仁安醫院
UNION HOSPITAL

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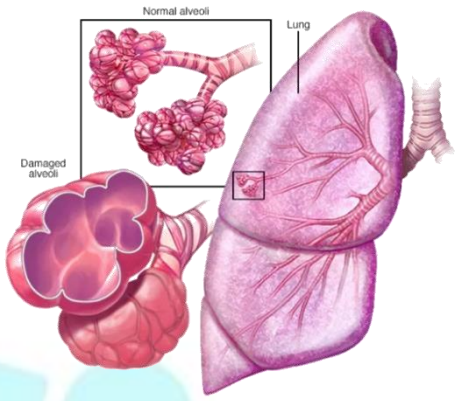
Operation Information

Bullectomy

Introduction

A bulla refers to a dilated air sac in the lung parenchyma measuring more than 1 cm. A bulla that takes up more than one third of the hemithorax is regarded as giant bulla. The most common cause of a lung bulla is chronic obstructive pulmonary disease (COPD), which is a chronic inflammatory lung disease that causes obstructed airflow from the lungs.



Source: https://www.mayoclinic.org/-/media/kcms/gbs/patient-consumer/images/2013/11/15/17/40/ds00916_-ds00296_im04560_mcdc7_emphysemathu_jpg.jpg

Emphysema is one of the common conditions that contributes to COPD. It causes air sacs to become over inflated. When air sacs get extremely large, these giant bullae press on the healthy lung, preventing the healthy air sacs from working properly which in turn causing dyspnea. In this case, bullectomy will be considered.

Outcomes

This operation helps to remove the bullae which in turn restore better lung function and breathing of the patient.

Procedures

Your doctor may perform the bullectomy in one of the two ways:

Thoracotomy:

1. The operation is performed under general anaesthesia.
2. The doctor will make a surgical cut between two ribs, it will go from the front of the chest wall to your back, passing just below the armpit. The ribs will be separated.
3. The lung on the operated side will be deflated so that air will not move in and out during surgery. Use the lung of another side for breathing during the time.
4. The bulla or bullae will be removed manually.
5. After resection, one or two chest tubes are placed into the surgical area to allow draining of excess fluid and air from around the lung.
6. The wound is closed with stitches.

Video-assisted thoracoscopic surgery (VATS):

1. The operation is performed under general anaesthesia.
2. Three to four small incisions are made in the chest near the region of the bullae.
3. A thoracoscope and surgical instruments are inserted into the incisions.
4. The doctor is guided by images of the operative area transmitted from the thoracoscope onto a computer monitor during the operation.
5. The bullae will be removed from the lung through the small incisions.

6. After resection, one or two chest tubes are placed into the surgical area to allow draining of excess fluid and air from around the lung.
7. The wounds are closed with stitches.

Possible Risks and Complications

1. Wound bleeding
2. Wound infection
3. Pneumothorax (Presence of air in the chest cavity)
4. Subcutaneous emphysema (Presence of air or gas in subcutaneous tissues)
5. Heart attack
6. Deep vein thrombosis
7. Stroke

** 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. We strongly recommend that you stop smoking prior to surgery.
2. Good hygiene can prevent surgical wound infection. Therefore, we advise you to clean up yourself on the day of operation.
3. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
4. 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.
5. In general, you may have a blood tests, pulmonary function test (breathing test), CT scan, electrocardiogram, etc. before the operation.
6. An anti-embolism stocking may be arranged according to doctor's prescription to prevent post-operative deep vein thrombosis.
7. Nurse will supply surgical soap to you for washing your whole body, especially your chest area and axilla.
8. Your doctor may use surgical marker to mark the side you are to be operated on and please do not wash off the marking.
9. No food or drink six hours before operation.
10. Please change into a surgical gown after removing all clothing including undergarments, dentures, jewellery and contact lenses.
11. Please empty your bladder before the operation.

Post-operative Preparations

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. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor.
3. You may be placed on a device that provides pain medication whenever you press a demand button (called a PCA, or Patient Controlled Analgesia) if needed.
4. You should use a semi-recumbent position to facilitate lung expansion and change position regularly to facilitate drainage from the chest cavity.
5. Oxygen may be required for a short period of time. It will be weaned off gradually.
6. A chest drain is used to drain out the body fluid, blood and air. You must ensure the drainage tube is stayed in place. Do not pull, twist, clamp and apply pressure on the drainage tube.
7. The chest drains will be removed after the operation according to individual's condition. Usually 1-2 days.
8. You may have an indwelling urinary catheter in your bladder, nurse will measure and monitor your urine; this would normally be taken out the next morning.
9. Physiotherapists may be referred as doctor's advice to instruct you how to cough and help you to expand your lungs to prevent a chest infection.
10. The hospital stay is typically for 2-3 days which may vary with health condition of the patient.

Wound Care

1. The wound will be covered with a sterile dressing which must be kept dry.
2. The wound dressing will be changed according to doctor's order.
3. 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. You are advised to consume adequate fluid and fiber diet to avoid constipation.

Activities

1. Early mobilization can promote a rapid postoperative recovery. You may follow doctor's instruction to resume light activities post-operatively.
2. Avoid heavy lifting and strenuous activity until you are allowed by the doctor.
3. Avoid travel by airplane for at least three months after the procedure is recommended.

Advice on Discharge

1. Please comply with the medication regime as prescribed by your doctor.
2. You must ensure the wound is kept clean and dry, change the dressing if necessary (as instructed by doctor).
3. Regular activities can be resumed gradually along with a balanced diet.
4. Immediately consult your doctor or return to hospital for professional attention in the event of severe chest pain, shortness of breath, bleeding, drainage from your incision, increased swelling and tenderness around incision, coughing up blood, shivering, high fever over 38ºC or 100.4ºF, or any other unusual symptoms, etc.
5. 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.

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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