



Tikrit University
College of Veterinary Medicine

Tracheotomy and Tracheostomy

Subject name: Practical Surgery

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SCAN ME

Lecturers link

Tracheotomy and Tracheostomy

It is an opening in the tracheal ring to provide good ventilation from the outer environment to the trachea; this operation is performed in different species of animals like horses, cattle, dogs and cats.

*The operation can be done in both elective and emergency surgery. (In an emergency situation, such as the animal in danger of suffocation, the surgeon may need to forget a complete aseptic preparation).

Anatomy:

- Trachea consists of incomplete hyaline cartilage rings which are connected dorsally by trachealis muscle between the rings of trachea there are bands of the of fibroelastic tissue “unnuler ligaments” the tracheal wall in cross-section consists of an inner mucosa and submucosa followed by fibrocartilaginous ring and outer adventitia in the cervical trachea or serosa in the intrathoracic trachea.
- The trachea receives a segmental blood supply from cranial and caudal thyroid arteries; the source of blood supply shifts primarily to the bronchoesophageal arteries.
- venous drainage via thyroid, internal jugular and bronchoesophageal veins
- lymph flows to the deep cervical, cranial mediastinal, medial retropharyngeal and tracheobronchial nodes
- main innervation from the right vagus and recurrent laryngeal nerve.

There are two types to perform tracheotomy :

1- Permanent tracheotomy

There is a removal of part of the tracheal ring, and the cutting is going through the two adjacent tracheal ring and its annular ligament and the tracheostomy tube going or devices fixed for long time.

2- Temporary tracheotomy

The operation is just an incision in the annular ligament, and the tracheostomy tube is fixed for a short time.

INDICATION:

Temporary tracheostomy:

- 1- Trauma.
- 2- Anaphylaxis
- 3- Neoplasia.
- 4- Conformational defects.
- 5- Swelling of the tongue due to some cases of snake bites
- 6- During surgical manipulation of the oral cavity.
- 7- Bilateral epistaxis.

Permanent tracheostomy:

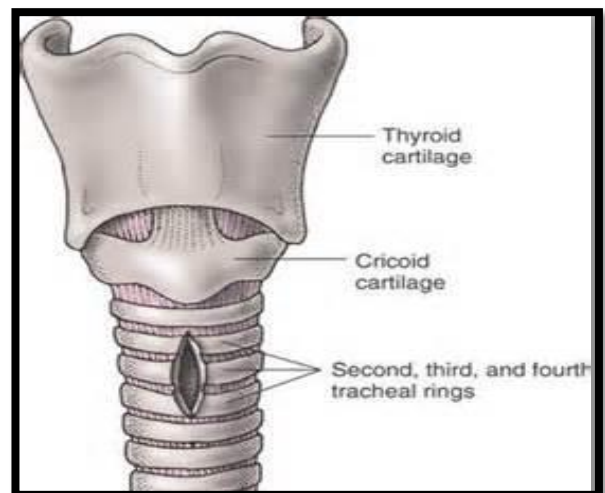
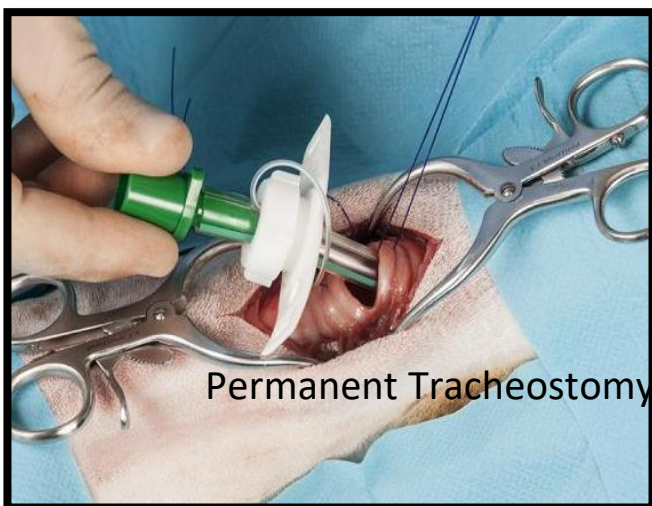
- 1- Laryngeal masses.
- 2- Laryngeal paralysis or collapse.
- 3- Irresolvable trauma.
- 4- Laryngeal resection or reconstruction.

SURGICAL PROCEDURE:

- The operation performed with the animal in the standing position (the best position) and the neck is extended with lateral deviation of the head.
- Type of anaesthesia is performed with sedation and local infiltration of the surgical sites.
- The site of the operation is at the junction of the upper and middle third of the neck, at the fourth and sixth tracheal ring.
- Preparation of the surgical sites by clipping and shaving, washing with soap and water, and then disinfecting the area.
- The surgical incision goes through the skin and the subcutaneous tissues by sharp dissecting (7-10cm length and 5 cm wide), stops the bleeding,

then separates the sterno thyro- hyoideus muscle by bland dissecting, then cuts through the fibrous tissue which surrounds the trachea, exposed the trachea and cutting through the annular ligament or through the tracheal ring its self.

- **For the temporary Tracheostomy** (this operation is performed when you need to lift a tracheostomy tube in place for a short period of time).
- the scalpel is inserted in midway between the two tracheal ring, the incision is made in a horizontal direction 1 cm in either direction from the midline
- then insert the tracheostomy tube, and this method is used.
- **For the Permanent Tracheostomy** (this operation is performed when you need to place the tracheostomy tube for a long period of time).
- An shaped section of one tracheal ring is cut throw
- then the same cutting in the adjacent tracheal ring
- inserts the Jones tracheotomy tube.
- The incision is not closed, and the wound is healed by secondary intention when the tracheotomy tube is removed.



Post

Operative Management:

- 1- The site of operation should be cleaned with normal saline.
- 2- Suitable and non-irritant antibacterial ointment should be applied once or twice daily.
- 3- Clean the tube once or twice daily.
- 4- Cover the tube when the animal stable is dusty or dirty.
- 5- Protect the tube from friction with the door or wall.

Complication:

- 1- Subcutaneous emphysema.
- 2- Tracheal stenosis.
- 3- Bleeding.
- 4- Adhesion.
- 5- Respiratory affection.
- 6- Abscess formation.