Tracheal Resection

Welcome to the Thoracic Surgery Department at Queen Elizabeth Hospital Birmingham. The Thoracic team is a surgical team dealing with problems involving the chest, for example, the lungs, airways or heart.

We hope that this information leaflet can answer some questions or queries you might have about your procedure. The information provided in this leaflet will be discussed with you in full before your admission.

What is tracheal resection?

Tracheal resection is removal of part of the major airway (trachea) to the lungs. This is done when narrowing (stenosis) of the airway is causing problems. Smaller procedures will have been done before planning tracheal resection, including bronchoscopy and dilatation.

What does the surgery involve?

A horizontal cut is made on the neck. The narrowed part of trachea is cut out and the two remaining ends of the trachea are stitched back together. Another cut may be needed on the chest, if the narrowing is very low down or very long. This may be a cut on one side below the shoulder blade between the ribs (thoracotomy) or vertical cut through the breastbone (median sternotomy). The surgeon and anaesthetist need to be specialists to be able to do airway surgery working as a team. The surgery is only done at specialist hospitals. You will need a thorough assessment and to be healthy enough to cope with the operation before tracheal resection is recommended.

What are the alternatives to surgery?

It is your choice whether to go ahead with surgery or choose another kind of treatment. We will respect your wishes and support you in choosing the treatment that suits you. You are always welcome to seek a second opinion.

If you do not want surgery or are not fit enough to have an operation other options may include:

- Repeat bronchoscopy and dilatation
- Long term tracheostomy

If the narrowing is due to a cancer options may include:

- A stent in the trachea
- Radiotherapy
- Palliative care

You can discuss treatment options with your hospital doctors, your Lung Cancer Nurse and your GP.

What are the risks?

The risks here are a guide; your own risk may vary. You should discuss the risks and benefits of surgery with your surgeon, especially if you are worried.
The following are risks of tracheal resection:

Minor more common risks

A pneumothorax (collapsed lung) may happen, this is treated with a chest drain.
Your kidneys may not work as well after surgery but this is usually temporary and gets better with extra fluid.

Major less common risks

The narrowing may come back, the risk of this depends on the cause of the narrowing. Extra tissue (granulations) may grow at the join; bronchoscopy and removal of tissue can be done to treat this.

Hoarse voice

The nerves to the voice box run along the trachea, care is taken to protect the nerves but they may be damaged. This would cause temporary or permanent voice changes.

Dehiscence

The join between the two ends of the trachea may break down. This may require further surgery and is the biggest concern at the start of recovery after surgery, this problem may be fatal. Symptoms of breakdown include fevers, difficulty breathing and neck and chest swelling. The risk of death after tracheal resection is one in 100, this also means 99 in 100 people recover from the surgery.

General risks of thoracic surgery

Pain

It is normal to have pain after this operation. This is often at the back of the neck due to having your head down for a long period of time. A supportive pillow such as a travel pillow may help you to relax your neck and reduce pain. Regular pain relief will be given to control the pain. It usually improves quickly once the chin stitch is taken out. Very occasionally, pain does not settle (long lasting or chronic pain), and you may need to see a specialist at a pain clinic.

Bleeding

Following chest surgery some blood loss into your drain is normal. Occasionally a blood transfusion will be required, if this is needed further information will be given to you.

Chest Infection

This occurs in a small number of patients.

Physiotherapy, early mobilisation and adequate pain relief can help you to be more mobile and clear chest secretions; this reduces the risk of this occurring. If you develop a chest infection you may need extra physiotherapy, different antibiotics and to stay in hospital for a little while longer.

Wound Infection

Showering before your surgery, frequent hand washing and using the alcohol rubs provided will reduce this risk. Some patients will still develop a wound infection needing antibiotics and wound dressings. This may require help from the district nurses to dress the wound once you have been discharged.

Fast Heartbeat
With the heart being close the thymus, the heart can start going in an irregular and faster beat, this is called atrial fibrillation (AF). This is usually controlled with medication. If AF continues beyond a few days you may need to have medication to thin the blood, such as warfarin.

Constipation
Painkillers often cause constipation. To help you should have a healthy diet, drink enough fluid, take laxatives and walk around.

Sepsis
Sepsis arises when our body's response to infection injures its own tissues and organs. It may lead to shock, multi-organ failure, and death.

Intubation and ventilation
A chest infection may cause you to have shortness of breath which may be severe enough to require help from a ventilator machine. This can be with a face mask with you fully awake. It may also be need via a tube in your windpipe with you under sedation. If you need help breathing via a tube for a long time, it may be better to have a temporary tracheostomy. This is a tube put in through the neck which is removed once breathing improves.

Blood clots
These can occur in the legs (deep vein thrombosis) and then travel to the lung (pulmonary embolism). The risk is greatly reduced by wearing support stockings, having daily injections of a blood thinning drug, and early mobilisation. Special massaging boots, called flowtron boots, are also put onto your legs during your operation.

Heart Attack or Stroke
This can occur during or after surgery. The risk is higher in patients with a cardiac history or undiagnosed cardiac disease. For this reason, every patient will be fully assessed before surgery.

Death
Nationally, 99 in 100 people are alive one month after surgery, this also means 99 in 100 people recover from the surgery. Your individual risk may be higher or lower depending on your health. This will be discussed with you by your surgeon.

What can I expect during my admission and during my recovery?
Tracheal resection is nearly always an elective procedure. This means you will have been brought in from home for your surgery. You will be in hospital for around five to seven days.

You may need to be cared for on the intensive care unit at first. The airway can be swollen at first after surgery and extra support for your breathing may be needed. You may need to have an assessment of the join with a bronchoscopy or a scan. Chest drains are not routine if a cut is only made on the neck.

You will need to keep your neck flexed (chin towards your chest) at first after surgery. Lifting your chin up would put too much strain on the joined ends of the trachea in the first few days after surgery. It is routine to have a stitch between the chin and chest for safety in the first few days after surgery. You will be checked at least daily and your consultant will decide when it is safe to remove the chin stitch.

You should soon notice your breathing is easier compared to before surgery. It is estimated that 95 in 100 people have a good result they are happy with.

Information for Patients

Following surgery, sudden movements can cause discomfort due to the healing and recovery process. You may also have some muscle weakening as a result of having an operation. It is generally not advisable to drive for four to six weeks after an operation, to allow time for healing. We advise patients to check with their motor insurance provider following surgery.

On average, we expect that it will take around three months for you to return back to your usual level of activity.

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