Institute of Surgical Research
„C” Module – Advanced Medical Skills

C1-2 MODULE – „Minor surgical skills” in local anesthesia
Removal of encapsulated structures
– Advanced suturing: enterotomy, bowel anastomosis

C3-4 MODULE – Operations in practice

C5-6 MODULE – Minimally invasive surgery

SMI

Minor Surgical Skills

Minor surgical interventions: in local anesthesia in emergency rooms

without special preoperative preparation and/or peri- or postoperative monitoring.

Principles of intervention:

- **adequate surgical indication;**
- **adherence to the rules of asepsis;**
- **adequate cost - benefit (risk) analysis.**
- **typical minor surgical interventions:** **incisions**
  excisions

INCISIONS

In a wider sense:

all invasive interventions start with incision.

In minor surgery:

incision means opening of a cavity (abscess, cyst, etc).

Abscesses arise most frequently in the skin (*folliculitis, furunculus, carbunculus, inflamed atheroma, hydradenitis*), or in the perianal area.

Treatment of abscess: (1) local anesthesia, (2) incision, (3) rinsing, (4) drainage.

EXCISIONS ON THE SKIN

Lesions: scars, benign fibroma, pigmented naevi).

Local anesthesia (1.0 or 2.0% Lidocain)

Ellipse excision: (1) together with intact edges surrounding the lesion, (2) in three dimensions (3) along a natural crease line if possible.

Handling of bleedings

Closure: with Donati-type interrupted sutures (because of tension), the use of subcuticular stitches is limited.

EXCISIONS UNDER THE SKIN LEVEL

Lesions:

- **encapsulated (*lipomas, atheromas, lymph nodes or cysts*);**
- **not encapsuleted (such as *lipomas* on the back).**

Local anesthetics (encirclement in the skin, infiltration of deep to the lesion).

Incision: along the crease lines, the line above the lesion should be shorter than the diameter of the lipoma.

Handling of bleedings

Closure

„Minor Skin Procedures"
training program

Ellipse excision

Epidermoid cyst removal

Removing a lipoma

Advanced suturing

Bowel anastomosis - preparations

Isolation: before opening the intestinal lumen, it should be draped with sterile towels.

Emptying: if any content is palpable in the lumen, it should be gently pushed to aboral direction.

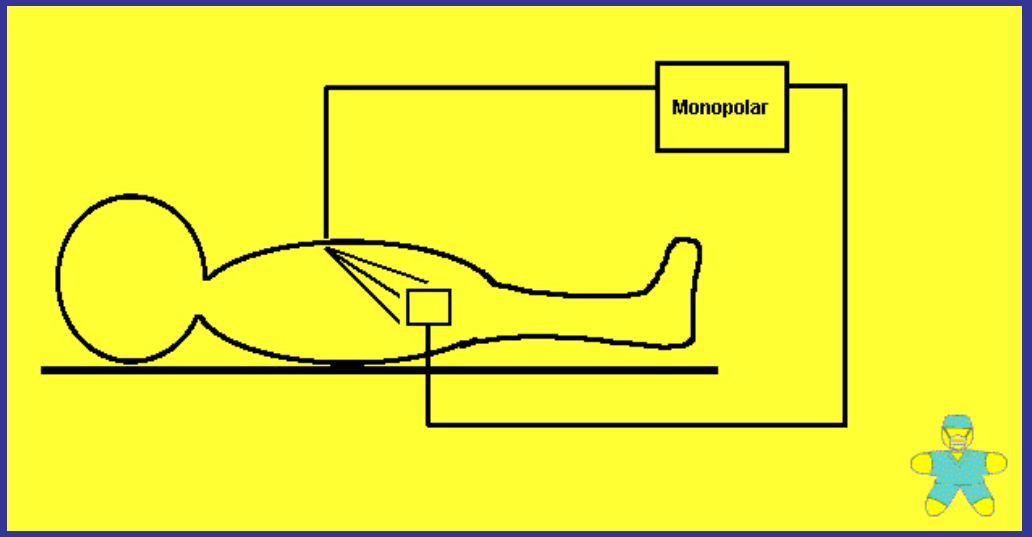
Temporary closure of the lumen: the afflicted part of bowel should be reversibly closed by atraumatic „Klammer" forceps in oral and in aboral directions.

