



# ENDOMETRIOSIS!

**Dr Rahul Manchanda**

M.B.B.S., MD, FICOG, FICMCH, FICS

Head and Professor

Gynaecology endoscopy unit

Manchanda's Endoscopic Centre,

PSRI Hospital, Delhi

**Dr Jahnavi Meena , Dr Stuti Tyagi**

Gynae endoscopy fellow, MEC Delhi

# INTRODUCTION

- Endometriosis is defined as the presence of endometrial tissue (glands and stroma) outside the uterus.
- Endometriosis varies in appearance from a few minimal lesions on otherwise intact pelvic organs, to massive ovarian endometriotic cysts that distort tubo-ovarian anatomy and extensive adhesions involving bowel, bladder, and ureter.



Frequency of endometriosis vary widely, but the prevalence is assumed to be around 10% and is associated with pelvic pain and infertility.



>> ENDOMETRIOSIS: MY LIFE WITH YOU. <<





RESEARCH ARTICLE

# Trends in Endometriosis among Laparoscopic Patients in Multiple Hospitals in Northern India: A 3-Year Review

<sup>1</sup>Chijioke Caminus Umelo, <sup>2</sup>Rahul Manchanda

## ABSTRACT

### Objectives:

- To determine the prevalence of the disease, its pattern of incidence, major clinical features in multiple hospitals in the North Indian region over the period of 3 years.
- To determine the most affected age group and the grades of the disease in the region.
- To evaluate the commonly affected pelvic organs and surgical management offered.

**Data collection:** Records were collected from five different hospitals spread mainly over North Indian region that underwent laparoscopic procedures from January 2012 to December 2014. Total cases analyzed were 440 laparoscopic cases and 110 endometriosis cases.

**Design:** Retrospective analytic study.

**Patients:** All those patients who underwent laparoscopy of all ages referred to the above-mentioned hospitals during the period.

**Results:** Out of the 440 laparoscopic procedure done, 110 were confirmed cases of endometriosis (25%). The mean age of the studied population was  $30.6 \pm 5.62$  while 25 to 29 (40.0%) age bracket was the most affected. There was a yearly rise in the incidence of endometriosis with a range of 21 to 42% per 100 person-year population with a prevalence rate of 25%. The most commonly associated symptom was infertility (87.3%), followed by chronic pelvic pain (56.4%) and dysmenorrhea (34.5%). The ovary was the most affected organ (89.1%), grade II (mild) endometriosis the most common grade (35.5%), while cystectomy (30.0%) and excision of the endometriosis implants (19.1%) were the commonly performed surgical procedures.

**Conclusion:** Study shows that endometriosis is prevalent in this region and its major symptom is infertility and chronic pelvic pain, these facts should stimulate gynecologist to promptly examine women with symptoms suggestive of endometriosis laparoscopically with a view of offering early treatment and counseling.

**Keywords:** Chronic pelvic pains, Dysmenorrhea, Enigma subfertility.

**How to cite this article:** Umelo CC, Manchanda R. Trends in Endometriosis among Laparoscopic Patients in Multiple Hospitals in Northern India: A 3-Year Review. J South Asian Feder Obst Gynae 2015;7(3):167-170.

**Source of support:** Nil

**Conflict of interest:** None

**Date of received:** 10 September 2015

**Date of acceptance:** 20 November 2015

**Date of publication:** December 2015

## INTRODUCTION

Endometriosis was first described by Rokitansky in 1860. It is defined as the presence of functioning endometrial tissue outside the uterine cavity; commonest site being the pelvis. The exact prevalence of the disease is not actually known, however, prevalence estimates range from 2 to 10% within the general population but up to 50% in infertile women.<sup>1</sup> It occurs in approximately 70% of women with dysmenorrhea and dyspareunia, although not all women with endometriosis are symptomatic.<sup>2</sup>

The economic impact of endometriosis is important through direct health-related costs stemming from surgery and long-term medical treatments and indirect cost-related to loss of productivity. Endometriosis typically develops on pelvic structures including the rectovaginal septum, urinary bladder, bowels, intestines, ovaries and fallopian tubes, but it may also be found in distant regions including the diaphragm, the lungs and very rarely, areas as far outside the abdominopelvic region as the brain. The ovaries are among the most frequent sites. Depending on the location, the disease may present with varied symptoms, the main symptoms are subfertility, chronic pelvic pain, dysmenorrhea and deep dyspareunia.<sup>3</sup> The gold standard for the diagnosis of endometriosis is laparoscopic pelvic examination and where appropriate peritoneal biopsy.<sup>4</sup>

Considering the current burden of endometriosis, the diagnostic challenges faced by gynecologist and the paucity of local data, the study aimed to study the trends of the disease in women who underwent laparoscopic surgery in this region.

