

Tracheostomy

Definition:-

- making an opening in to the trachea and connecting it to the skin surface.

Indications:-

1-relief of upper respiratory obstruction.

a-congenital:

- . bilateral caoanal atresia.
- . laryngeal web.
- . laryngeal cyst .

.upper tracheal stenosis.

**.tracheo- esophageal
anomalies.**

b-traumatic:

**--- internal (inhalation of
steam or irritant fumes,
foreign body or swallowing
of corrosive)**

**--- external (blow on the larynx
, gun shot , or cut throat).**

c-infections:

.acute epiglottitis.

**. acute laryngotracheo
bronchitis.**

.diphtheria .

. Ludwig's angina .

. retropharyngeal abscess.

. parapharyngeal abscess.

**d-tumors: malignant tumors of
tongue , upper trachea ,
pharynx , larynx , or thyroid
gland.**

**e- bilateral recurrent laryngeal
palsies: after thyroidectomy
or bulbar palsy .**

**f- cord fixation : due to
rheumatoid arthritis.**

**g-other causes of glottic
obstruction: like hemophilia
, angioneurotic
oedema.....**

2-protection of lower respiratory tract: bulbar and pseudobulbar palsy.

. coma (head injury or drug abuse).

.myasthenia gravis.

. Polyneuritis.

. tetanus .

. cervical cord lesion.

3-assist ventilation: in conditions that cause respiratory insufficiency :-

a-pulmonary disease :-

.chronic bronchitis.

.emphysema .

.postoperative pneumonia .

**b-severe chest injury: flial
chest.**

c-neuromuscular

**incoordination that cause
stagnation of bronchial
secretion or the need for
artificial or intermittent
positive pressure ventilation
PPV.**

**4-elective procedure: in
any major procedure in
mouth , pharynx or
larynx.**

Types of tracheostomy:-

1-emergency or elective.

2-temporary or permanent.

Types of tracheostomy tubes:-

1-metalic: silver Jackson.

2- portex.

- **Other classification:-**

1-uncuffed.

2-cuffed:-a- single cuff.

b- double cuff.

Technique or procedure of tracheostomy:-

1-anesthesia : local or general.

**2-position of the patient:
supine with over extension.**

**3-vertical or transverse skin
incision.**

**4-midline dissection of the
strap muscles.**

**5-cutting or elevation the
isthmus of the thyroid
gland.**

**6-opening of the second , third
or fourth tracheal rings.**

**7- introduction of the
tracheostomy tube.**

8-closure of the wound.

Criteria of emergency

tracheostomy:-

**1-recession of suprasternal ,
supraclavicular , intercostal
and subcostal space.**

2-anxiety , palor , sweating.

**3-cyanosis : indicate late and
grave stage.**

The tracheostomy aids

respiration by:-

1-reducing dead space by 50%.

**2-by-passing resistance to air
flow in nose , mouth and
glottis.**

3-easy toilet of bronchi.

4-using of positive pressure ventilation PPV.

Post operative care:-

1-nursing care: constant attention is essential for the first 24 hours at least.

2-fixation of the tracheostomy tube.

3-removal of secretions by suction.

4-humidification :by wet gauze.

5-changing the tube.

6- care of the inflatable cuff.

7-removal of the tube.

Complications of tracheostomy:-

a-immediate:

1-hemorrhage.

2-air embolism.

3-apnea:-due to CO₂ wash leading to respiratory centre suppression.

4-cardiac stand still:-due to

i- excessive adrenalin production in an anxious patient.

ii- rapid raise of PH due to washing of CO₂.

iii- hyperkalemia due to respiratory alkalosis.

5- local damage to surrounding structures.

b-early:

1-dislodgement or displacement of the tube.

2-surgical emphysema.

3-pneumthorax and pneumomediastinum.

4-scabs and crusts.

5-infections.

6-tracheal necrosis.

7-tracheo-arteriolar fistula.

8-Tracheo-esophageal fistula.

9-dysphagia.

c-late:

1-tracheal stenosis.

2-difficult decannulation.

Laryngotomy:-

- **Definition: an opening through the cricothyroid membrane.**
- **Indications: sudden laryngeal obstruction when intubation is impossible and facilities for tracheostomy are not available.**
- **Impaction of a foreign body is the commonest indication.**

