

# **SURGICAL TECHNIQUE**

**Department of Pathophysiology  
Faculty of Medicine in Pilsen  
Charles University**

# Chirurgical instruments





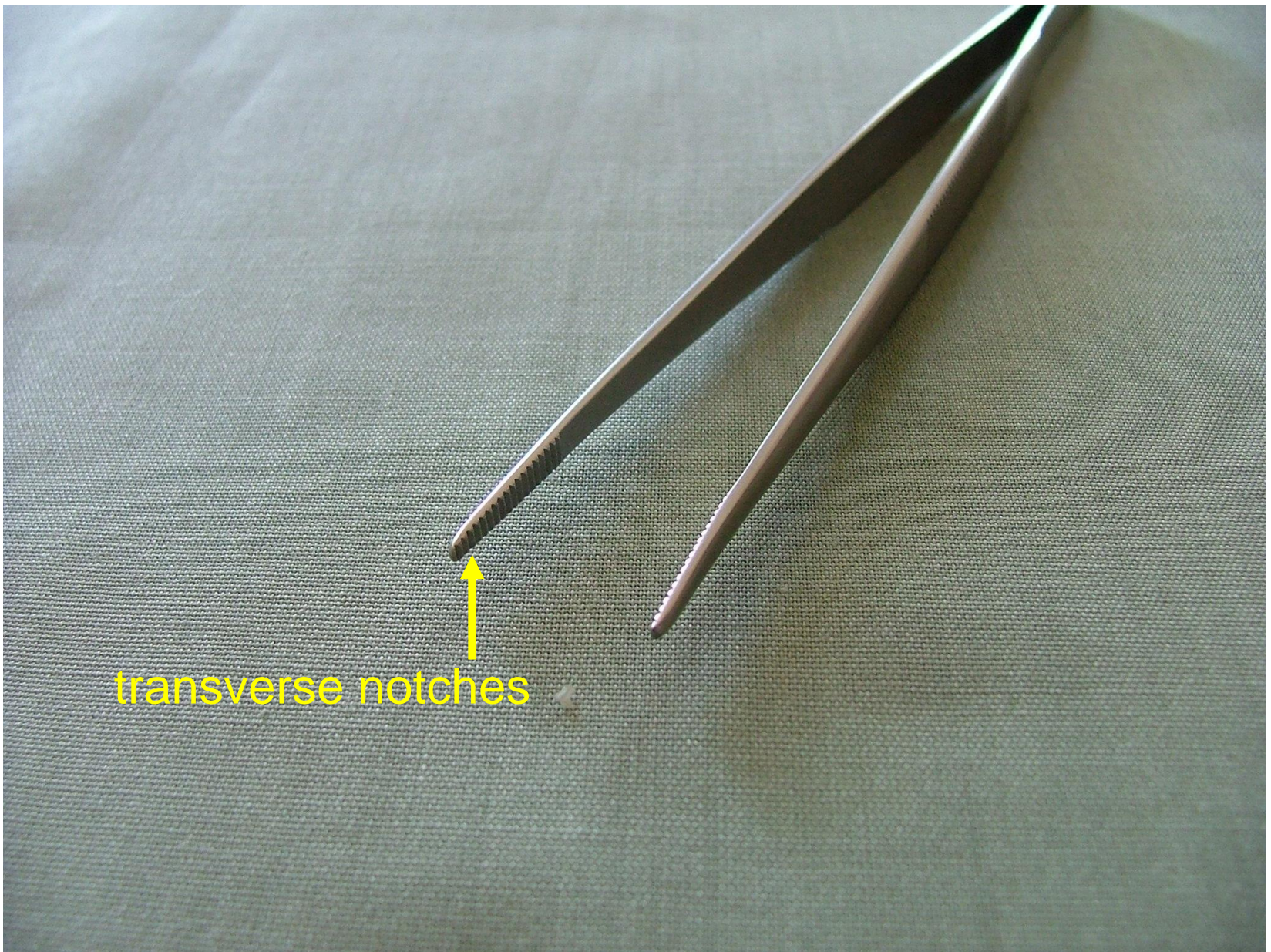
Towel clamp (Backhaus)



