

34. Understanding Tracheostomy

A tracheostomy, where a tube is inserted through the skin of the anterior neck directly into the trachea, is used routinely in OMFS to facilitate breathing or ventilation of the lungs. We use the technique principally in major cancer cases where the surgery itself, or bleeding or swelling afterwards, may potentially obstruct the airway. It thus makes the process safer and reduces risk. It will also facilitate providing a second anaesthetic in the post-operative period if something should go wrong, such as bleeding or flap failure. The second use in OMFS is following major facial trauma where there may be multiple fractures of the mandible, tongue swelling or fragments of broken tooth or bleeding which might compromise the airway.

There are other indications for tracheostomy, such as maintenance of the airway in patients who have reduced consciousness or who need longer term artificial ventilation of the lungs on an intensive care unit.

Tracheostomy has traditionally been the work of ENT surgeons and they usually provide a tracheostomy service for patients of other specialities in the hospital. In some hospitals OMF surgeons are involved with providing this service.

Tracheostomy is most commonly carried out during an open operation with a patient under general anaesthesia but in intensive care units it may be performed using a percutaneous technique by the intensive care physicians.

Following tracheostomy the two main concerns are that the tube might block or become displaced. The patient should therefore be looked after by nurses who are skilled in the monitoring of patients with tracheostomy and are skilled in their care. This usually means they are on an ENT or OMFS ward, a powerful argument for the two specialities to share facilities. Equipment should be available on the ward to deal with tracheostomy emergencies (blockage or displacement); it is often kept in a 'tracheostomy box' containing tracheostomy tubes, tracheal dilators, inner tubes, tapes etc. A nasendoscope is used in the diagnosis of a displaced tracheostomy tube.

Good care should reduce the risk of blockage or displacement. Patients should breathe air that has been humidified which will reduce the formation of thick

Tracheostomy



1. Under endo-tracheal anaesthesia patient is positioned with neck extended. Trachea is exposed through horizontal incision.



2. A window is cut in trachea at level of 2nd & 3rd tracheal ring. The anaesthetic tube is seen within.



3. The anaesthetist withdraws the endotracheal tube as the tracheostomy tube is introduced.

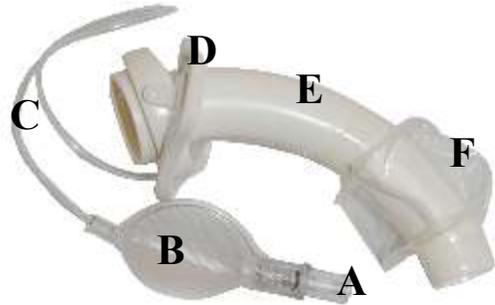


4. The anaesthetic circuit is attached to the tube, the cuff is inflated and the tube is secured to the patient with sutures and/or tape around the neck.

tenacious sputum. Sputum accumulation can be reduced by regular suction through the tube using a thin (size 2) catheter tube inserted and slowly withdrawn. The inner tube should be removed by the nursing staff at regular intervals and washed or replaced. The tube should be securely fixed to the patient by sutures or tape around the neck; this should be checked regularly. The whole tracheostomy tube should be changed every 7 to 10 days. In most of our patients the tube will not be needed after a few days post-operation.

It is desirable that the tracheostomy be removed as soon as it is not needed. The air should be removed from the cuff and the tube should be suctioned to remove secretions which might have accumulated above the cuff. Before removing the tube it is essential that the patient is able to breathe around the tube which may be facilitated by using a fenestrated tube. The tube can be blocked off for a while so that we can be confident that the patient no longer needs it. The speech and language therapist can be consulted as they have expertise in airway patency. Tube removal is best carried out first thing on a week day morning ensuring there are sufficient trained staff available to deal with any problems.

Outer tracheostomy tube



A: Air introduction port **B:** Air reservoir (expands when cuff is inflated) **C:** Air connecting tube to cuff **D:** Flange **E:** Outer tube shaft **F:** Air cuff

Introducer: Is placed inside outer tube when tube is inserted into trachea at operation.



Inner tube: Locks in place in outer tube & can be removed for cleaning.



Outer tube from front: Shows flange marked with size, lock for inner tube, cuff air tube and neck attachment tape.