


Surgical Drains:

Drains are used for a variety of purposes, and overall the use of drains is reducing.

Indications:

- To minimise dead space** in a wound and prevent fluid collecting (eg following axillary nodal clearance, mastectomy, thyroidectomy).
- When there is a risk of leakage**(eg pancreatic surgery, bowel anastomosis)
- To drain actual fluid collections**(eg radiologically placed drain for subphrenic abscess).

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- To divert fluid away from blockage or potential blockage (eg biliary T-tube, suprapubic urinary catheter, ventricular CSF drain).
 - To decompress and allow air to escape (chest drain).

Types:

- > Drains can be open (into dressings) or closed (into container) systems.

- > Drains can be suction or non-suction drains (passive gravity drainage).

Suction drains provide better drainage but ➤ may damage adjacent structures (eg bowel) and precipitate a leak.

- > Closed systems reduce the risk of introducing infection.

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Examples:

Suction drains (closed)-

Radivac drain, suction chest drain.

Non –suction drain (open)-


Penrose drain, corrugated drain.

Non-suction drains (closed)-

Robinson drain, T-tube drain, urinary catheter, chest drain.


Complications:

- .Infection via drain track.
- .Lets in air (eg chest tube).
- .Injury to adjacent structures by drain or during placement (eg bowel)
- .Anastomotic leakage.
- .Retraction of the drain into the wound.
- .Bleeding by erosion into blood vessel.

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- .Pain (eg chest drain irritating diaphragm)
 - . Herniation at the drain site.

Routine drainage of a bowel anastomosis is contraversial.

Drains may cause more problems than they solve. They can directly dammage anastomosis, and can prevent formations of adhesions to adjacent vascular structures through which anastomosis would expect to gain an extra blood supply



If the anastomosis is not watertight (eg biliary or urological) a drain is usually used to prevent build-up of a collection which may otherwise hinder healing.

After removal a fluid collection, removal of a drain may result in the formation of a tract of scar tissue circumferentially along the passage of the drain. A mature tract allows continued drainage from an area. Over time, this will heal in the same manner as a fistula.

Respiratory Monitoring and support in Critical Care

Definitive airway management in critical care patients who are unable to maintain their own airway or who require invasive ventilation is intubation.

Nasal intubation is preferred for paediatric ITU there is increased risk of haemorrhage in adults and risk of sepsis from sinus infection.

Endotracheal or Pretracheal intubation is the mainstay of management.

Nasotracheal intubation:

Is contraindicated in Apnoeic patient and in patients in whom mid-face or basal skull fractures are suspected.

Achieved either blindly or using a fiberoptic-guided insertion

Orotracheal intubation:

Characteristics:

.Internal diameter:8-9 mm for males;7-8 mm for females

.Length: 23 cm to teeth in males; 21 cm in females.

.Checked on chest X-ray level with lower edge of clavicle

The cuffed end:

- . Creates a seal
- . Helps prevent aspiration.
- . Can cause stenosis and tracheomalacia if high pressure (so pressure should be monitored).

Complications:

I:Early

oesophageal intubation (a fatal complication).

Tube too far down entering the Rt main bronchus.

Airway damage or rupture.

II:Late

Erosion; stenosis of the trachea and larynx