<sup>1</sup>Senior Registrar, <sup>2</sup>Director, Head and Surgeon

<sup>1</sup>Department of Obstetrics and Gynecology, Irua Specialist Teaching Hospital, Irua, Edo State, Nigeria; Gyn-Endoscopic Fellowship Resident, Manchanda's Endoscopic Centre New Delhi, India

<sup>2</sup>Department of Gyn-Endoscopy, Manchanda's Endoscopic Centre, New Delhi, India

**Corresponding Author:** Chijioke Caminus Umelo, Senior Registrar, Department of Obstetrics and Gynecology, Irua Specialist Teaching Hospital, Irua, Edo State, Nigeria; Gyn-Endoscopic Fellowship Resident, Manchanda's Endoscopic Centre, New Friends Colony, New Delhi, India. Phone: +234806132436, e-mail: umehuoc@yahoo.com

# WHAT OUR STUDY SAYS?

**STUDY DURATION** – January 2012 to December 2012

**CONDUCTED AT-** Multiple tertiary hospitals of North India

**INCIDENCE-** 25%

**AGE AFFECTED-** 25 -29 years

**YEARLY INCIDENCE-** 21-42 / 100 person year

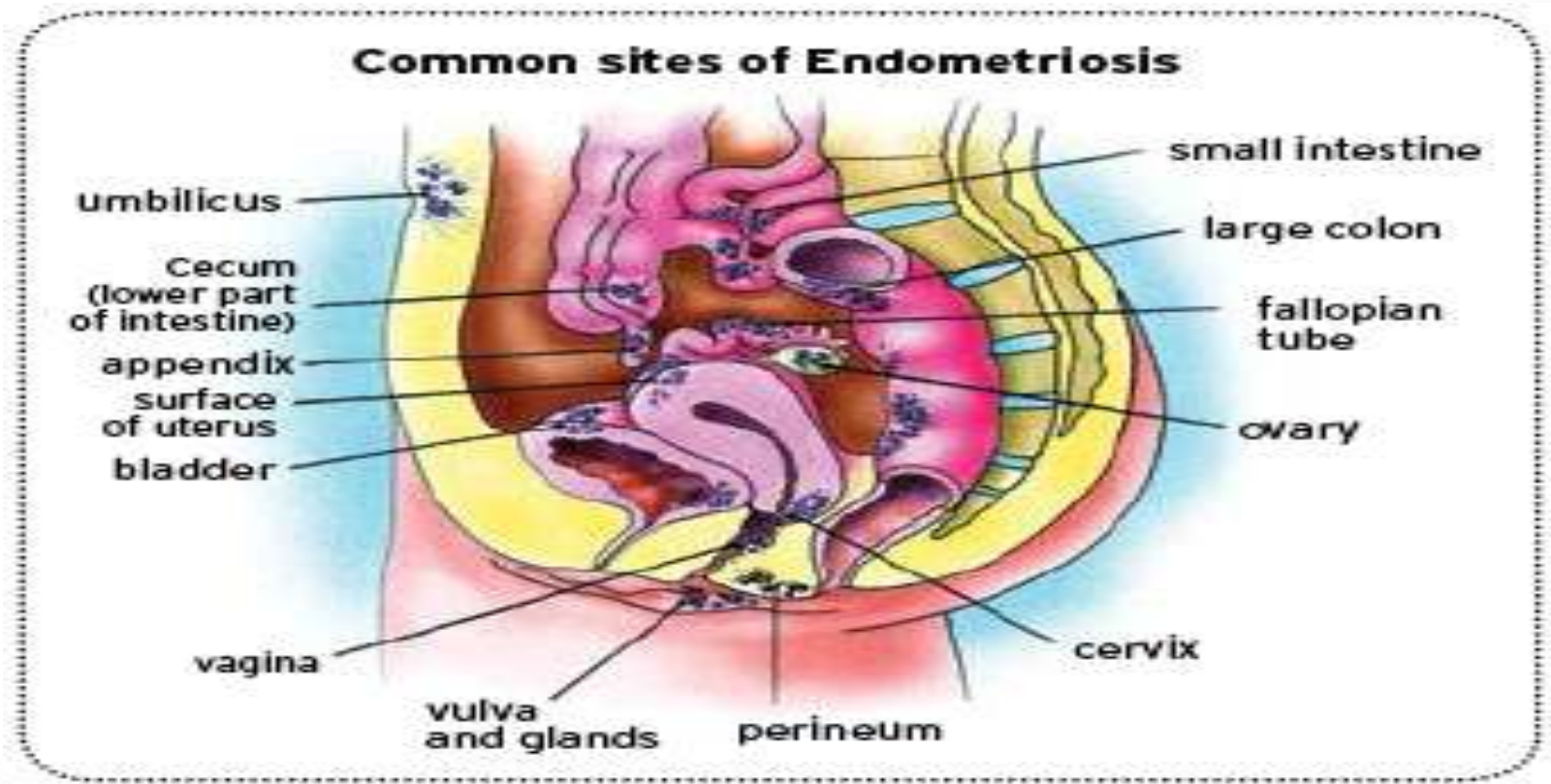
**MOST COMMON PRESENTATION –**

1. Infertility (87.3%)
2. Chronic pelvic pain (56.4%)
3. Dysmenorrhea (34.5%)

**MOST COMMON ORGAN AFFECTED-** Ovary (89.1%)

**MOST COMMON PROCEDURE DONE-** CYSTECTOMY (30%)

# COMMON SITES



# CLASSIFICATION- ASRM

## REVISED AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE CLASSIFICATION OF ENDOMETRIOSIS 1985

Patient's Name \_\_\_\_\_ Date: \_\_\_\_\_

Stage I (Minimal) 1-5 Laparoscopy \_\_\_\_\_ Laparotomy \_\_\_\_\_ Photography \_\_\_\_\_  
 Stage II (Mild) 6-15 Recommended Treatment \_\_\_\_\_  
 Stage III (Moderate) 16-40 \_\_\_\_\_  
 Stage IV (Severe) > 40 \_\_\_\_\_  
 Total \_\_\_\_\_ Prognosis \_\_\_\_\_

