

Mediastinoscopy and Mediastinotomy

A patient's guide

This leaflet has been written to provide information about the surgical procedures called Mediastinoscopy and Mediastinotomy. We hope the leaflet will answer some of the questions or concerns you may have.

What are a mediastinoscopy and mediastinotomy?

These procedures are performed to examine the lymph nodes that are found in the space in the centre of the chest between the lungs called the mediastinum.

The mediastinum is the area behind the sternum (breastbone), which contains the heart and its major blood vessels, some of the lymph nodes, the trachea (windpipe), the oesophagus (the tube through which you swallow your food) and the thymus gland.

Lymph nodes are small, bean-shaped glands that are part of the lymphatic system, this carries fluid, nutrients, and waste material between the body tissues and the bloodstream. Lymph nodes are filters along this system.

Their job is to filter out and trap bacteria, viruses, cancer cells and other unwanted substances, and to eliminate them from the body.

A biopsy of these lymph nodes helps to identify disease processes that may be present in the mediastinum and lungs.

Why is a mediastinoscopy/mediastinotomy performed?

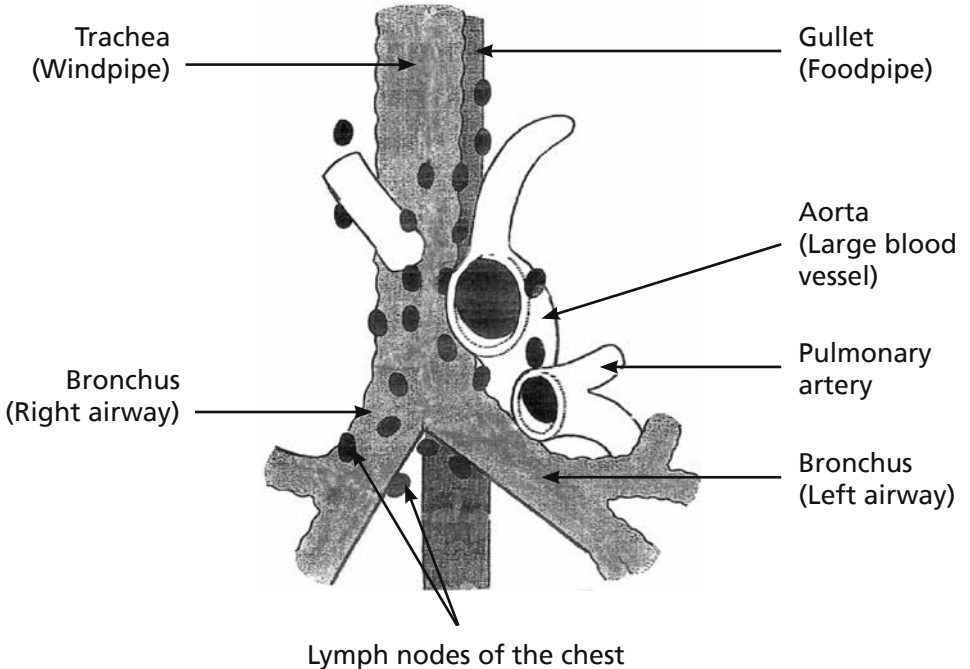
A mediastinoscopy is performed to see, examine and biopsy tissue and lymph nodes (glands) in the mediastinum.

A mediastinotomy is performed when the lymph nodes on the left side of the chest need to be examined, these lymph nodes cannot be reached by the mediastinoscopy.

Reasons to access lymph nodes

Lymph nodes can be enlarged by:

- Infection or inflammation.
- Cancer of the lungs, air way and/or structures in the mediastinum.
- Lymphoma - a type of cancer of the lymphatic system eg. Hodgkin's disease.
- Sarcoidosis - a condition that causes fleshy swellings in the tissue around organs eg. liver, lungs and spleen.
- Thymoma - a tumour of the thymus gland (this is situated behind the breastbone and is part of the immune system).
- Mediastinoscopy/mediastinotomy provides a diagnosis in 97% of cases.