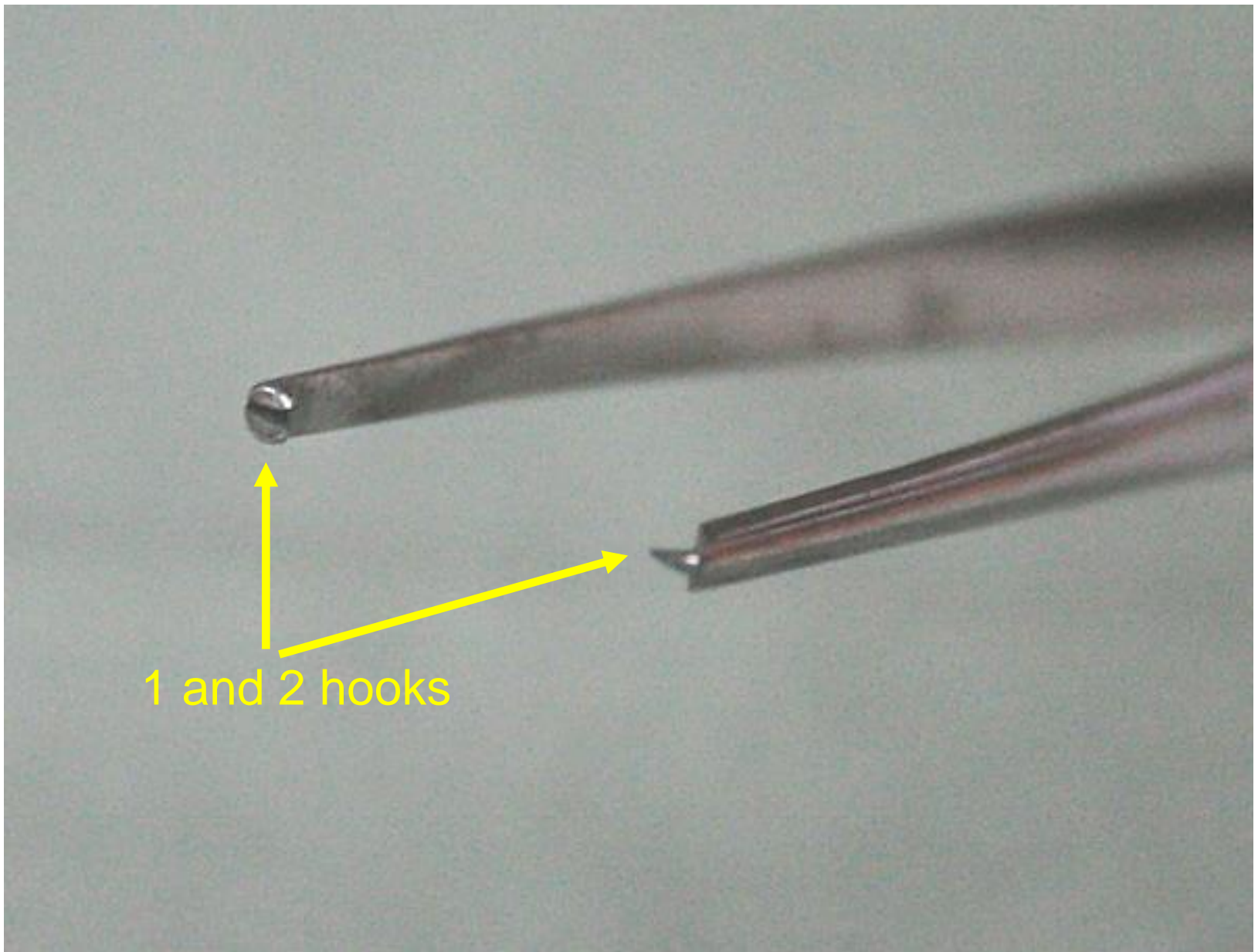
Sponge forceps



Forceps, tweezers

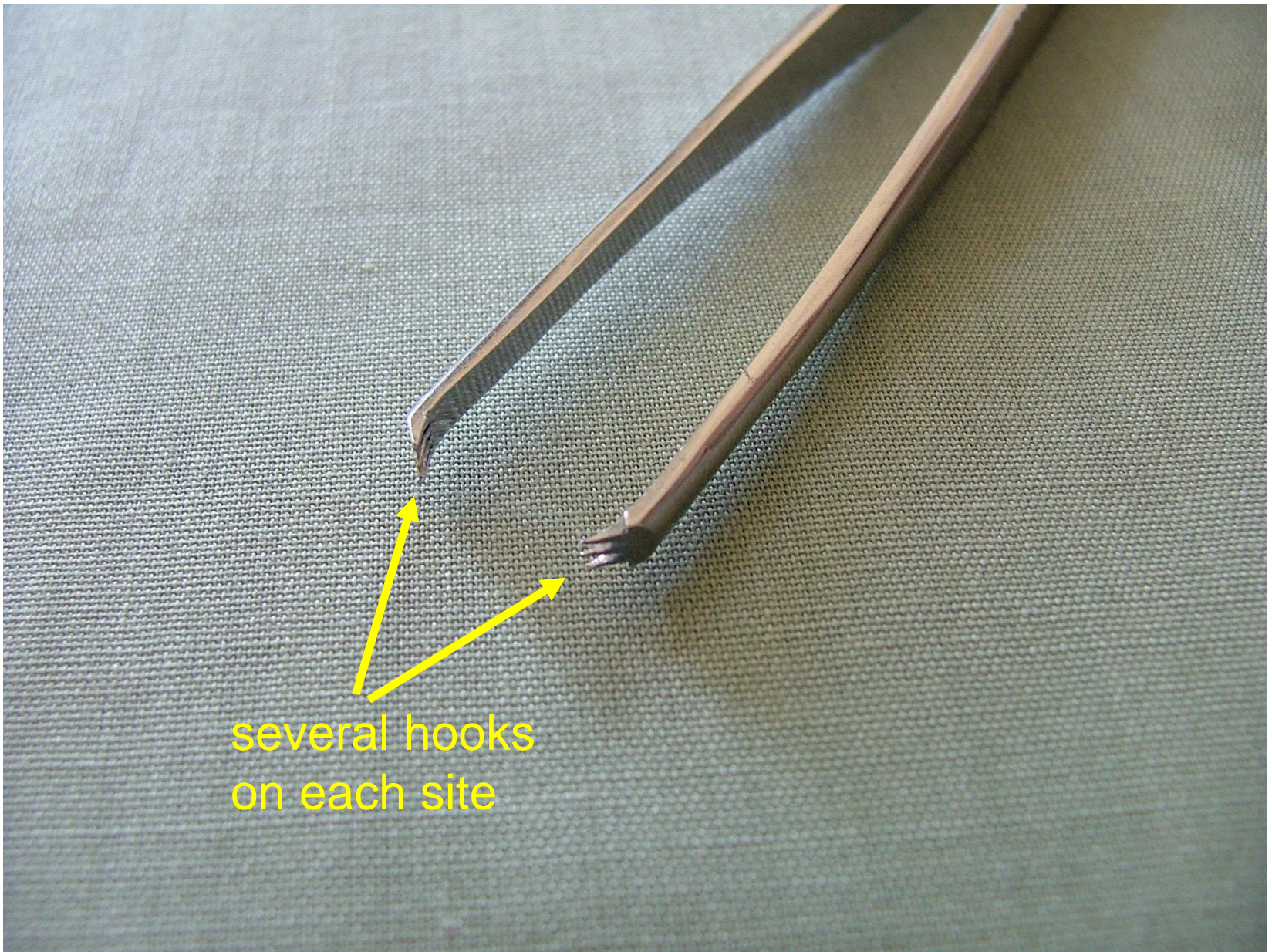


Anatomic, dissecting forceps



1 and 2 hooks

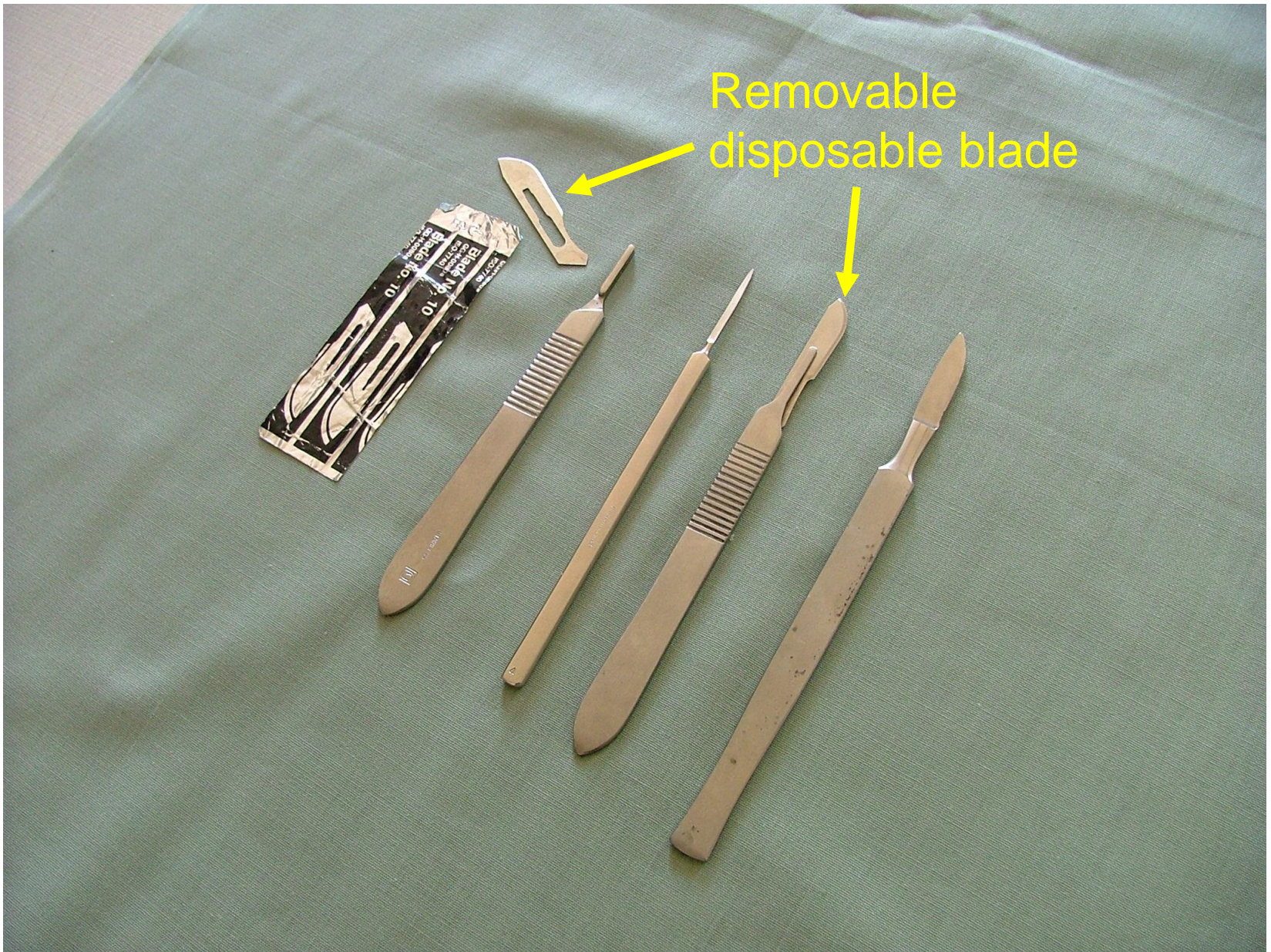
