

Introduction

Renal biopsy is done to establish the type of renal disease and its seriousness so that appropriate treatment can be given.

The Procedure

1. The patient shall lie in prone position, back arched up with 1-2 pillows tucked beneath head and low chest.
2. The kidneys are located by ultrasound or X-ray. After administering a local anaesthetic, the surgeon will make a small incision on the back.
3. Guided by ultrasound or X-ray, the doctor will insert a needle through the incision into the kidney for tissue collection. The procedure may be repeated to ensure enough tissue is taken. The doctor may instruct the patient to breath during the procedure. The patient remains conscious throughout the procedure, which can be completed smoothly with his/her cooperation.

Before the Procedure

1. The patient shall go to the hospital one day before the procedure. Fast 4-6 hours before the procedure.
2. Signing the Surgical Consent Form after the physician has given explanation on the reasons, procedures and possible complications of the surgery.
3. Sampling blood for laboratory test to ensure safety of the biopsy.
4. Skin cleaning and sterilization. Removal of hair in the lumbar region, if necessary.
5. If necessary, analgesic or tranquilizing drug will be administered to patient in accordance with doctor's instruction 30 minutes before the biopsy.
6. Patient learns how to inhale and exhale deeply so that he/she can hold the breath in an exhaling state.
7. Empty bladder before the biopsy to reduce sensation of fullness.

After the Procedure

1. Immediate care Health care professionals will apply sterile spray and dressing to the wound, which will then be covered with pressure bandage to prevent bleeding.
2. Patient shall lie down on his back and remain bed-rested for at least 24 hours to minimize the risk of bleeding. To prevent bleeding, he/she should avoid vigorous body movements.
3. For early detection of blood loss, a nurse will check the patient's blood pressure frequently. The patient's urine will be examined to see if there is profuse bleeding.
4. Except for some special cases, the patient should drink more water (at least 2000ML daily) to guard against urinary obstruction.

Common Risks and Complications

Complications include:

1. Death: occurrence rate: < 0.1%.
2. Mild haematuria: so mild that it is invisible to the naked eye but can be detected with a microscope or test paper. Occurrence rate: 100%. No obvious symptoms and not serious.
3. Serious haematuria: occurrence rate: 3-5%. Condition usually improves in 24 hours. May last for a few days.
4. Perinephric hematoma: occurrence rate: 90%. No clear symptoms. Heals in 2- 3 months.
5. Anomalous arteriovenous fistula: occurrence rate: 15-18%. No clear symptoms and not serious. Heals in 2-10 months.
6. Other rare complications: perforation of another organ such as the intestines and spleen, pneumothorax and wound infection.

Complications are rare (apart from slight wound pain) and the occurrence rate is 2- 3%. Bleeding is the most common and more serious type of complication, and there are cases when blood transfusions are needed. If bleeding is uncontrollable, a surgical operation will be needed to stop it (occurrence rate:<0.2%). For more serious cases, surgical kidney removal is necessary (occurrence rate: 0.06%).

Things to take note on discharge

1. Patient should not do any vigorous physical exercise or activity during the first two weeks to prevent secondary bleeding. He/she should keep the abdomen free from pressure (if possible, do not cough or sneeze).
2. If there is lumbar pain, hematuria, dizziness or any signs of bleeding, consult the health care professionals immediately.

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: "General Information on Renal Biopsy" (2021)
Smart Patient: https://www.ekg.org.hk/pilic/public/IM_PILIC/IM_RenalBiopsy_0042_eng.pdf (20-07-2023)