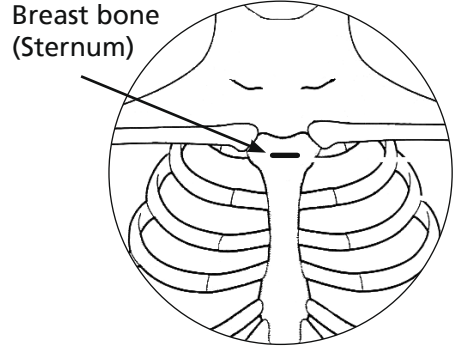
How are the procedures performed?

Mediastinoscopy/mediastinotomy are both performed under a general anaesthetic.

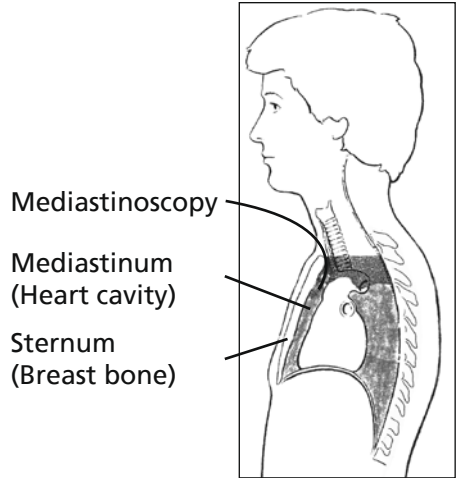
Mediastinoscopy

Once you are fully asleep, a small incision (2.5cms) is made at the notch at the top of the breastbone.

The surgeon then gets access to the lymph nodes with the mediastinoscope. This instrument is a narrow, hollow tube with a light attached. It allows the surgeon to see inside the mediastinum. Other instruments are inserted through the hollow tube to take samples of tissue from the lymph nodes or mass, these are then sent for analysis.

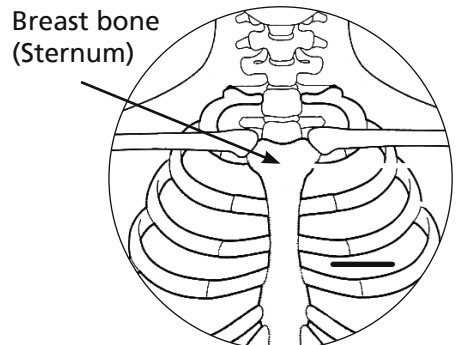


Mediastinoscopy



Mediastinotomy

A mediastinotomy is performed when the lymph nodes on the left side of the chest need to be examined. An incision (approximately 5cms), is made on the left side of the chest at the front near the top.



Anterior Mediastinotomy

How long does the surgical procedure take?

The procedure normally takes about 30 minutes plus 30 minutes for the anaesthetic.

Risks of the procedure

As with any surgical procedure, complications can occur.

Possible complications of mediastinoscopy/mediastinotomy with the most common first:

1. Postoperative discomfort/pain - there may be some mild discomfort around the incision which responds well to simple painkillers eg. Paracetamol.
2. Bleeding - there may be some swelling and bruising around the incision for a few days. Bleeding is not usually a problem unless you are on drugs which prevent normal blood clotting or have a hereditary bleeding condition. You will be given advice before the procedure on when to stop blood thinning drugs. Significant bleeding is rare <1%.

3. Pneumothorax - air in the space between the lung and chest wall (pleural space). If air becomes trapped in the pleural space, the lung can collapse. This is treated by inserting a chest drain, and usually settles in a few days. This is also unusual.

4. Hoarseness of the voice - one of the nerves which supply the voice box runs alongside the windpipe (trachea). It can be bruised during the mediastinotomy causing hoarseness of the voice. This usually recovers within six weeks but in a small number of cases it can be permanently damaged.

5. Infection - the surgical incision can become infected causing inflammation, swelling and discharge.

These are relatively rare. The National complication rate is 1.3% to 3%. Death (mortality) is very rare.