Surgical, tissue forceps



several hooks  
on each site

Adapting forceps





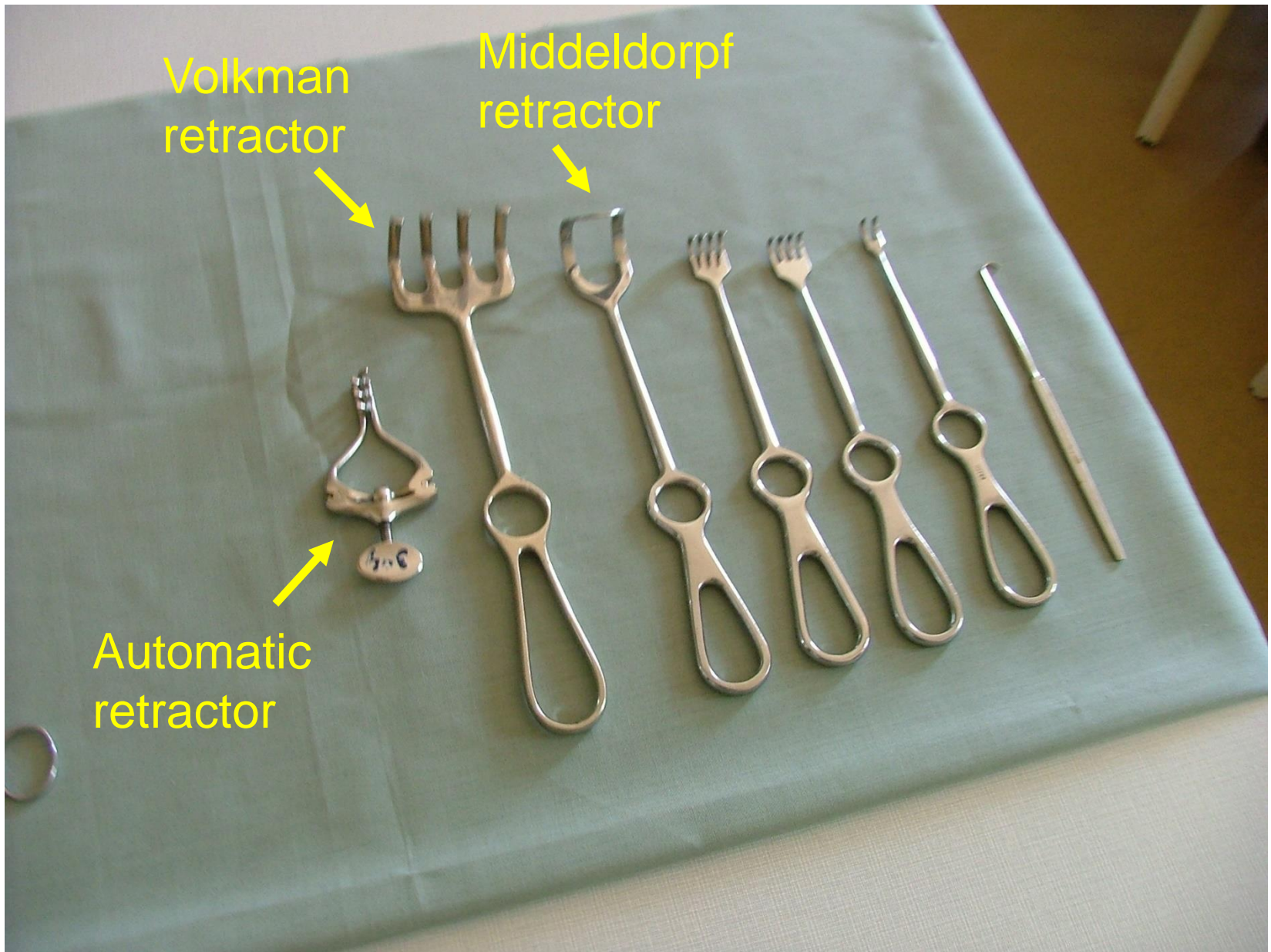
Scalpels



Scissors - straight, curved, angled, eye scissors



Probes