Peritoneum	ENDOMETRIOSIS	< 1 cm	1 – 3 cm	> 3 cm
	Superficial	1	2	4
Ovary	Deep	2	4	6
	R Superficial	1	2	4
	Deep	4	16	20
	L Superficial	1	2	4
	Deep	4	16	20
	POSTERIOR CULDESAC OBLITERATION	Partial	Complete	
Ovary	ADHESIONS	4	40	
		< 1/3 Enclosure	1/3-2/3 Enclosure	> 2/3 Enclosure
	R Filmy	1	2	4
	Dense	4	8	16
	L Filmy	1	2	4
	Dense	4	8	16
Tube	R Filmy	1	2	4
	Dense	4	8	16
	L Filmy	1	2	4
	Dense	4*	8*	16

\*If the fimbriated end of the fallopian tube is completely enclosed, change the point assignment to 16.

Additional Endometriosis: \_\_\_\_\_ Associated Pathology: \_\_\_\_\_



# Examples of scoring (ASRM)

STAGE I (MINIMAL)



PERITONEUM			
Superficial endo	- 1-3cm	-2	
R OVARY			
Superficial endo	- < 1cm	-1	
Filmy adhesions	- < $\frac{1}{3}$	-1	
TOTAL POINTS		-4	

STAGE II (MILD)



PERITONEUM			
Deep endo	- > 3cm	-6	
R OVARY			
Superficial endo	- < 1cm	-1	
Filmy adhesions	- < $\frac{1}{3}$	-1	
L OVARY			
Superficial endo	- < 1cm	-1	
TOTAL POINTS		-9	

STAGE III (MODERATE)



PERITONEUM			
Deep endo	- > 3cm	-6	
CULDESAC			
Partial obliteration		-4	
L OVARY			
Deep endo	- 1-3cm	-16	
TOTAL POINTS		-26	

STAGE III (MODERATE)



PERITONEUM			
Superficial endo	- > 3cm	-4	
R TUBE			
Filmy adhesions	- < $\frac{1}{3}$	-1	
R OVARY			
Filmy adhesions	- < $\frac{1}{3}$	-1	
L TUBE			
Dense adhesions	- < $\frac{1}{3}$	-16*	
L OVARY			
Deep endo	- < 1cm	-4	
Dense adhesions	- < $\frac{1}{3}$	-4	
TOTAL POINTS		-30	

STAGE IV (SEVERE)



PERITONEUM			
superficial endo	- > 3cm	-4	
L OVARY			
Deep endo	- 1-3cm	-32**	
Dense adhesions	- < $\frac{1}{3}$	-8**	
L TUBE			
Dense adhesions	- < $\frac{1}{3}$	-8**	
TOTAL POINTS		-52	