Bowel anastomosis 2.

Enterotomy

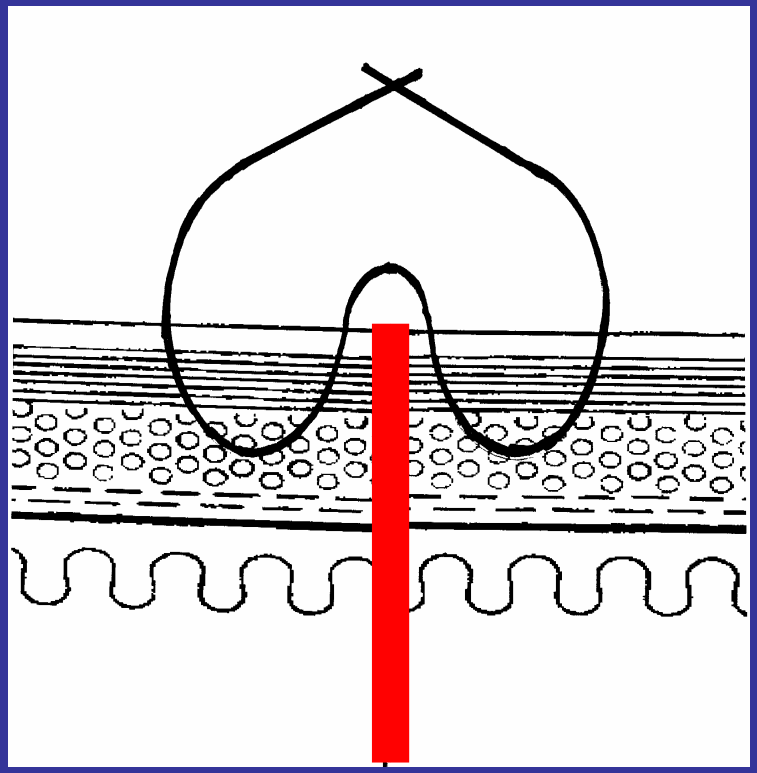
The bowel should be opened with diathermy on the antimesenterial side, in order to avoid bleeding from the wall.

After opening the bowel the lumen should be cleaned with povidone-iodine (Betadine) sponges.



Diathermy: a high frequency alternating electric current generating heat

Bowel anastomosis 3.