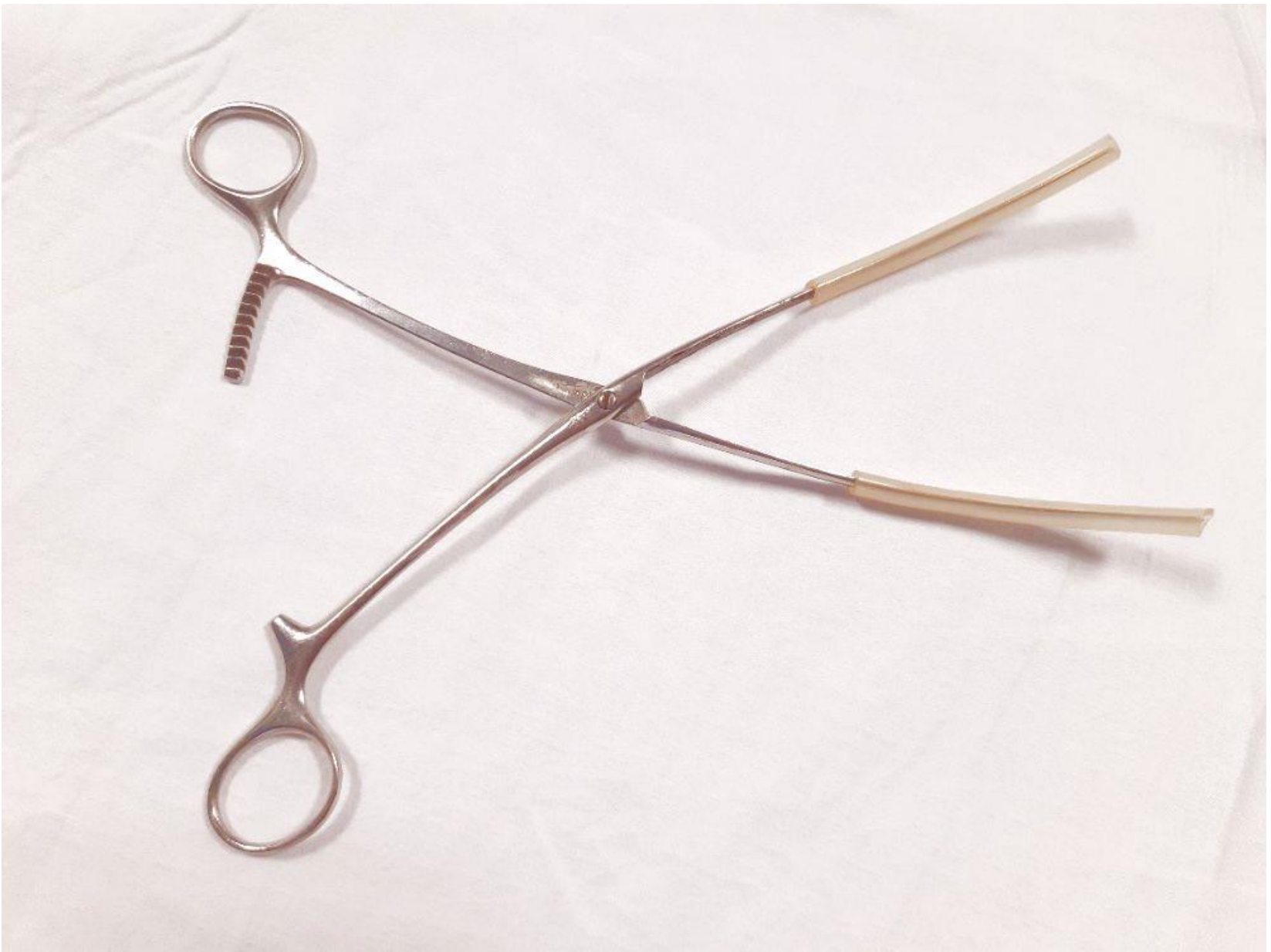


Volkman  
retractor

Middeldorpf  
retractor

Automatic  
retractor

Surgical hooks, retractors



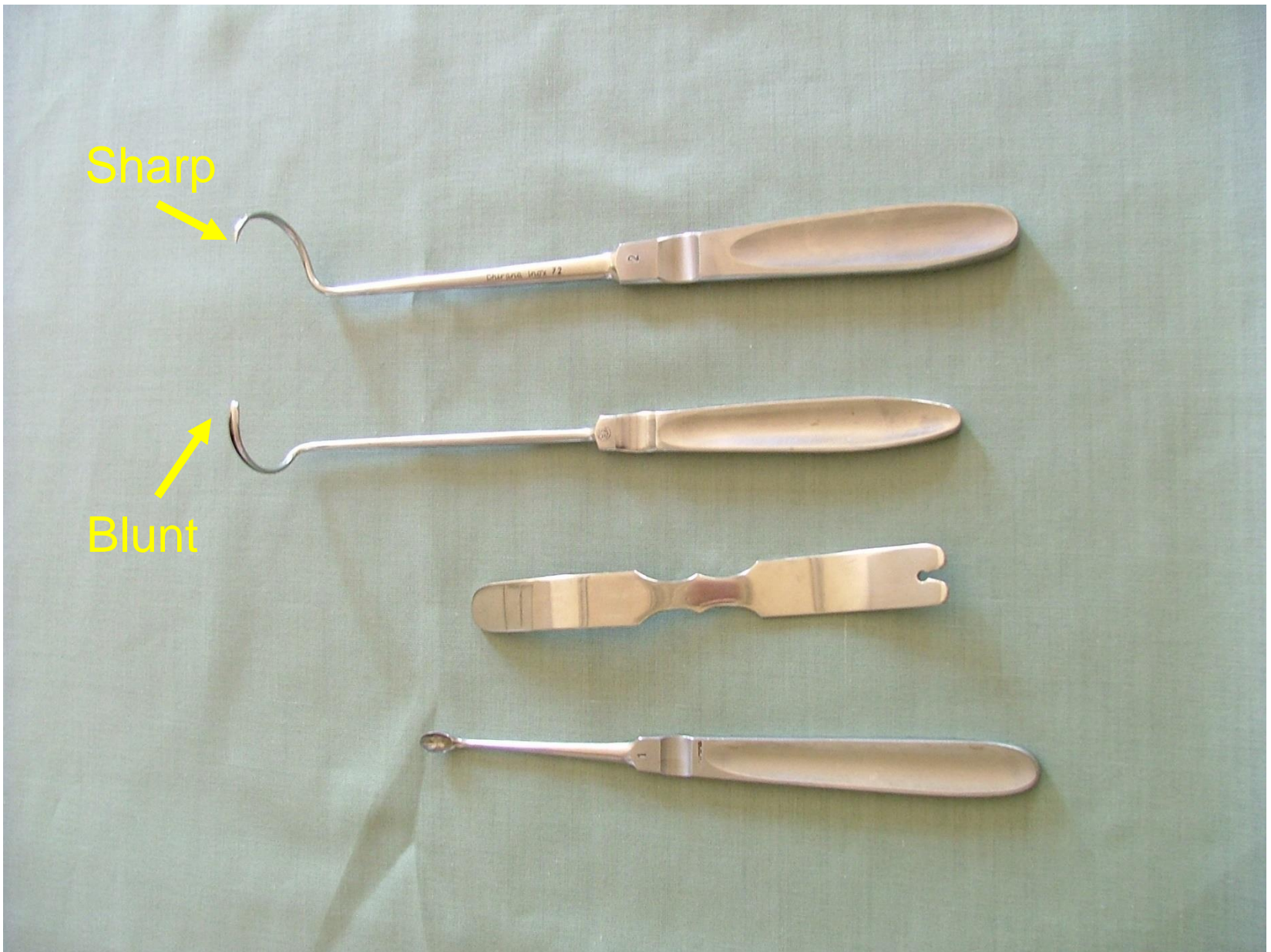
Intestinal clamp



Intestinal clamp

