

# Tips and tricks



Endoscopy in reproductive medicine  
2011

---

---

---

---

---

---

---

---

What is wrong ?



---

---

---

---

---

---

---

---

## ERGONOMY : DEFINITION

- ✓ ergonomics: greek
  - ergon : work
  - nomos : law
- ✓ Quantitative and qualitative study of your work in order to improve the conditions of work and increase the productivity.
- ✓ Look for a better adaptation between the function, the equipment and the user.

---

---

---

---

---

---

---

---

## WHAT IS LAPAROSCOPY

✓ A way of access ?

✓ No !

- It is a different access
- With planned but also unexpected advantages (cf EP)
- So this is a different philosophy for different benefits.



theAcademy

---

---

---

---

---

---

---

---

## General aspects

Open Surgery

Laparoscopic Surgery

Direct binocular vision

Hand & eye coaxial

Indirect magnified image of the operative field

Suturing in semi-automatic fashion

Task broken down into sequential steps

Each step facilitates the succeeding one



theAcademy

---

---

---

---

---

---

---

---

## Obstacles of Widespread Acceptance of the Laparoscopic Approach

✓ Ergonomics

✓ Working on a Screen (3D -> 2D)

✓ Exposure:

- Good vision but reduced visual field (180 vs 110°)
- Poor exposure in the operative field from bowel
- Inadequate retractors and limited in number
- Lose your assistant
- Lose of aesthetic advantages if ↑ numbers of trocars

theAcademy

---

---

---

---

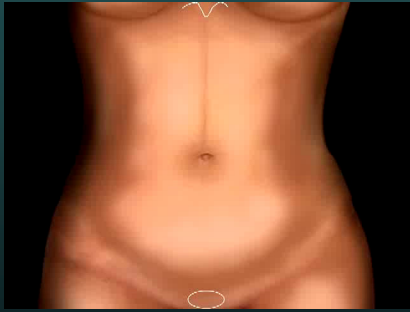
---

---

---

---

### Trocar position



---

---

---

---

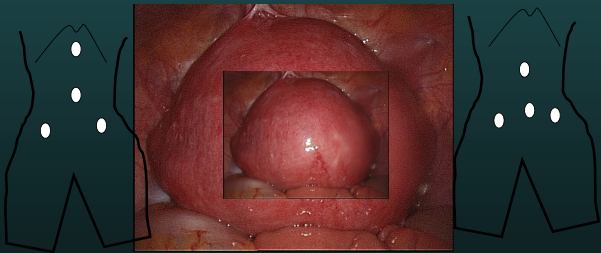
---

---

---

---

### VIRTUAL SURGERY : ADVANTAGES



---

---

---

---

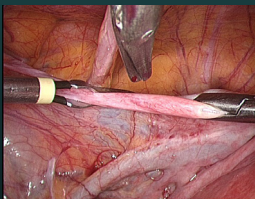
---

---

---

---

### PUT ALL INFORMATIONS NEEDED ON YOUR SCREEN.



- ✓ Instruments info
- ✓ Anatomy info
- ✓ Energy info
- ✓ Remove or hide no useful info.



---

---

---

---

---

---

---

---

## NEVER STOP TO LOOK AT THE SCREEN!

- ✓ Team organisation
- ✓ Operative field organisation
- ✓ Trocars placement
- ✓ Instruments functions
- ✓ Operative strategy.



theAcademy

---

---

---

---

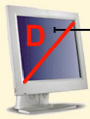
---

---

---

---

4-5 x D



Copyright © WeBSurg®

theAcademy

---

---

---

---

---

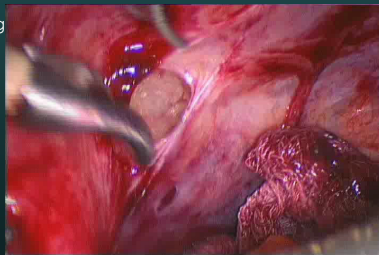
---

---

---

## Why not to wash a lot ?

- ✓ Loose time to aspirate the fluid
- ✓ Makes image disturbing
- ✓ Disseminate blood everywhere
- ✓ Makes us loose the correct dissection plan



theAcademy

---

---

---

---

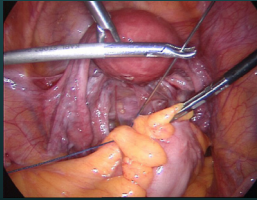
---

---

---

---

## RETRACTION RESTRICTION.



- ✓ A trocar used for retraction is lost for surgery.
- ✓ Every time possible retraction should use an alternative way.