\*Point assignment changed to 16

\*\*Point assignment doubled

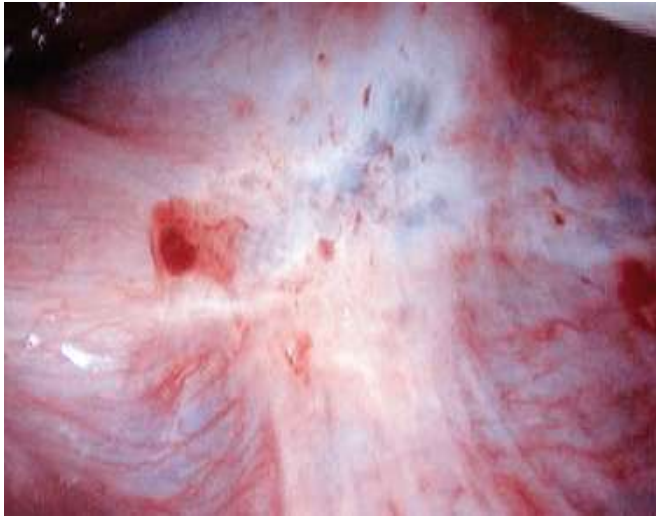
STAGE IV (SEVERE)



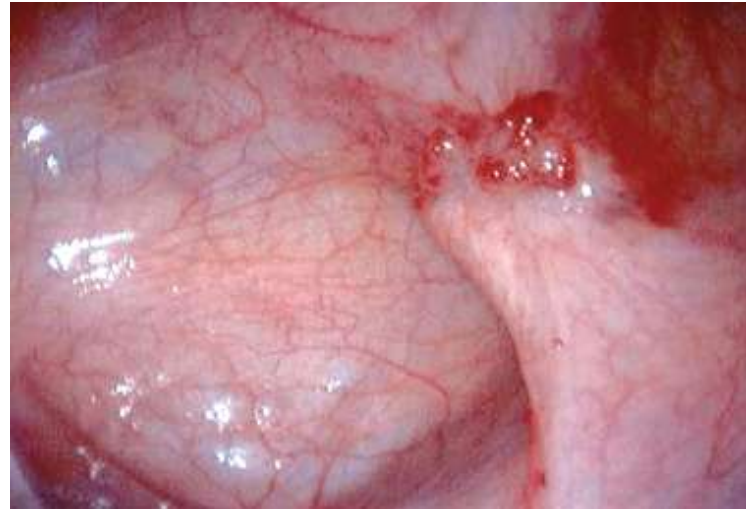
PERITONEUM			
Deep endo	- > 3cm	-6	
CULDESAC			
Complete obliteration		-40	
R OVARY			
Deep endo	- 1-3cm	-16	
Dense adhesions	- < $\frac{1}{3}$	-4	
L TUBE			
Dense adhesions	- > $\frac{2}{3}$	-16	
L OVARY			
Deep endo	- 1-3cm	-16	
Dense adhesions	- > $\frac{2}{3}$	-16	
TOTAL POINTS		-114	