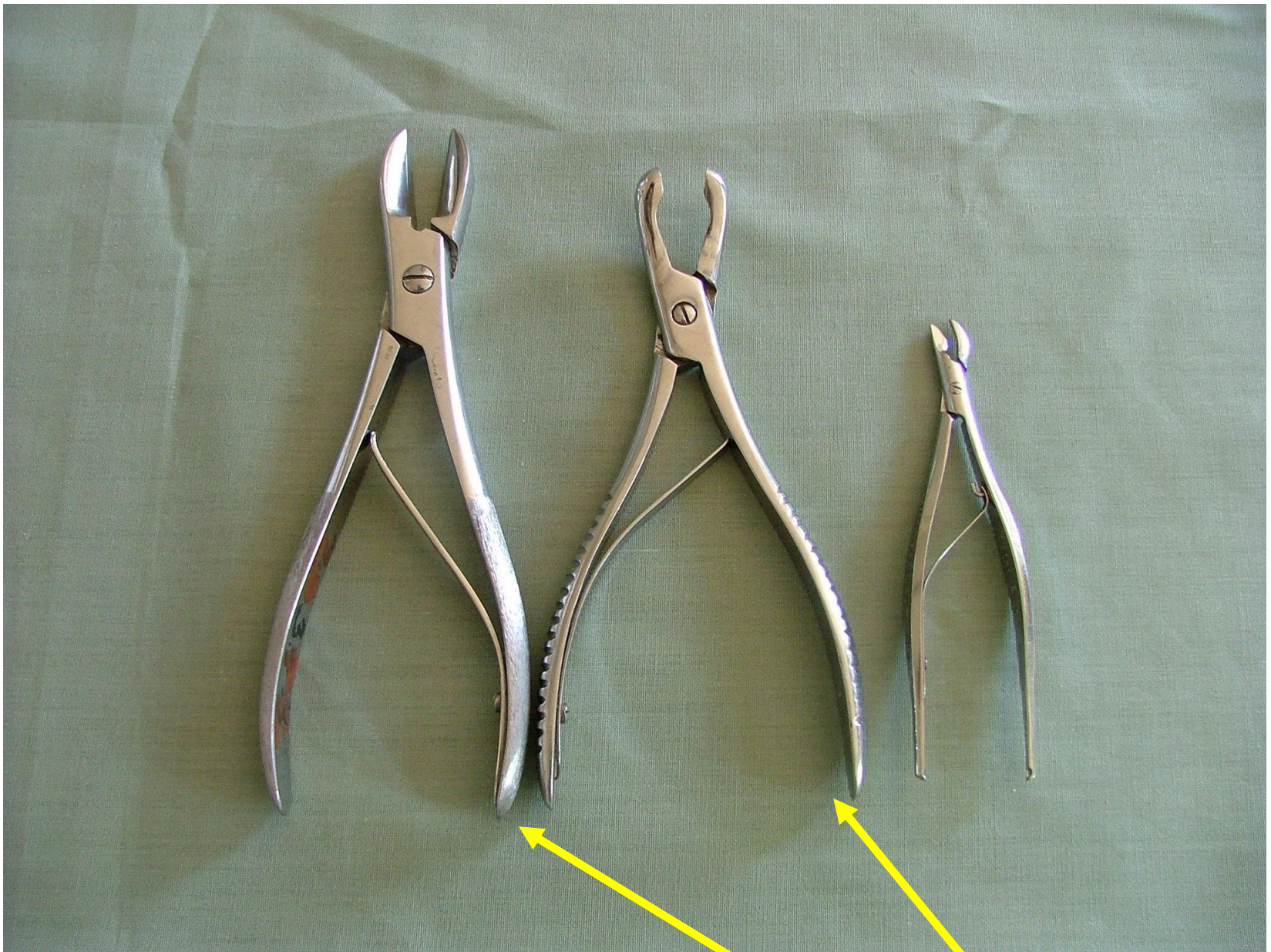


Hammer, chisels, raspatory



Ligature needles (Deschamps), chisel spoon

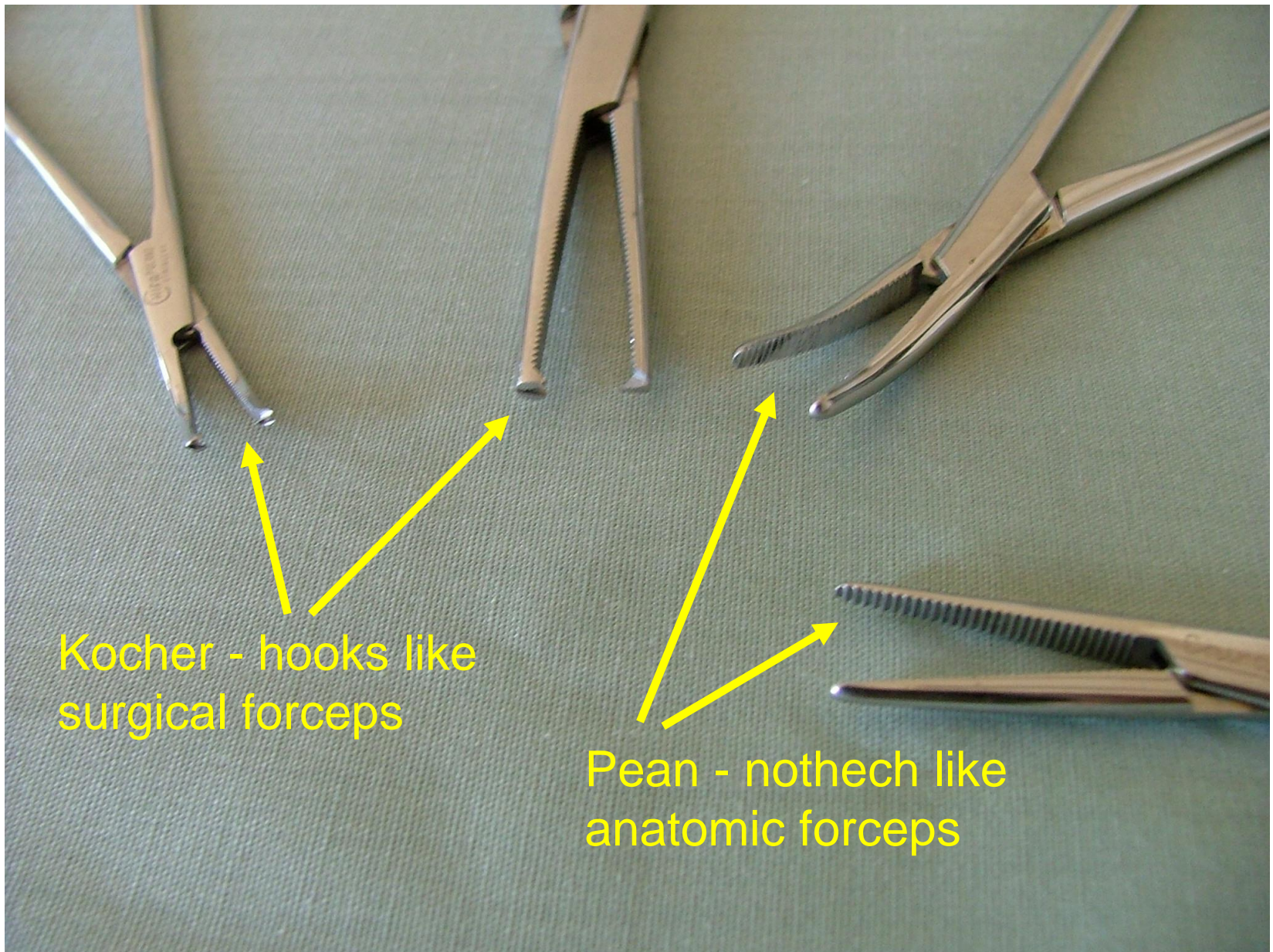




Raspatory forceps (Liston, Luer)



