DEFINITION

- Goals of suturing
- Suture characteristics
- Armamentarium of suturing
- Suture materials
- Principles of suturing
- Suturing techniques
- Surgical knot
- Removal of suture

DEFINITION

What is suture?

Suture is a stich or series of stiches made to secure apposition of the edges of a surgical or traumatic wound.

What is suture materials?

Suture materials is an artificial fibers used to keep wound together until they hold themselves by natural.s

GOALS OF SUTURING

- Wound edge apposition.
- Provide adequate tension.
- Maintain hemostasis.
- Aid in wound healing.
- Avoid wound infection.
- Produce aesthetically pleasing scar by approximating skin edges.

Objectives

- 1. To facilitate healing.
- 2. Hemostatic.
- 3. To retain drainage tube and implants.
- 4. To reduce the size of natural opening.

Qualities of An Ideal Suture Material

1. It should be non-antigenic, nontoxic and non-carcinogenic.
2. It should have mono-filamentous texture.
3. It should have no capillary property.
4. It should have adequate tensile strength in-vitro and in-vivo.
5. It should have good handling property.
6. It should have good knot security.
7. It should be compatible with all kinds of antiseptic disinfectants.
8. It should be easily sterilizable.
9. It should remain intact until union occurs.
10. It should have minimum tissue reaction.
11. It should be cheap and easily available.

CHARATERISTICS OF SUTURE

Physical structure:

- Monofilament-
- This suture material is smooth & tends to slide through tissues easily.
- Difficult to knot
- Can be damaged by gripping it with needle holder or forceps.That can lead to fracture of the suture materials.

Multifilaments-

- Easy to knot.
- Have a greater surface area than monofilaments.
- Have a capillary actions where bacteria may lodge & be responsible for persistent infections.
- This material can be coated with silicone in order to make it smooth.

SUTURE CHARACTERISTICS

Tensile Strength:

It can be expressed as the force required to break it when pulling the two ends apart.It depends upon –

- Constituent of suture materials.
- Thickness of suture materials.
- How it is handled in the tissues.

SUTURE CHARACTERISTICS

- **Absorbability:**
- Suture materials may be absorbable or non-absorbable.
- This property must be taken into consideration when choosing suture materials for specific wound closures.
- Oral mucosa & Deep sturcture need to be absorbable suture materials but vascular anastomoses need non-absorbable suture materials.
- **Biological Behaviour:** It depends upon the constituent of raw materials.

Armamentarium of suturing

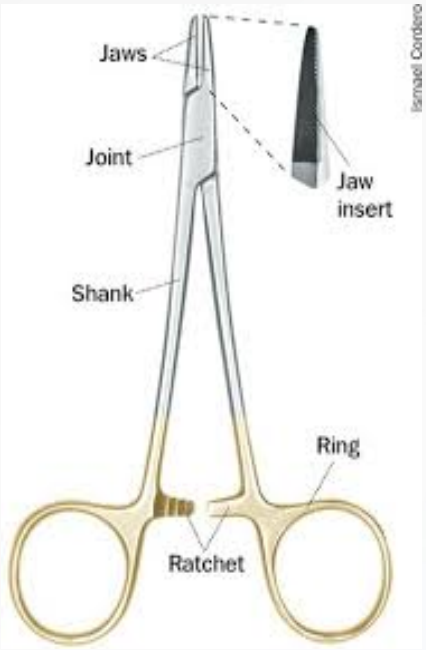
- Needle holder

- A suture needle

- Suture material

Needle holder

- Parts:
- Working tip/jaws
- Hinge joint
- Shank/body
- Catchmechanism/ratchet
- Grip area



Needle holder

How to hold?

- The needle holder is held with thumb & ring finger through the rings & with the index finger along the length of needle holder to provide stability & control.