointestinal tract (<1%), pleural cavity and lungs (1-3%), spleen and liver.
5. Unintended perforation of urinary tract.
6. Bleeding causing haematoma and clot retention, that requires blood transfusion (10-30%), radiological or surgical intervention (1-3%) and even a possibility of nephrectomy (removal of the entire kidney)
7. Conversion to open surgery or other interventional procedure.
8. Sepsis (1-2%).
9. Impairment or loss of kidney function.
10. Allergic reaction to intravenous contrast medium.
 - **Mild reactions:** For example, itching, mild skin rash, nausea, vomiting, feeling of warmth, arm pain, sneezing, coughing, and chest tightness. A few patients may experience delayed reactions usually within 24 hours, which include pain at injection site, itching, rash, painful or swollen salivary glands. The symptoms are usually transient, requiring minimal or no treatment.
 - **Moderate reactions:** These symptoms are more severe and last for longer duration. Patient may also experience rash or urticaria, fever and chills, an increase or decrease in blood pressure and palpitation. Specific treatment and close monitoring are required.
 - **Severe reactions:** The symptoms include shortness of breath, irregular heartbeat, chest pain, severe kidney failure, convulsion, and unconsciousness. If these symptoms occur, the patient will require urgent medical treatment.
 - **Death:** Contrast medium may cause severe allergic reaction and leading to death but it is extremely rare

Disclaimer

This leaflet only provides general information pertaining to this procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

1. The Hong Kong Society of Interventional Radiology Limited, Patient Information Leaflet: Percutaneous Nephrostomy (PCN) (2010)
2. Smart Patient Website by Hospital Authority: Percutaneous Nephrostomy (2020)

Patient's Label

Patient Name: _____
Hospital No: _____
Episode No: _____

Signature of Patient: _____

Date: _____