Vascular forceps (Pean), Kocher forceps



Kocher - hooks like surgical forceps

Pean - nothech like anatomic forceps

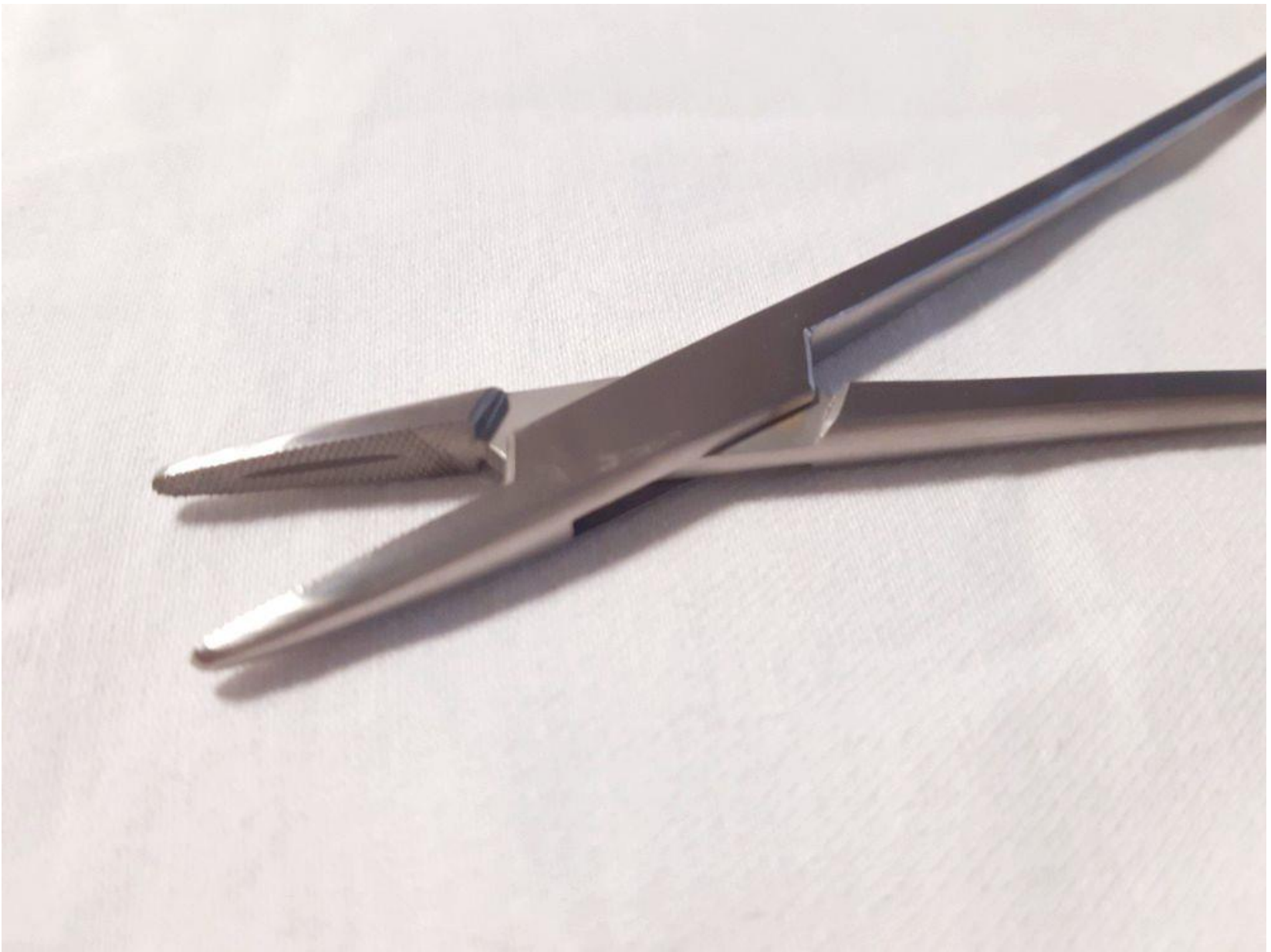
Pean forceps, Kocher forceps - straight, curved



Needle holder, needles, sewing material



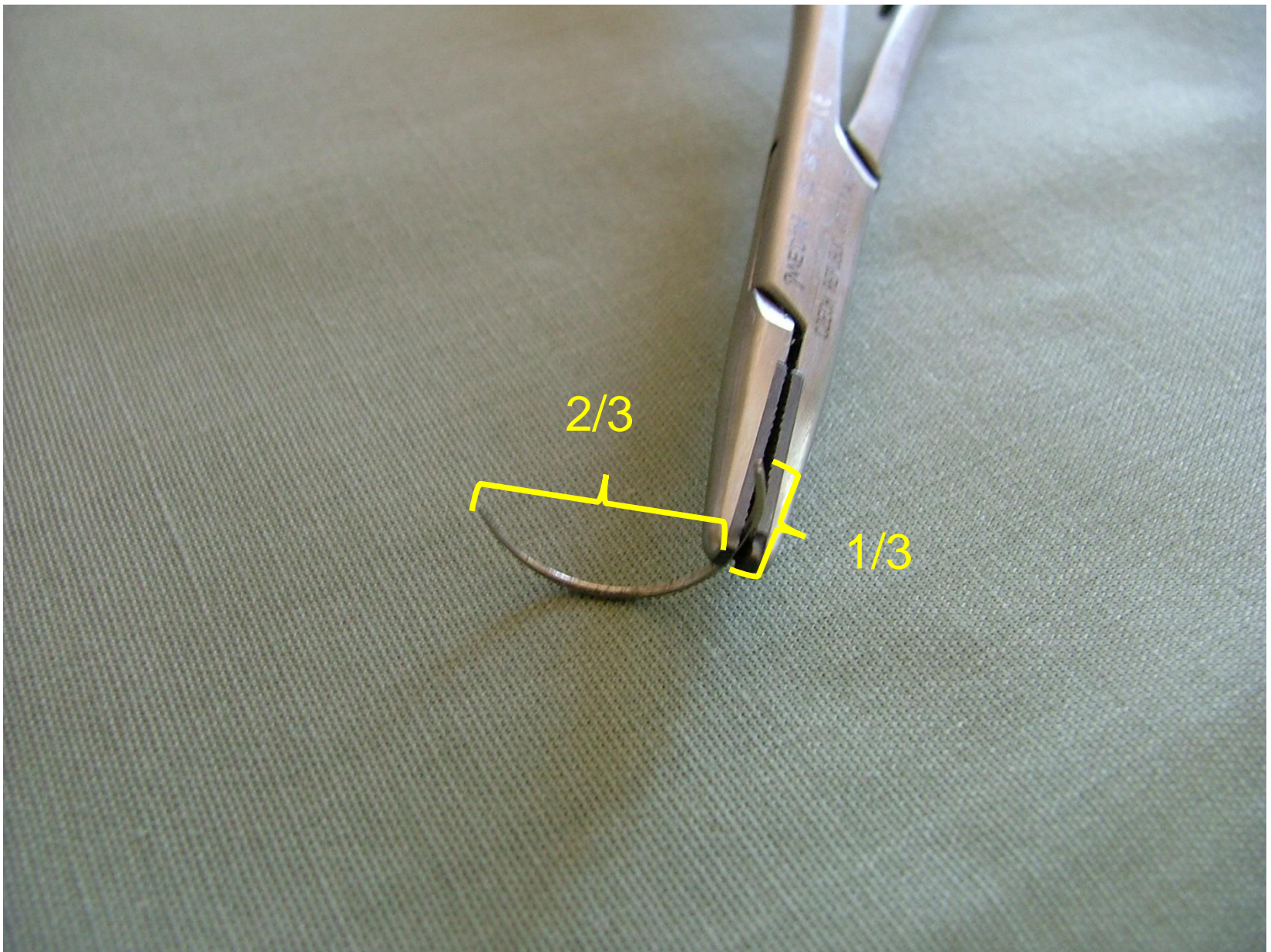
Needle holder



Needle holder



A needle fixed in a needle holder



A needle fixed in a needle holder

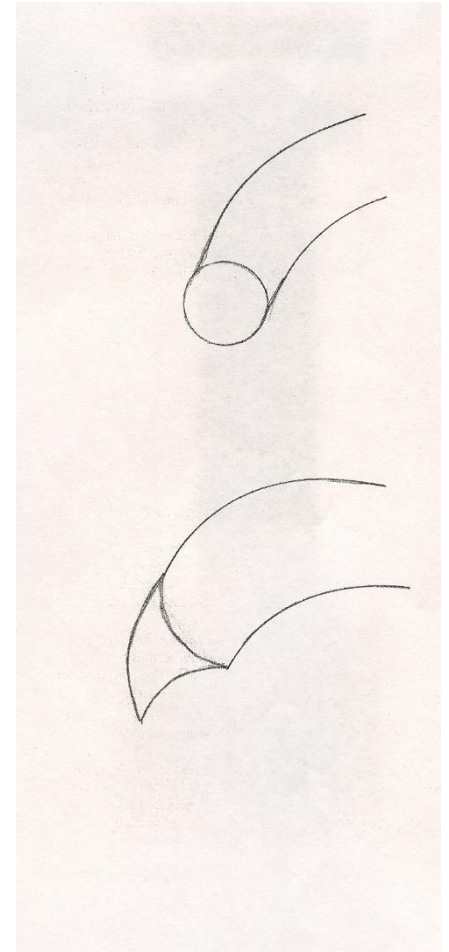
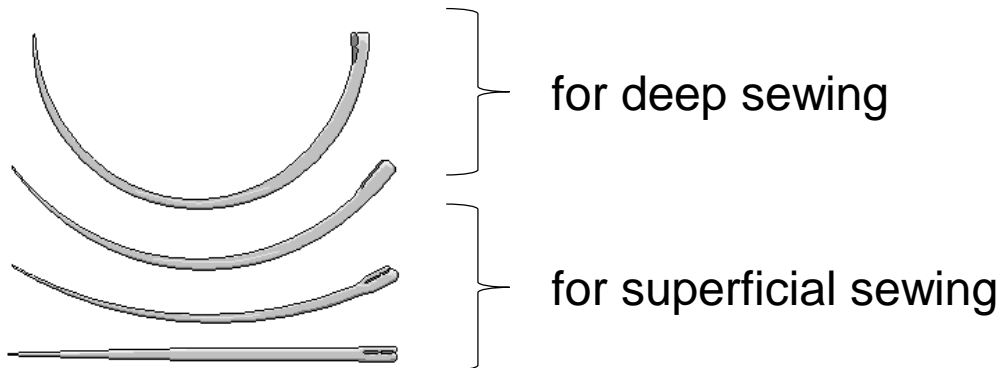


# Surgical needles

**Muscle (wire) needle**  
- circular cross section

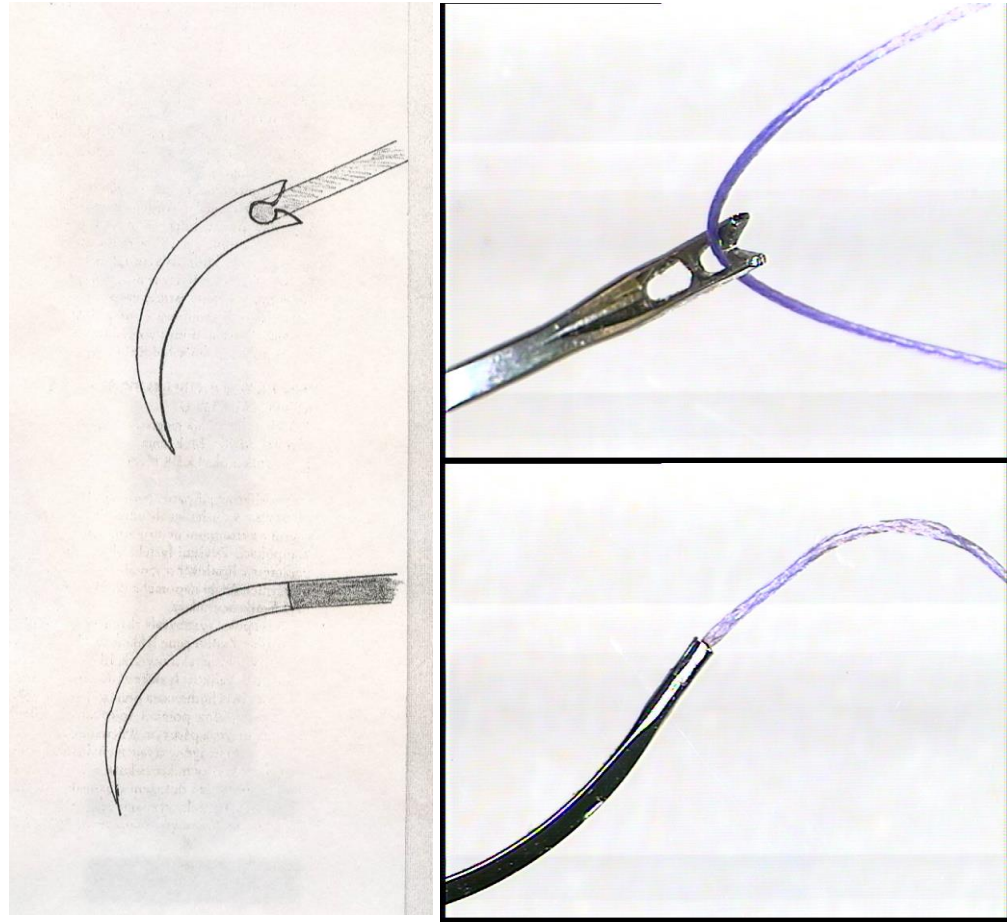
**Skin (cutting) needle**  
- triangular cross section

## Various curvature of the needles



# Surgical needles

**Classic**



**Atraumatic**

# Suture materials

**Absorbable:** silk, nylon

**Non-absorbable:** catgut, vicryl, monolac, chirlac



Fiber diameter:

EP/USP

1 unit EP = 0.1 mm (EP 1.5 → fiber diameter of 0.15 mm)

