

Introduction

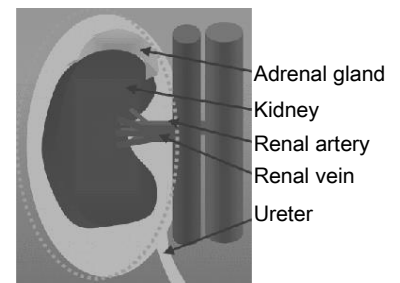
A nephrectomy is an operation to remove one of the two kidneys that sits at the back of the abdominal cavity. The kidneys make urine by filtering waste products and excess fluid from the blood. A nephrectomy involves removing an entire kidney (see Diagram 1) through an incision in the flank (the side of the body between the ribs and the hip). In a small number of cases if a person has poor kidney function or if they only have one kidney, a partial nephrectomy may be done which means only part of the kidney is removed. (see Diagram 2)

A nephrectomy is usually done for cancer of the kidney or because of a non-functioning kidney. In the case of kidney cancer a **radical nephrectomy** is done, whereby the entire kidney, adrenal gland, protective shell are removed with surrounding fat and attached vessels.

For non-functioning kidneys, which are either caused by large stones, a lack of blood supply or abnormal kidney structure, a **simple nephrectomy** is done. With a simple nephrectomy only the kidney itself is taken. A simple nephrectomy is usually done to avoid recurrent infection and the possibility of severe illness because of infection.

The Operation

1. General anesthesia with muscle relaxation is required.
2. The operation is usually done through a flank incision. In a small number of cases when cancer is suspected, higher or lower incision or an abdominal incision may be necessary.
3. The blood supply to the kidney is then isolated and tied off and the kidney is removed either with or without its surrounding structures. The wound is then closed with staples or stitches. A wound drain may be inserted to drain any wound ooze. This is usually stitched in place and stays in for few days.
4. A catheter (drainage tube which drains urine from the bladder) is also put in to monitor the urine output from the remaining kidney. The catheter usually stays in for 1-2 days, or until you are up and about.
5. If you have had a partial nephrectomy, you may have a stent which is a plastic tube that runs from the kidney to the bladder. This helps the kidney to heal. It will be removed under local anaesthetic in the outpatient clinic about 4-6 weeks after your surgery.
6. Nephrectomy is a relatively common operation that takes approximately 2-3 hours to perform. Gross morbidity, abnormal body build, or prior abdominal surgery can contribute to greater technical difficulty of the procedure.



↑ 1. Curative Nephrectomy – removal of kidney, adrenal gland, ureter and surrounding fat.



↑ 2. Partial Nephrectomy

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.
6. Prophylaxis against deep vein thrombosis may be indicated for patients at risk.

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. There may be slight bleeding at wound.
2. The drains and tubes will usually be removed, by the second or third day after surgery.
3. All the skin sutures and wound staples usually stay in for 7 to 10 days. Patient will be given instruction for removal of skin sutures if required.

Diet

In general, you can drink on first day and eat on second day after surgery.

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. Significant bleeding and haematoma formation requiring blood transfusion.
2. Injury to adjacent organs including major blood vessel, gastrointestinal tract, pancreas, liver and spleen, requiring intervention including operation.
3. Entry into the lung cavity requiring insertion of a temporary drainage tube.
4. Secondary haemorrhage.
5. Wound infection, pneumonia, urinary tract infection.
6. Urinary fistula, pancreatic fistula.
7. Intestinal obstruction or paralytic ileus.
8. Decreasing renal function. Dialysis may be required.
9. Bulging of the wound due to damage to the nerves serving the abdominal wall muscles.
10. Mortality (1-2%).

Things to take note on discharge

1. Full recovery from surgery usually takes around 6 weeks.
2. Keep active, gentle exercise such as walking.
3. Eat and drink as usual at home.
4. No heavy lifting, straining, gardening for up to 6 weeks or until advised by your doctor.
5. Attend follow up visit by the surgeon in 2 to 4 weeks to discuss your management plan. Such as further therapy of cancer if pathology report conferred malignancy.
6. You should seek medical advice at the nearest Accident and Emergency Department if you noticed signs of infection (increase in redness, or heat around the wound), excessive bleeding, or severe pain.

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 Nephrectomy" (2022)

Smart Patient: http://www.ekg.org.hk/pilic/public/surgery_pilic/urosurg_nephrectomy_0196_eng.pdf (12-07-2023)