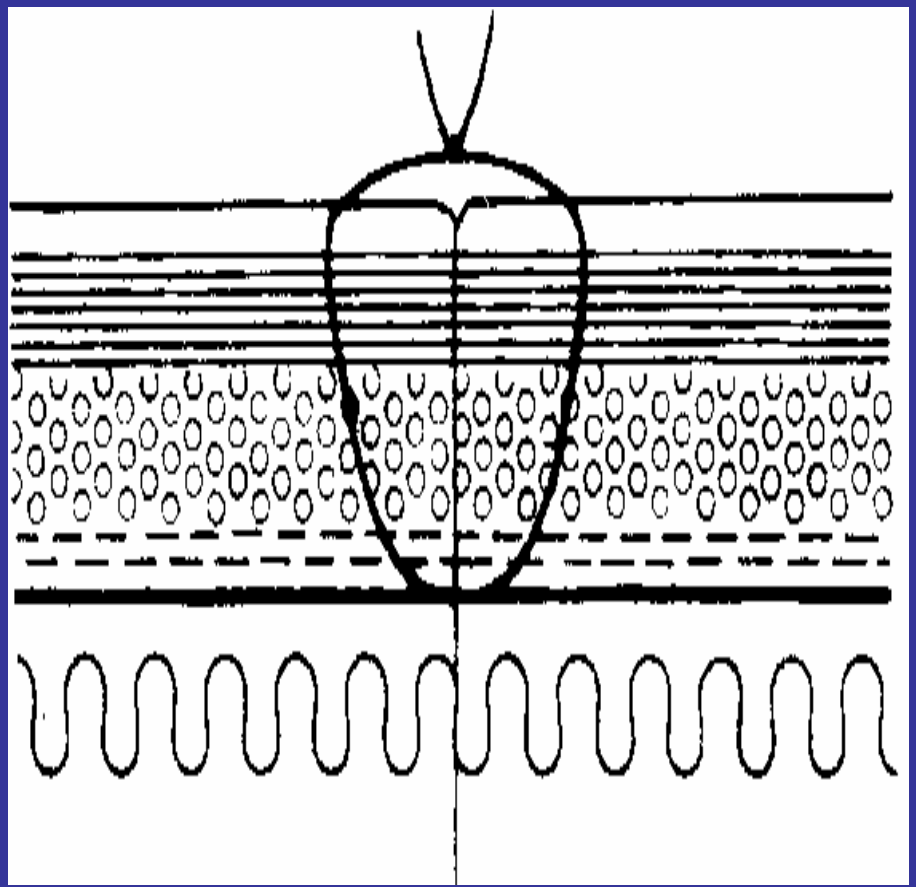


seromuscular stitch

The bowel is sutured with interrupted simple stitches using 3/0 absorbable thread.

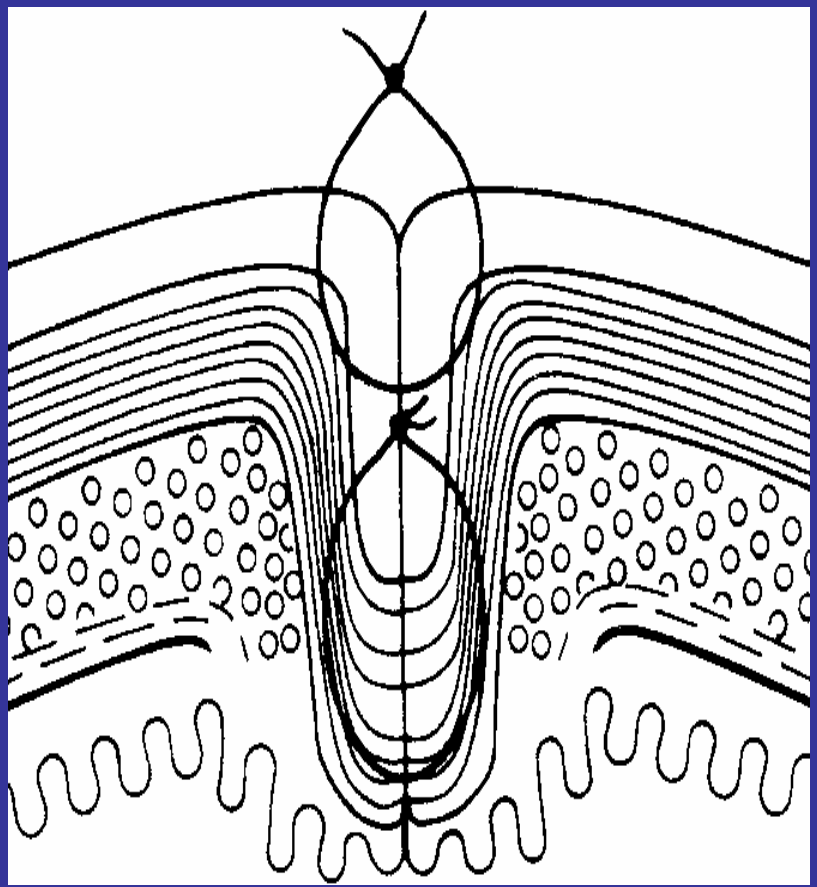
Bowel anastomosis 4.

One-layer closure of bowel



Seromuscular stitch

Two-layer closure of bowel



A second serosal stitch
covers the first seromuscular sutu

Bowel anastomosis 5.

Stay stitch

Insert the first two stitches *seromuscularly* into the two opposite ends of the wound.

