SUTURED GI ANASTOMOSES

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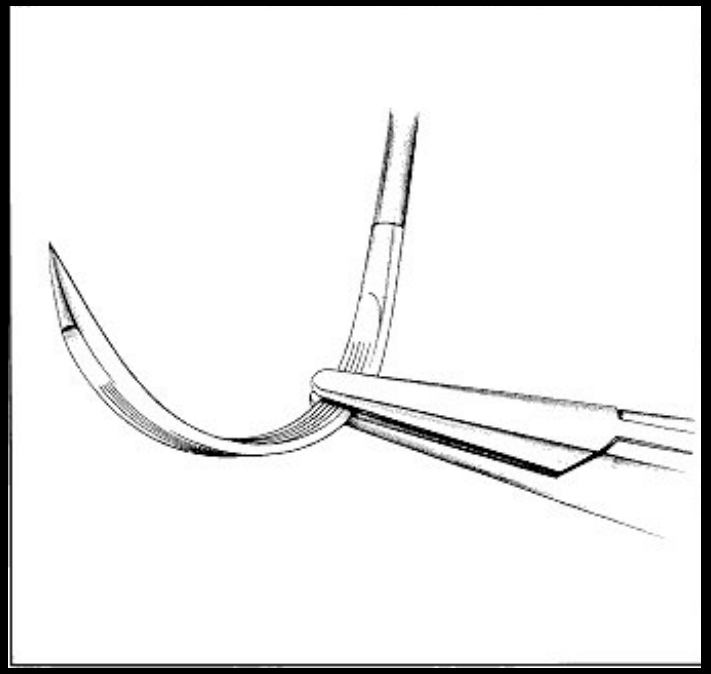

Principles of Suture Selection (1)

- When a wound reaches max. strength, sutures are no longer needed.

Slow-healing tissues (skin, fascia) – non or slowly absorbable

Fast-healing tissues (GI, bladder) - absorbable

Principles of Suture Selection (2)

- Regarding suture size

Use finest size commensurate with natural tissue strength

Principles of Suture Selection (3)

- FB in contaminated tissues may convert to infection.

Avoid multifilament

Use monofilament or absorbable

Principles of Suture Selection (4)

- FB in fluids of high crystalloid conc. may precipitate stones.

Use smallest inert absorbable monofilament in urinary and biliary tracts

Needle-holder

- Correct size match to suture/needle
- Removing thumb from ring allows improved axis of rotation
- Hold needle 2/3 from the point
- Place and pass needle once only
- Release needle when holder is stopped by tissue

Techniques

- Sutured or stapled
- Single or double layer
- Continuous or interrupted
- Full thickness, seromuscular or submucosal
- Inverted or everted
- End-end, side-side or end-side
- Others- leak test, omental wrap, tissue glue, drains

Factors affecting anas. healing

Favourable	Unfavourable
Good vascularity	Poor vascularity
No tension	Under tension
Healthy bowel ends	Diseased bowel ends
Free distal flow	Distal obstruction
No abscess	Associated abscess

Common Errors

- Error in judgement
- Poor handling
- Suture-line defect
- Everted anastomosis
- Poor hemostasis
- Poor drain placement
- Mesenteric vascular injury
- Strangulating sutures
- Intestine caught in fascia closure

Suturing patterns(1)

- Enter perpendicular
- Distance b/w stitches equal to width of each stitch
- Tie 'loosely' to allow for edema
- Tight continuous suture can pursestring and constrict
- Continuous locking suture prevents slippage and bleeding but may strangulate
- Vertical mattress – precise edge approximation
- Horizontal mattress – eversion

Suturing patterns(2)

- Connell stitch – continuous inverting suture commonly used for inner anterior layer of bowel anas.
- Lembert stitch – continuous or interrupted outer layer inverting suture
- Halsted stitch – interrupted seromuscular horizontal mattress
- Cushing stitch – continuous seromuscular horizontal mattress