---

---

---

---

---

---

---

---

## Benefits of Correct Exposure

1. Gain an Assistant
2. Improve Surgical performance:
  - Excellent view and large working space
  - Comfort and confidence
  - Operate with both hands
3. Safety:
  - Haemostasis,
  - Lower intra-abdominal pressure

→ **SAVE TIME**



---

---

---

---

---

---

---

---

## SUSPENSION TECHNIQUE

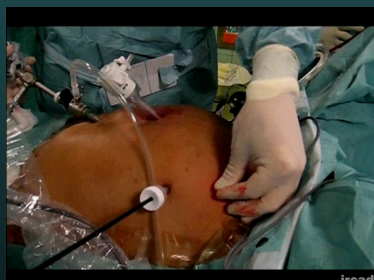
Achieved by:

### Transparietal fixation

- Clamps +++
- Knots

### Internal attachment

Fixation to other internal organs



---

---

---

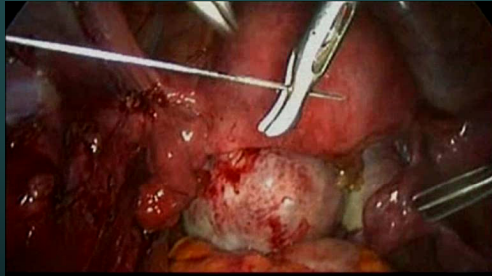
---

---

---

---

---



3.1 Suspension of the sigmoid colon

iread

theAcademy

---

---

---

---

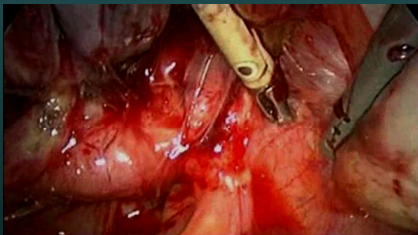
---

---

---

---

## OVARY SUSPENSION



3.2 Transabdominal suspension of the ovaries

iread

theAcademy

---

---

---

---

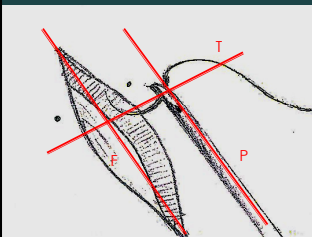
---

---

---

---

## The perfect stitch



- ✓ P = axe of needleholder
- ✓ T = axe of needle
- ✓ F = midline of incision

theAcademy

---

---

---

---

---

---

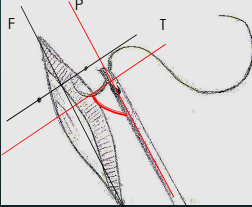
---

---

## THE STICH SUTURING ANGLES

ALFA is the angle between axe of needleholder and T the needle's position plan

### THE PERFECT STICH



SUTURE ANGLES  
ALFA =  $90^\circ$



theAcademy

---

---

---

---

---

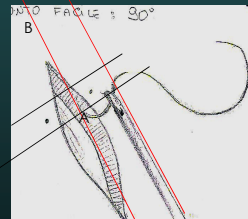
---

---

---

## THE STICH SUTURING ANGLES

BETA is the angle between axe of needleholder and F the virtual midline of the closure's tissue



SUTURE ANGLES  
A=ALFA =  $90^\circ$   
B=BETA =  $0^\circ$



theAcademy

---

---

---

---

---

---

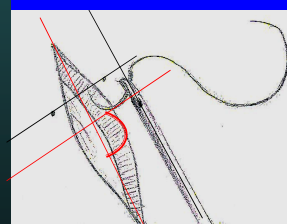
---

---

## THE STICH SUTURING ANGLES

Gamma is the angle between T, the needle and F the virtual midline of the closure's tissue

### THE PERFECT STICH



SUTURE ANGLES  
ALFA =  $90^\circ$   
BETA =  $0^\circ$   
GAMMA =  $90^\circ$



theAcademy

---

---

---

---

---

---

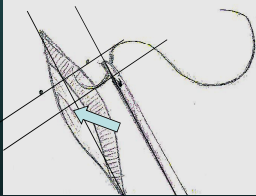
---

---

## THE STICH

When the needleholder P axe is parallel to the F score tissue axe we will have: THE PERFECT STICH. This means that the axe of the needle plan is 90° degrees angled respect to the needleholder P axe.

### THE PERFECT STICH



### SUTURE ANGLES

ALFA = 90°

BETA = 0°

GAMMA = 90°



---

---

---

---

---

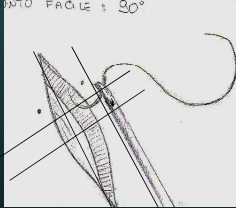
---

---

---

## THE STICH

### THE PERFECT STICH



- ✓ This is the Target for a simple stich in Laparoscopy.
- ✓ For this reason sometimes we will change the F axe position ?



---

---

---

---

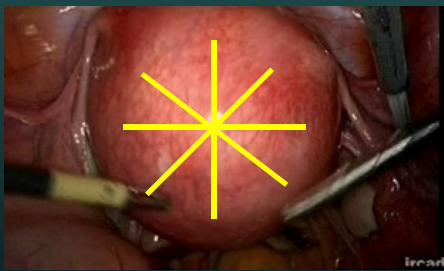
---

---

---

---

## Technique : Incision ?



---

---

---

---

---

---

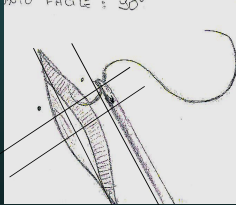
---

---



## THE STICH

### THE PERFECT STICH



- ✓ This is the Target for a simple stich in Laparoscopy.
- ✓ For this reason sometimes we will change the F axe position ?
- ✓ change the P axe?
- ✓ Change needle?

