

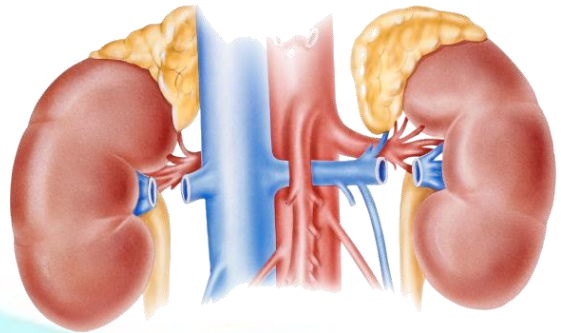


Operation Information

Adrenalectomy (Open/ Laparoscopic)

Introduction

The adrenal glands are two small organs which are located at the top of each kidney. They secrete hormones that help regulate many bodily functions, including immune system, metabolism, blood sugar levels, and blood pressure control. Excess hormone production (either from adrenal tumor or tumor from other origin) and benign or cancerous tumors on the adrenal glands are the most common reason for an adrenalectomy.



There are two types of adrenalectomy: Open adrenalectomy and Laparoscopic adrenalectomy. It is an organ-removal surgery that removes one or both of the adrenal glands. If only one adrenal gland is removed, the remaining adrenal gland can take over and provide full functions. The doctor will discuss the treatment plan with you for the best and good fit option accordingly your condition.

Source:
https://www.upstate.edu/whatsup/images/2016/03/istock_0000178_41982_large-copy.jpg?w=640

Outcomes

This operation is a surgical intervention to remove the problem adrenal glands which can correct any hormone imbalance. If the tumor is cancerous, it can be controlled before further deterioration or invading into any other part of the organ.

Procedures

Open adrenalectomy

1. The operation is performed under general anaesthesia.
2. Make a large incision under the ribcage or on the side of the body.
3. Access to the glands and the blood vessels attached to them.
4. Disconnect each adrenal gland from the surrounding blood vessels and tissue.
5. Tie off the blood vessels to prevent excessive bleeding, and take the adrenal glands out of the body.
6. Rinse the abdominal cavity with a sterile saline solution before closing the wounds.
7. The wound is closed with sutures.

Laparoscopic adrenalectomy

1. The operation is performed under general anaesthesia.
2. Carbon dioxide gas is used to distend the abdomen.
3. Make three to four small incisions in the abdomen and near the belly button to access the adrenal glands.
4. Inserts a tiny camera and surgical instruments through the small incisions.
5. Disconnect the adrenal glands and cauterize the blood vessels.
6. Remove the adrenal glands from the body.
7. The wound is closed with sutures.

Possible Risks and Complications

1. Wound pain
2. Wound bleeding
3. Wound infection
4. Deep vein thrombosis
5. Lung problems, such as pneumonia, atelectasis, pulmonary embolism and etc.
6. Damage to other nearby organs, such as spleen and pancreas
7. Heart attack or stroke
8. Allergic reaction
9. Ileus
10. Incomplete wound healing
11. Scarring
12. Adrenal insufficiency (rare)

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

Pre-operative Preparations

1. Good hygiene can prevent surgical wound infection. Therefore, we advise you to clean up yourself on the day of operation.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia. Please inform doctor if you are taking medications that affect blood coagulation such as Aspirin, Warfarin, Xarelto or Pradaxa, nonsteroidal anti-inflammatory drug (NSAID) such as Ibuprofen, Naproxen and Chinese medication.
4. Routine tests such as blood test, urine test, X-ray, electrocardiogram (ECG), CT or MRI scan will be performed before the operation as ordered by the doctor.
5. Clipping on the operation site may be required and nurse will supply surgical soap to you for washing the operation site as necessary.
6. No food or drink six hours before operation.
7. Please change into a surgical gown after removing all clothing including undergarments, dentures, jewellery and contact lenses.
8. Please empty your bladder before the operation.

Post-operative Instructions

General

1. After general anaesthesia, you may:
 - experience discomfort in the throat after tracheal intubation.
 - experience side effects of anaesthesia includes feeling tired, drowsy, nausea or vomiting. Inform the nurse if symptoms persist or worsen.
2. Your hormone balance will be a major concern for the doctors after the operation. You may require specific lab tests to check your hormone level.
3. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor.
4. An indwelling urine catheter will normally be removed in the second day after the operation.
5. A drain may be inserted, it will be removed within few days after the operation.
6. An intravenous infusion will be given to replenish fluids and administer medications.
7. (For laparoscopic adrenalectomy) Some of the gas used to inflate your abdomen can remain inside your abdomen after the operation, which can cause:
 - Bloating
 - Abdominal cramping
 - Shoulder pain, as the gas can irritate your diaphragm which might affect nerve endings in the shoulder.Therefore, early mobilization would encourage relieving those symptoms.
8. You will normally be discharged 2-5 days after the operation, depending on your condition.

Wound Care

1. The wound will be covered with a sterile dressing which must be kept dry.
2. You may take shower after the operation but must ensure that the dressing is waterproof and remains clean and dry.

Diet

1. A normal diet may be resumed as instructed after recovery from anaesthesia.
2. After recovery from operation, you are advised to consume adequate fluid and fiber diet to avoid constipation.

Advice on Discharge

1. Please comply with medication regime as prescribed by your doctor.
2. Heavy lifting, straining or strenuous exercise should be avoided for at least two to four weeks.
3. Sexual intercourse may be resumed three to four weeks after the operation as follow doctor's advice.
4. If both adrenal glands are removed, then you will need to be on life-long steroid treatment as follow doctor's instruction.
5. Immediately consult your doctor or return to hospital for professional attention in the event of increasing pain, redness or discharge from wound, shivering, high fever over 38°C or 100.4°F, or any other unusual symptoms etc.
6. If the adrenalectomy was performed due to a cancerous mass, then you may also be followed up by an oncologist for further treatment.
7. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification

