

## Microlaryngoscopy - under Local Anaesthetic (LA)

Your surgeon has recommended a Microlaryngoscopy under Local Anaesthetic.

However, it is your decision to go ahead with the operation or not.

This document will give you information about the benefits and risks to help you to make an informed decision.

If you have any questions that this document does not answer, ask your surgeon or healthcare team.

### What is the Larynx?

The larynx (voice box) prevents food and drink from going down your windpipe to your lungs.

It has two vocal cords that vibrate when air passes over them to give you your voice.

The larynx also opens and narrows to help regulate your breathing.

### What is a Microlaryngoscopy?

A microlaryngoscopy is a procedure to look at your voice box (larynx), using some form of magnified imaging whether it is a microscope or rigid telescope through the mouth, or a flexible telescope through the nose.

In this case, the microlaryngoscopy will be performed using a flexible high definition telescope that is passed through your nose.

### What are the benefits of a Microlaryngoscopy?

Your doctor is concerned that you may have a problem in your larynx and/or upper airway. A Microlaryngoscopy is a good way of finding out if there is a problem, and also further examining and treating that problem.

During microlaryngoscopy, your surgeon can physically contact and examine the tissues of your larynx and upper airway.

Photographs and videos can also be taken, and biopsies (removing small pieces of tissue) to help make the diagnosis can also be performed.

For some people, treatments are performed at the same time.

### What are the benefits of Microlaryngoscopy under local Anaesthetic?

Compared with a Microlaryngoscopy under a general anaesthetic, there are a couple of benefits.

Because you are awake during the procedure, and your vocal folds and airways are moving as they would in everyday life, the surgeon is able to directly assess the impact of any treatment on their position and function. This can provide important feedback.

Because the procedure is performed with a telescope through the nose, there is no risk of damage to teeth, jaw or neck

Because the instruments used are generally needles or fine forceps or laser fibres passed through the flexible telescope, the risk of bleeding is also kept to a minimum.

The lack of a general anaesthetic also means that you are technically able to take yourself home after the procedure, and even return to work the same day if necessary.

## **What are the disadvantages of Microlaryngoscopy under Local anaesthetic?**

Compared with a Microlaryngoscopy under a general anaesthetic, there are a couple of disadvantages. Just as there is an advantage to the tissues moving and behaving as they do when you are completely awake, this movement may make it difficult or impossible to perform certain finer microscopic procedures.

Furthermore, the relatively short duration of effect of local anaesthetic prevents longer, more complex procedures from being performed.

Some patients may not tolerate the procedures

## **Are there any alternatives to surgery?**

This depends on the reason surgery has been recommended in your case.

In many cases, before surgery was offered, speech therapy would already have been undertaken, along with any appropriate medical treatments.

## **What does the operation involve?**

The operation is performed under a local anaesthetic, in a procedure suite in a hospital, or day procedure centre.

The procedure itself takes only a few minutes generally, but the preparation and post-procedure recovery takes about an hour.

## **Before the Procedure:**

The healthcare team will carry out a pre-procedure check to ensure they have identified you correctly, and that you are having the procedure that you came in for.

You can help by confirming to your doctor and the healthcare team your name and the procedure you are having.

The Healthcare team will also take your blood pressure, heart rate, blood oxygen levels, and temperature.

## **In the Procedure Room:**

Depending on your general health and other factors, the healthcare team may place a blood pressure cuff and blood oxygenation probe.

Your surgeon will then anaesthetize your upper airway.

This is achieved by using a combination of local anaesthetic sprays in the nose, an injection of local anaesthetic into the airway of the upper windpipe and overlying skin, and sometimes local anaesthetic oral rinses.

Your surgeon and the healthcare team will then move quickly to perform the procedure whilst your airway is well anaesthetized.

An assistant or the surgeon will pass a flexible telescope through the nose to show the surgeon the larynx on the video screen, and to record the procedure.

Depending on the procedure various instruments may be passed down through the flexible scope to access the larynx. These include fine biopsy instruments, injection needles, balloon catheters, or a laser fibre.

If a laser is used, various additional precautions will need to be undertaken to protect you and the healthcare team.

A needle may also be passed through the front of the neck and into the larynx to inject various medicines.

Your surgeon will explain the nature of any medicines that are to be injected into your larynx, and go into further detail about the risks and benefits.

Occasionally, fine instruments may be passed through the mouth to better access your upper airway.

### **After the Procedure:**

You will be escorted to the recovery area where you can sit in a comfortable chair and rest. Nursing staff will repeat your blood pressure, heart rate, and blood oxygen level measurements at regular intervals.

Generally, you will be required to remain in the recovery area for 30-60 mins after the conclusion of the procedure, at which stage your surgeon will come and assess you, ensure that all your immediate questions are answered, and that you are well enough to go home. If a vocal cord procedure has been performed, your period of strict voice rest will have already commenced, and your surgeon will advise you regarding the duration of this voice rest.

### **What should I do about my medication?**

Let your doctor know about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

### **What complications can happen?**

The healthcare team will try to make the procedure as safe as possible but complications can happen. Some of these can be serious and can even cause death. You should ask your doctor if there is anything you do not understand. Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

Generally speaking, Local Anaesthetic microlaryngoscopy is a very safe and well tolerated procedure.

However, you should discuss the following possible complications with your doctor if there is anything you do not understand.

#### **1. Complications of Anaesthesia**

As this procedure is performed using a combination of local anaesthetics, every care is taken to ensure that maximum safe doses for these agents are strictly adhered to. However, there is a very small risk of local anaesthetic being absorbed into the bloodstream where it may cause adverse effects on the heart and brain, leading rarely to decreased heart rate, seizures, and cardiac arrest.

A rare (0.07% chance) but potentially life threatening complication of local anaesthetic is a condition known as Methaemoglobinaemia. It results in impaired oxygen transport to the tissues of the body. It is treatable however.

#### **2. General Complications of any operation**

- **Pain:** Most patients do not experience significant pain during or after this procedure. However, there may be some nose & throat discomfort which will

improve over a few days. Simple over the counter pain relievers should be adequate. Occasionally, patients experience a dull earache during injections into the vocal fold itself, which is generally short-lived.

- **Bleeding:** There may be minor bleeding in the skin at the injection site on the front of the neck. Bleeding in the airway is also uncommon and generally minor if it occurs. However, a large bruise may cause swelling of the airway, and breathing problems (SEE BELOW).
- **Infection:** The chance of infection either in the larynx or at the skin is very low. The skin of the front of the neck is always cleansed with an anti-septic agent prior to any injections.

### 3. Specific Complications of this operation

- **Breathing problems:** occur infrequently during the procedure, but spasm of the vocal cords or the lower airways in the lungs may occur. These episodes are generally self-limited but may require temporary supplemental oxygen or a nebulized medicine to 'open up' the airways. Rarely, they can lead to other complications such as high blood pressure, heart attack or stroke. In the 48-72 hours after the procedure, there is a very small chance of swelling or bruising of the airway, which may cause breathing problems. You should immediately call 000 or attend the nearest
- **Voice problems:** if a procedure is performed on the vocal cords, the aim of this procedure is generally to improve your voice. However, there is a small chance (generally less than 2%) that your voice is worse
- **Fainting:** Whilst the chance of fainting during the procedure is low (1% of the time), it is the most common complication associated with this procedure. If it occurs, your surgeon will place in a lying down position, give you oxygen and take your vitals. Recovery is generally rapid and spontaneous.
- **Nose bleeds:** This is an uncommon complication, but may occur, especially if you have a narrow nasal cavity, or are on blood thinning agents. It is generally not severe.
- **Laser Related complications:** if a laser is used during the procedure, there is a very rare chance of non-intentional burns or airway fire.

## How soon will I Recover?

### 1. In Hospital:

After your period of observation in the recovery area (30-60 mins) you will be able to go home.

Initially, take small sips of water.

After a period of 1 to 1 ½ hours, the local anaesthetic effect should have completely worn off, and you may eat and drink as normal.

### 2. Returning to normal activities

As this procedure is performed under local anaesthetic, you are able to return to work the day of the procedure if desired.

Your return to work and normal daily activities will also be limited by the degree of voice rest your surgeon has prescribed.

### 3. The future:

Some Local Anaesthetic Microlaryngoscopy procedures need to be repeated a number of times at regular intervals, and your surgeon will advise you if this is the case.

### Summary:

A microlaryngoscopy is usually a safe and effective way of finding out if there is a problem with your larynx and upper airway, and treating many of these problems at the same time. A local anaesthetic microlaryngoscopy has many advantages. However, complications can happen. You need to know about them to help you to make an informed decision about the procedure. Knowing about them will also help to detect and treat any problems early.