Preparation for mediastinoscopy/mediastinotomy

You may be invited to attend a Thoracic Pre-admission clinic prior to your admission date, to prepare you for the procedure.

Normally you will be admitted to hospital the day before or the morning of the procedure.

You will meet a doctor, a clinical nurse specialist or surgical nurse. The following investigations will be either undertaken at the Thoracic Pre-admission clinic or when you are admitted onto the ward.

Doctor

They will ask you questions about your present symptoms and past medical history. They will also do a physical examination to ensure that you are well enough to undergo the procedure. They will explain the procedure to you; - the risks, benefits, any alternative treatment and investigations - before asking you to sign a consent form, if not done before. The consent form indicates that you agree to the operation being

performed and understand what is involved.

Clinical nurse specialist/surgical nurse

They will explain/reinforce the information you have been given about mediastinoscopy/mediastinotomy and the care you will receive after the procedure.

The following investigations will be undertaken at either the Thoracic Pre-admission clinic or when you are admitted onto the ward:

- **Chest X-ray** - this will look at the size and shape of your heart and the general condition of your lungs.
- **Electrocardiogram (ECG)** - this is a test that will measure the electrical activity of your heart eg. the rate and rhythm.
- **Blood tests** - blood samples are taken to assess how certain organs are working and to identify your blood group.

- **MRSA screening**

MRSA (Methicillin Resistant Staphylococcus Aureus) is an antibiotic-resistant form of a common bacteria called staphylococcus aureus. This can grow harmlessly on the skin and in the nose in around one in three people in the UK. Healthy people may not even be aware that they have MRSA. However if the bacteria gets into the body through a surgical wound it can cause a serious infection. Screening for MRSA is carried out by taking swabs from your nose, throat and perineum or groin.

- **Base line observations**

Your temperature, pulse, blood pressure, oxygen levels, height and weight are recorded.

We will take a history of your medication; please bring either all your medication to the Pre-admission clinic or an up to date copy of your repeat prescription. If you are taking any blood thinning medications (anticoagulants) - aspirin, warfarin, clexane or clopidogrel -, you will be asked to stop these prior to your admission.

Day of the procedure

- You will not be able to eat or drink prior to the procedure. This helps to reduce the risk of you inhaling any food whilst you are anaesthetised.
- You will have three identity bands placed on your wrists. If you are allergic or sensitive to any medications, latex, iodine etc these wrist bands will be red.
- You will be asked by the ward nurse to put on a white gown. Your legs will be measured and fitted with some elasticated (TED) stockings to reduce the risk of developing a blood clot.
- You will be accompanied to the anaesthetic room, where monitoring equipment will be attached to your chest. This is used by the anaesthetist to monitor your heart rate, blood pressure, and blood oxygen supply during the procedure.
- The procedure is then performed as described earlier in this leaflet.

After the operation

After the procedure you will be moved to the recovery room.

- The nurse will be observing your wound for signs of bleeding and monitoring your blood pressure, heart rate, respiratory rate and oxygen levels. Once your condition is stable you will be transferred to the ward.
- If you have had a mediastinotomy you will normally have a chest drain in place. The nurse will be observing the amount of drainage and any air bubbling in this drain.
- Following a mediastinoscopy most patients go home the next day, however some patients will feel well enough go home the same evening.

Discharge

You will be advised to keep the wound clean and dry.

- You should be able to eat a normal diet unless advised otherwise.
- You will be given some pain killers to help relieve any discomfort.

Please report any of the following to your General Practitioner.

- Fever and or chills.
- Redness, swelling, bleeding or any other discharge from the wound.
- Increased pain around the wound.
- Any changes in voice or difficulty breathing.

Notification of results

The results of the biopsies are normally available 7-10 days after the procedure.

Patients that have had a mediastinoscopy for cancer staging will be contacted by the clinical nurse specialist with an outpatient appointment.

Patients having a mediastinoscopy for other reasons will be given an appointment to see their surgeon or referring physician.

Contact details

Clinical Nurse Specialist

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