# DIFFERENT TYPES OF LESIONS

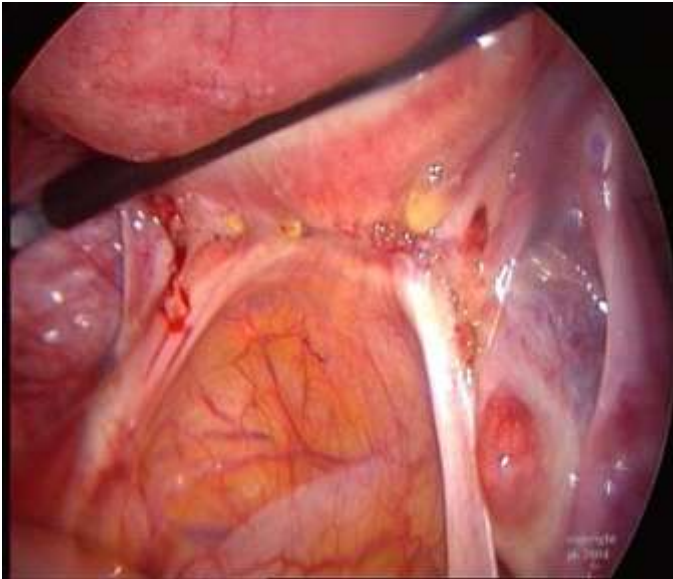


**Black and white lesions of the pelvic peritoneum with dense fibrosis**

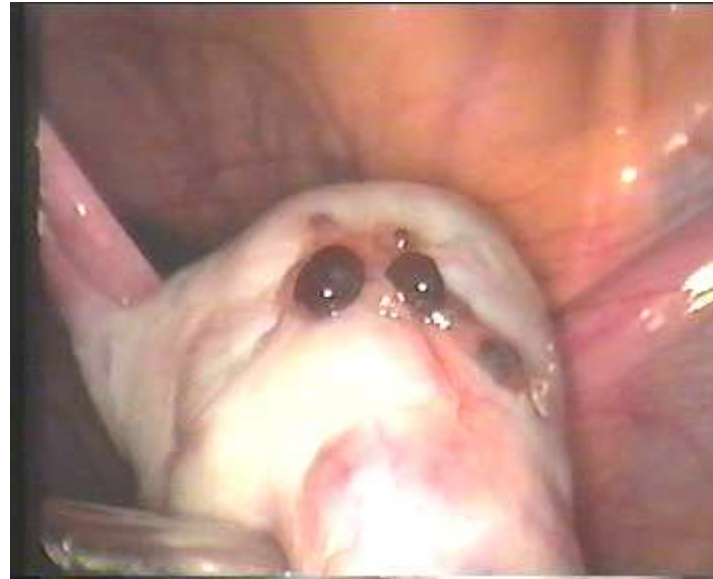


**Red lesion on the uterosacral ligament**

# DIFFERENT TYPES OF LESIONS



**Vesicular lesions**

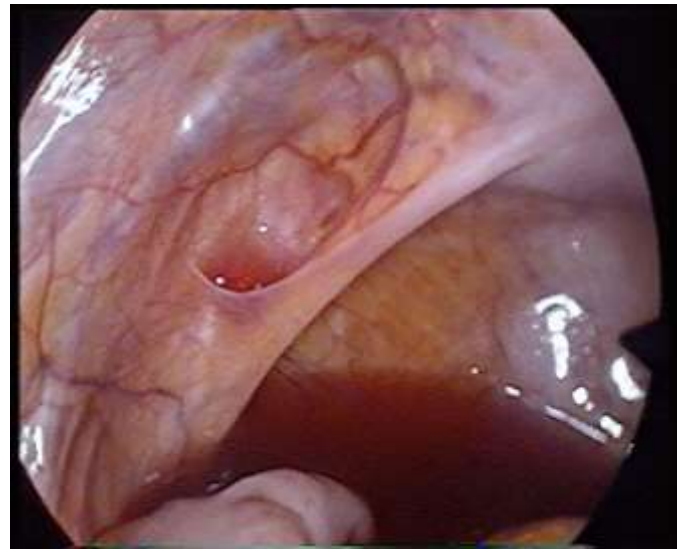


**Match stick lesions on ovary**

# DIFFERENT TYPES OF LESIONS



**Ovarian  
endometrioma**



**Peritoneal defects**

# ISSUES :

- ? Is Endometriosis Best Treated Surgically, Medically or Both
- ? Removal of Ovaries at Hysterectomy
- ? Adjuvant Treatment Postoperatively



# Treatment : Consideration

- Age
- Symptoms
- Stage
- Infertility



# Treatment: Overall Approach

- Individualize the patient
- Recognize Goals:
  - Pain Management
  - Preservation / Restoration of Fertility
- Patient counseling :
  - Disease may be Chronic, recurrent and not curable
  - Optimal Treatment- Surgery



# Pain Management: Medical Therapy

- NSAIDs
- OCPs (Continuous)
- Progestins
- Danazol
- GnRH-a
- Aromatase Inhibitors
- Misc: Opioids, SSRIs