# Surgical technique

**Asepsis** – preparation of the team (washing, disinfection, coats, gloves), instrument sterility

**General and/or local anesthesia**

**Verification of anesthesia depth**

**Surgical field preparation** - shaving, disinfection, towel application

**Surgery**

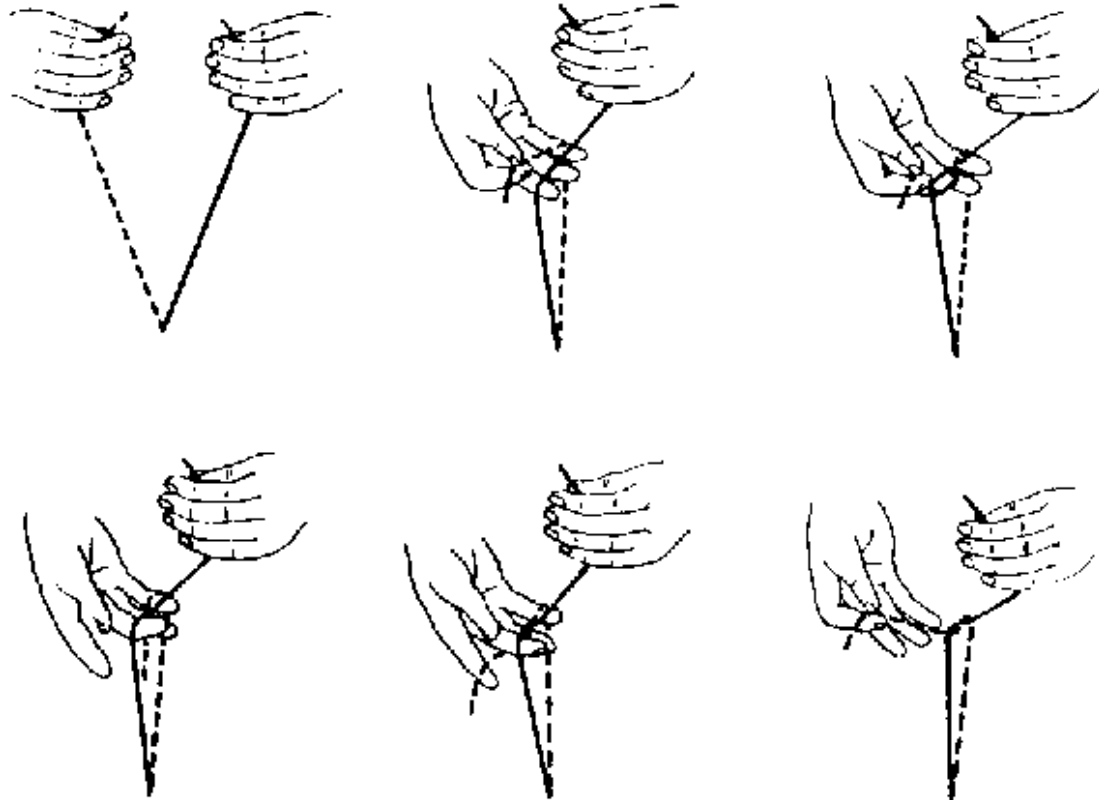


Scheme of surgical field disinfection

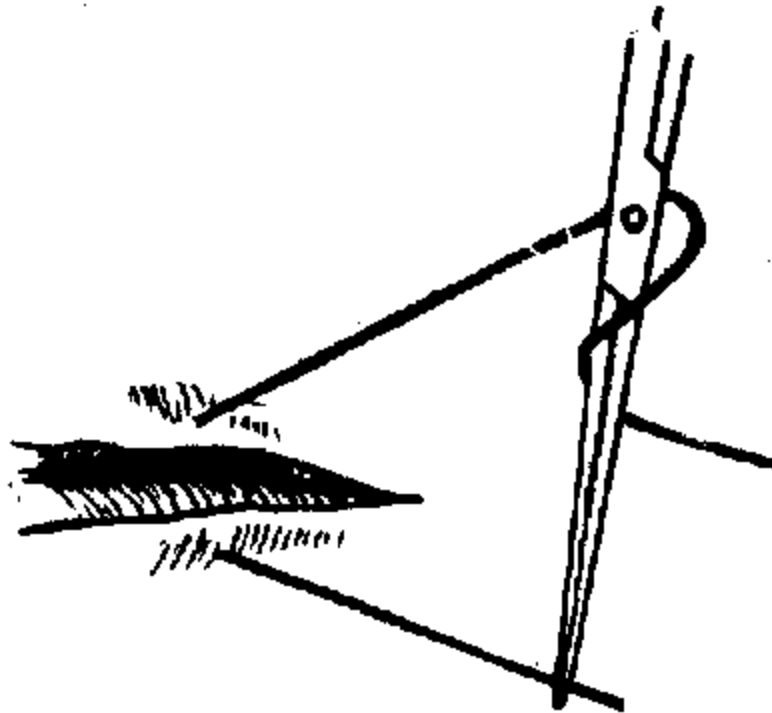
# Classical towel arrangement



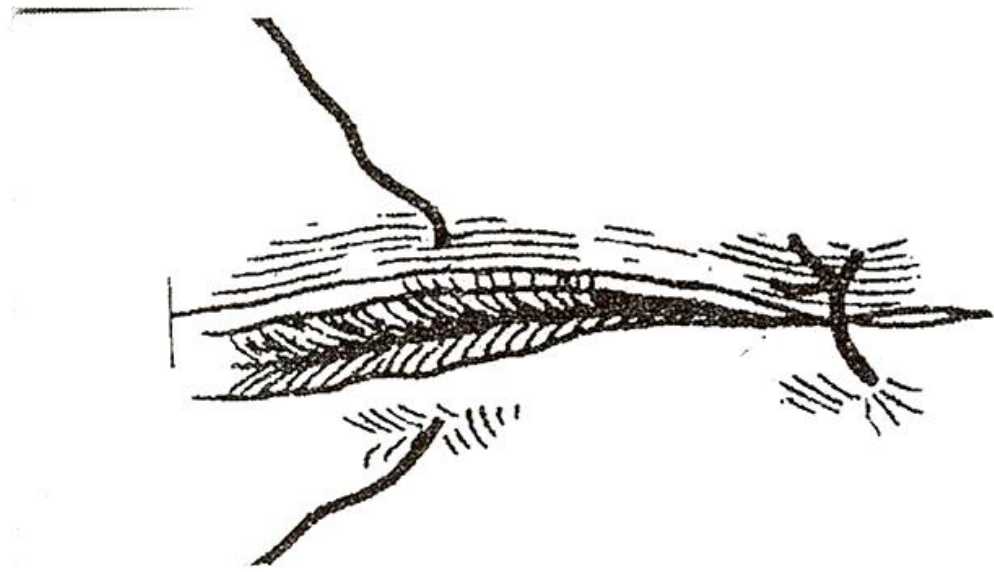
# Hand-made surgical knot



# Surgical knot made using an instrument (needle holder)



# Single suture





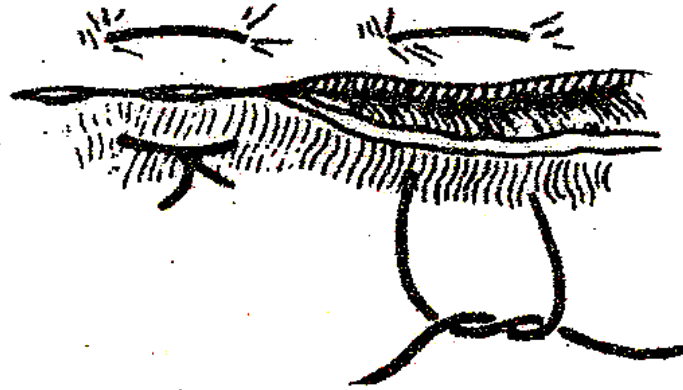
# Serial suture



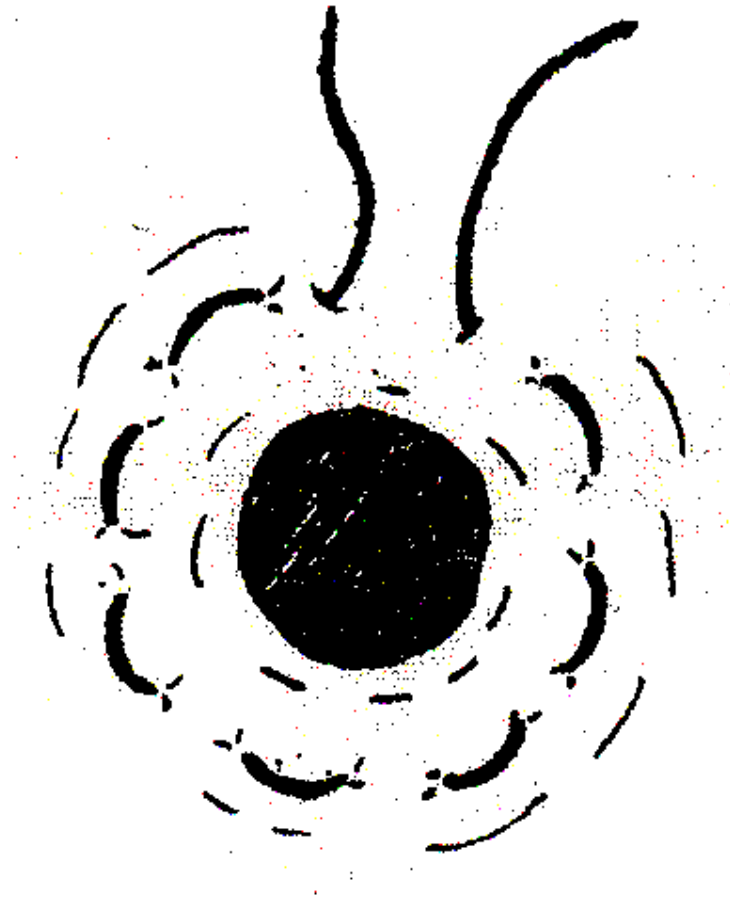
# Pull through



# Mattress suture



# Tobacco suture



**THE END**