

**Introduction**

PCNL is one of the treatment options for stone in kidney and ureter. It is a minimally invasive procedure involving the passing of an instrument through the skin into your kidney to remove the stones.

**The Operation**

1. Doctor will first perform cystoscopy and pass a catheter into the ureter for injection of contrast.
2. Doctor will make a small cut on your back and pass a needle through the skin to the kidney under X-ray guidance.
3. Instruments would be inserted through the dilated needle track to break and remove the stone.
4. After the operation, a drainage tube is placed into the kidney and an urine catheter is generally required.

**Preoperative Preparation**

1. Admit 1 day before or on same day of this “elective” operation.
2. Anaesthetic assessment. **Inform your doctors** about drug allergy, your regular medications or other medical conditions.
3. Keep fast for 6 to 8 hours before operation.
4. Empty bladder and change to operation clothes before transfer to operating room.
5. Pre-medication, antibiotic prophylaxis and intravenous line may be required.

**Postoperative Instruction****General**

1. Mild throat discomfort or pain because of intubation.
2. Mild discomfort or pain over the operation site. Inform nurses if more analgesics are required.
3. Nausea or vomiting are common; inform nurses if symptoms severe.

**Wound care**

1. Keep dressing intact.
2. Blood stained urine is expected coming out from the kidney drain and the urine catheter for a few days.
3. Kidney drainage tube and urine catheter will be removed as soon as it is indicated.

**Diet**

You may have intravenous fluid given and doctor will put you back to normal diet when your conditions have improved.

**Common Risks and Complications** (not all possible complications are listed)**Anesthesia related complications**

1. Cardiovascular: myocardial infarction or ischaemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
2. Respiratory: atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease.
3. Allergic reaction and shock.

**Procedure related complications**

1. Common: bleeding, infection, wound pain, residual stone fragments requiring additional or ancillary procedures.
2. Uncommon Risks and Serious Consequences
  - a. Injury to adjacent organ, including perforation of gastrointestinal tract (<1%), pleural cavity and lungs (1-3%), spleen and liver.
  - b. Injury to urinary tract.
  - c. Bleeding causing haematoma and clot retention, that requires blood transfusion (10-30%), radiological or surgical intervention (1-3%) and possibility of nephrectomy.
  - d. Failed percutaneous access or stone retrieval. Conversion to open surgery or other interventional procedure.
  - e. Sepsis (1-2%).
  - f. Impairment or loss of kidney function.
  - g. Mortality (<0.5%).

**Things to take note on discharge**

1. Contact your doctor or a nearby Accident & Emergency Department if you find increasing pain or redness around the wound and discharge from the wound.
2. Take analgesics prescribed by your doctor if required.
3. Resume daily activity gradually.

**Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor. Evangel Hospital reserves the right to amend this leaflet without prior notice. We welcome suggestions or enquiries on the information provided in this leaflet. Please contact our Healthcare professionals so that we could follow up and make improvement.

**Reference**

Hospital Authority: “Percutaneous Nephrolithotomy (PCNL)” (2020)

Smart Patient: [https://www.ekg.org.hk/pilic/public/surgery\\_pilic/urosurg\\_percutaneousnephrolithotomy\\_0197\\_eng.pdf](https://www.ekg.org.hk/pilic/public/surgery_pilic/urosurg_percutaneousnephrolithotomy_0197_eng.pdf) (20-07-2023)