OKAY! TODAY I WILL  
**GET SHIT DONE!**



**CRAMP**



UNBELIEVABLE  
**PAIN...**



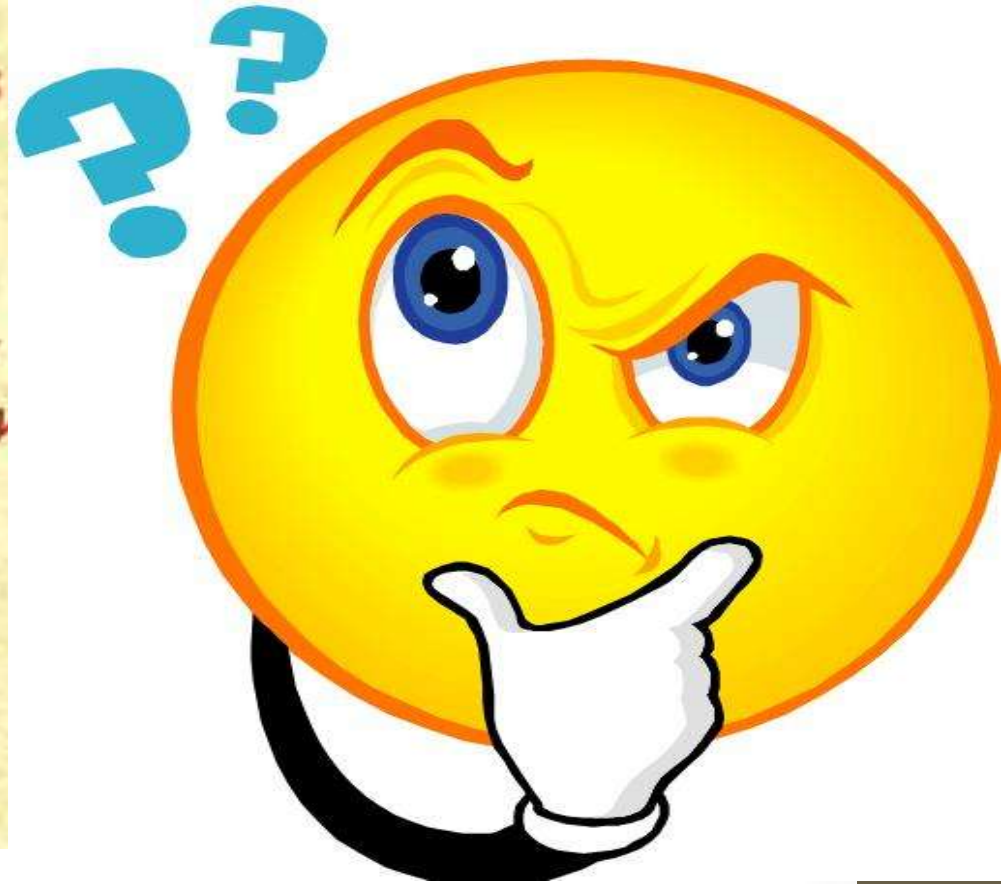
**WHAM  
WHAM  
WHAM  
WHAM**



NOT.







Pain abdomen has many causes and definitive diagnosis can only be made by **surgery**

# PRE OPERATIVE EVALUATION

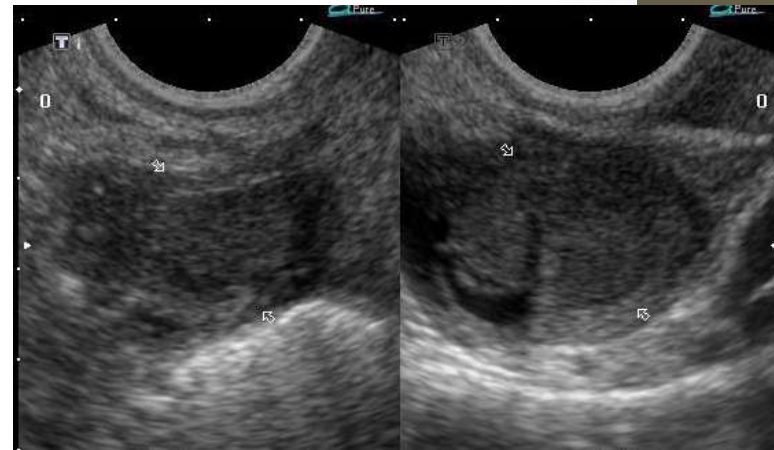
TVS to be used to diagnose ovarian endometrioma which shows following characteristics: ground glass echogenicity and one to four compartments and no papillary structures with detectable blood flow

Van Holsbeke et al. Endometriomas: their ultrasound characteristics. *Ultrasound Obstet Gynecol* 2010;35: 730–740

