



Introduction

1. Antegrade ureteric stenting is a procedure of placing a ureteric stent via antegrade (forward) approach from the kidney. The stent usually has a J-appearance at both ends. After optimal positioning, its proximal end is within the renal pelvis and distal end is within the bladder.
2. The procedure is mainly used to relieve ureteric obstruction, to divert urine flow and to relieve pressure in the management of fistula of the renal collecting system or ureter.
3. This procedure is performed by radiologists with special training in interventional radiology in the Department of Radiology under image guidance.

The Operation / Procedure

1. The procedure is performed under local anaesthesia using aseptic techniques.
2. Your vital signs (blood pressure, pulse and oxygenation status) will be monitored throughout the entire procedure.
3. The patient is lying face down or slight slanting position.
4. 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.
5. The placement of ureteric stent requires fluoroscopic guidance. After insertion of the ureteric stent, a nephrostomy catheter is placed in renal pelvis.
6. The procedure usually requires 1 hour.
7. The vital signs including your blood pressure, pulse and oxygenation status will be monitored throughout the entire procedure.
8. The nephrostomy catheter will be removed when the internal drainage is satisfactory.
9. When your disease is cured, the ureteric stent will be removed with an endoscope introduced into the bladder. Occasionally, exchange of ureteric stent is necessary when you need the stent for a long period.

Before the Operation / Procedure

1. A written consent is required.
2. Inform medical staff before the examination if patient is or may be pregnant as the examination involves high dose of X-ray that is harmful to a foetus. Pregnancy test may be necessary in case of any doubt if the examination is to be proceed.
3. Inform doctor of history of allergy to food and drugs, and in particular any previous reaction to contrast medium, asthma, urticarial, eczema and allergy rhinitis etc. Oral or intravenous steroid premedication may be needed before injection of contrast medium.
4. Keep fasting for 4 hours prior to the examination.
5. For diabetic patients on Metformin medication, patient should inform medical staff before examination.
6. Check clotting profile for any bleeding tendency, to be corrected if abnormality detected.
7. Antibiotic cover prior to examination when necessary.
8. Set up venous access.

Risk and Complication

Apart from the complications relating to percutaneous nephrostomy (Please refer to "Percutaneous Nephrostomy (PCN)" leaflet), there are complications specific to antegrade ureteric stenting.

1. Loss of stent patency: The overall stent patency is 80%, with most failure occurring within 2 months of placement.
2. Perforation of ureter (rare).
3. Bladder irritation and urinary frequency.
4. Malfunction of stent due to incorrect position or failure of procedure.
5. Infection.
6. Stent migration.
7. Stent fracture (rare).
8. Erosive damage to bladder (rare).
9. Procedure related mortality (rare).
10. The overall adverse reactions related to iodine-base contrast medium is below 0.7%. The mortality due to reaction to non-ionic contrast medium is below 1 in 250000.

Should a complication occur, another life-saving procedure or treatment may be required immediately.

Disclaimer

This leaflet only provides general information pertaining to this operation / 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

The Hong Kong Society of Interventional Radiology Limited, Patient Information Leaflet: Antegrade Ureteric Stenting (2010)