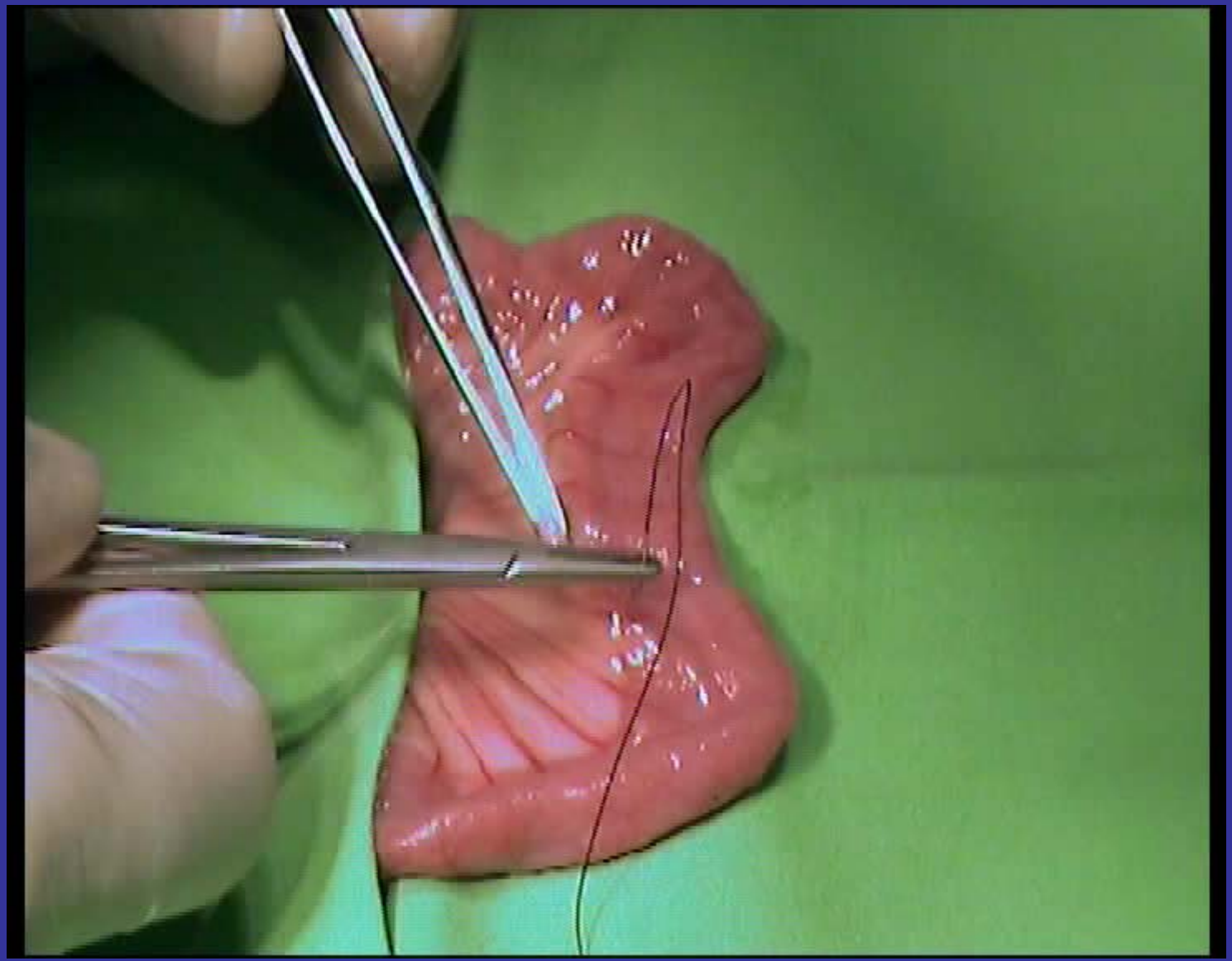
First layer:

- **Interrupted stitches in 3-5 mm distance**
- ***seromuscularly***

Second layer:

- **To cover the first suture line with serosa.**
- **The distance between individual stitches is 3-5 mm.**

Closure of an enterotomy



Schedule of the Practical

Computer Room:

„Minor Skin Procedures" according to computer program

Operating room:

Entering (cap, mask, footsack): sterile assisted gloving (helped by nurses); 1 assistant and 1 surgeon,

Practical:

1. **A/ Ellipse excision: in pairs (8x2),**
   B/ Encapsulated node or cyst removal;
   Closing the wound with Donati type interrupted or intracutaneus continous sutures;
2. **Intestinal enterotomy by diathermy in pairs (8x2), ;**
   ***Ex vivo* intestinal suture in two layers**