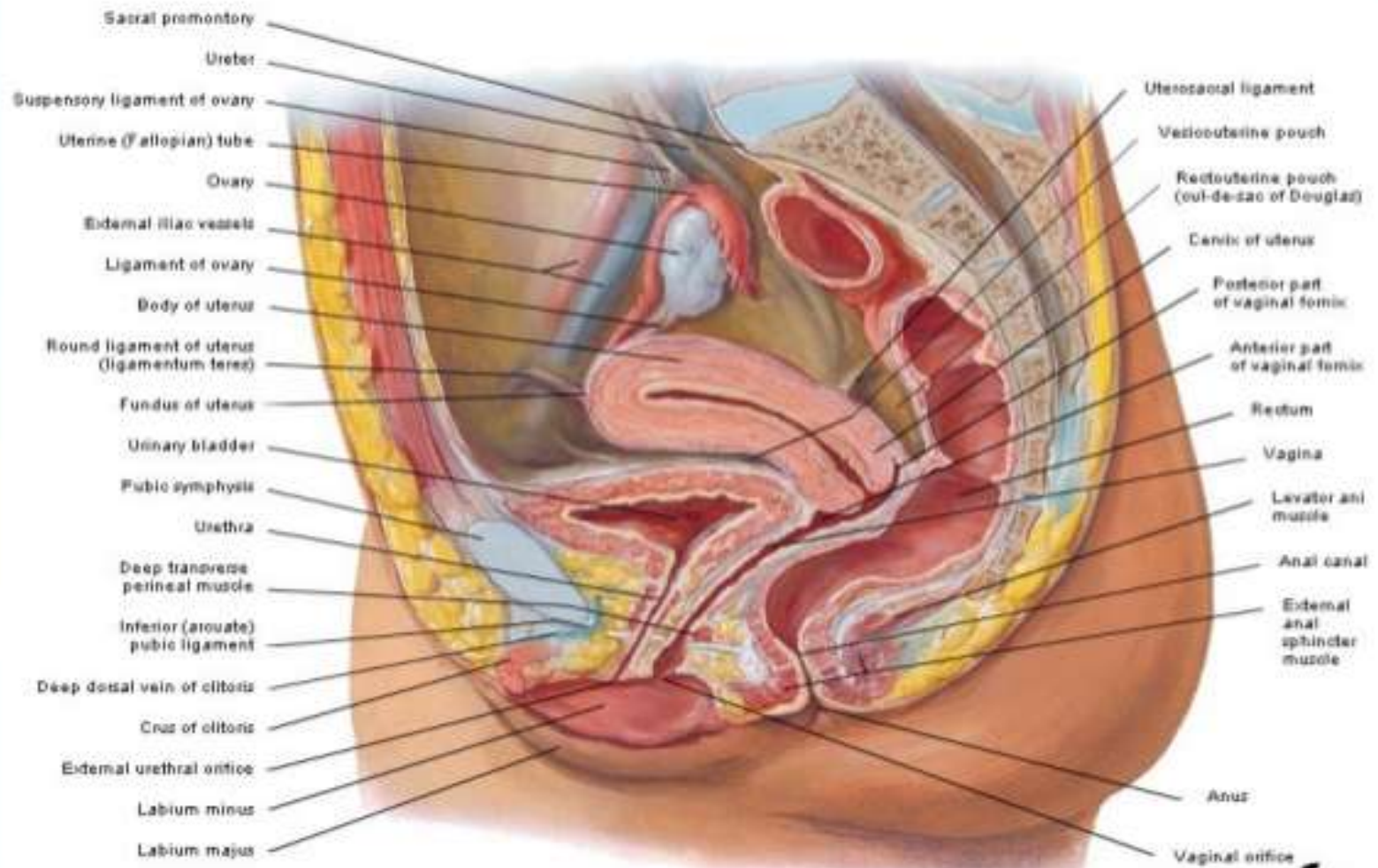
Usefulness of magnetic resonance imaging (MRI) to diagnose peritoneal endometriosis is not well established

Stratton et al. Diagnostic accuracy of laparoscopy, magnetic resonance imaging, and histopathologic examination for the detection of endometriosis. *Fertil Steril* 2003;79:1078 – 1085.

Assess ureter, bladder and bowel involvement by additional imaging if there is a suspicion based on history or physical examination of deep endometriosis, in preparation for further management.