---

---

---

---

---

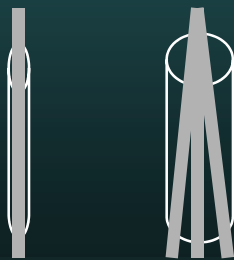
---

---

---

## Trocar size

- ✓ Use the same sized trocar and instrument



---

---

---

---

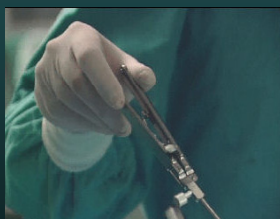
---

---

---

---

## Rotation of wrist & fingers



---

---

---

---

---

---

---

---

## General aspects

- ✓ Slow down from time to time
  - Define & redefine your strategy
  - Good hemostasis



- ✓ Both hands must work
  - Beginner
  - Experienced



---

---

---

---

---

---

---

---

## Ambidexterity

- Tissue manipulation
- Suture techniques
- Change in instruments



"My husband is ambidextrous... completely useless with either hand."



---

---

---

---

---

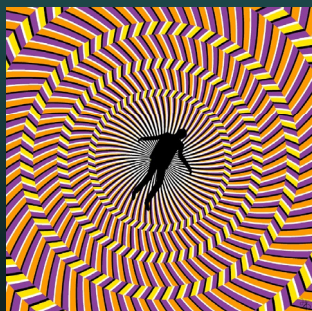
---

---

---

## General aspects

- ✓ Only one instrument should be moved at one time



---

---

---

---

---

---

---

---

## General aspects

- ✓ Good cooperation with assistant
- ✓ Tell clearly your assistant what you want
- ✓ Distorsion of information !!



+theAcademy

---

---

---

---

---

---

---

---

## What is wrong ?



+theAcademy

---

---

---

---

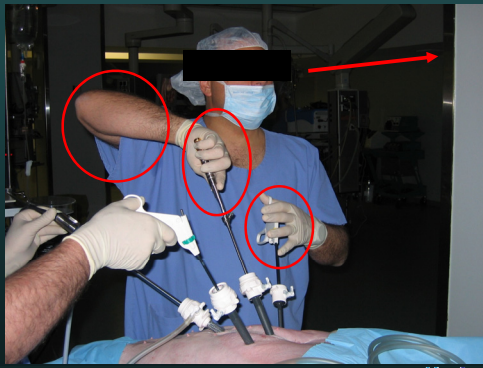
---

---

---

---

## What is wrong ?



+theAcademy

---

---

---

---

---

---

---

---

## KEY PHRASES

- ✓ Put all informations needed on your screen.
- ✓ Never stop to look at the screen
- ✓ Think before you wash
- ✓ Retraction & exposure
- ✓ Train ambidexterity



---

---

---

---

---

---

---

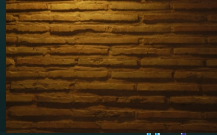
---

## Knots

- ✓ Do always the knot you know !
- ✓ Do not try to make SHOWS with knots tying



- ✓ When blocked better is to remove the suture !



---

---

---

---

---

---

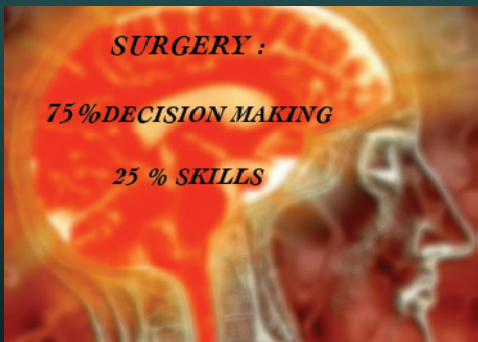
---

---

**SURGERY :**

**75 % DECISION MAKING**

**25 % SKILLS**



Some of the photos or pictures in this presentation are downloaded from the web.



---

---

---

---

---

---

---

---

## What is being an EXPERT ??



---

---

---

---

---

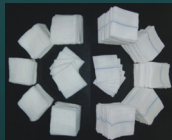
---

---

---

## Exercises

- ✓ Needle insertion through trocars
- ✓ Loading the needle
- ✓ Suturing WITHOUT KNOTTING
  - Z line
  - Greek line
- ✓ Extracorporeal knotting
- ✓ Intracorporeal knotting
  
- ✓ 2 layer suture on chicken leg
  - Deep muscle layer
  - skin



---

---

---

---

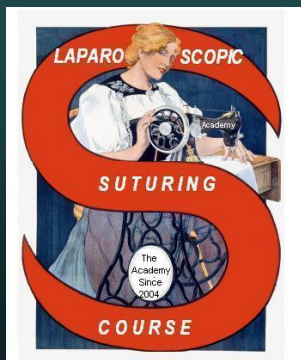
---

---

---

---

Thank you for your attention !



---

---

---

---

---

---

---

---