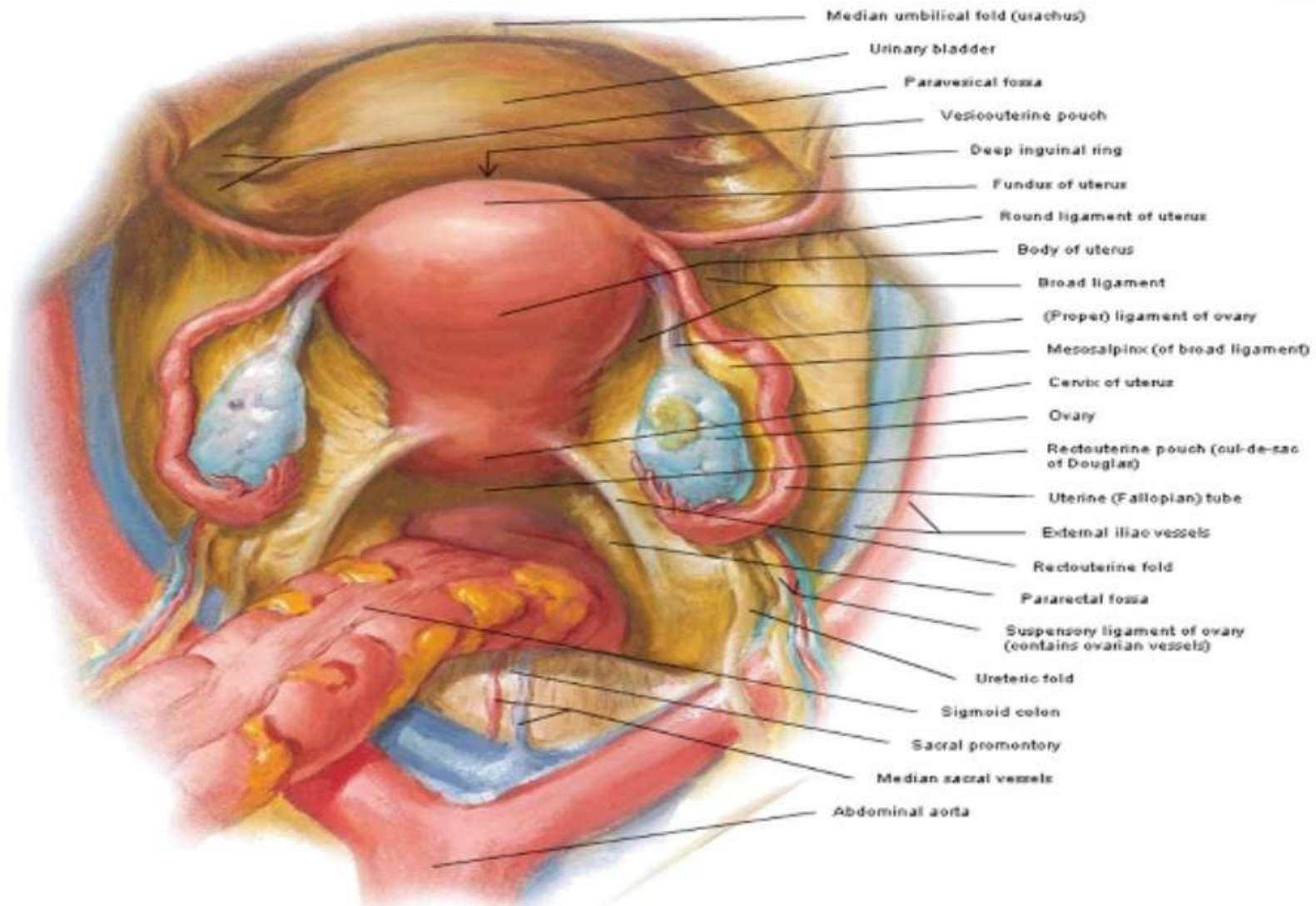


# PELVIC ORIENTATION





# PELVIC VISCERA (SUPERIOR VIEW)

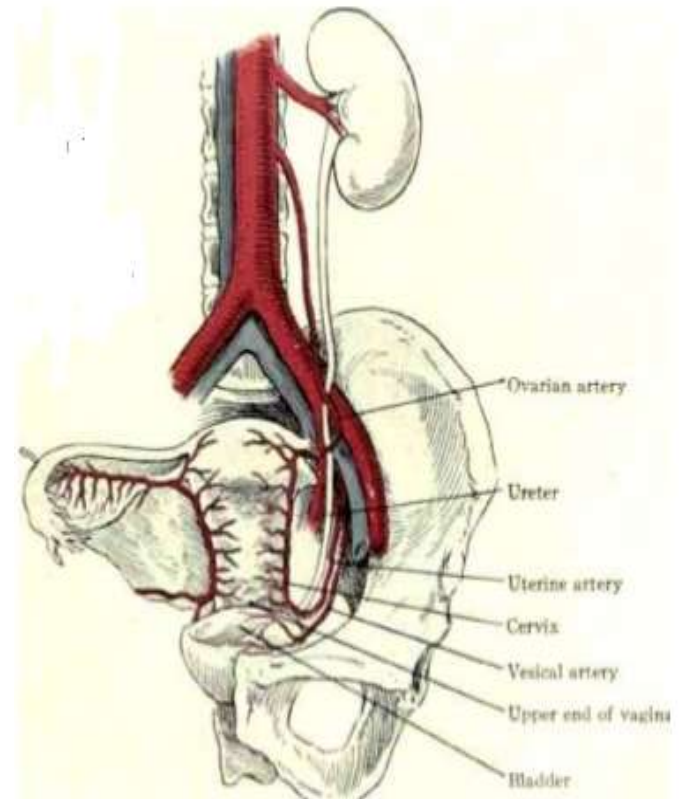




# ABOUT URETER

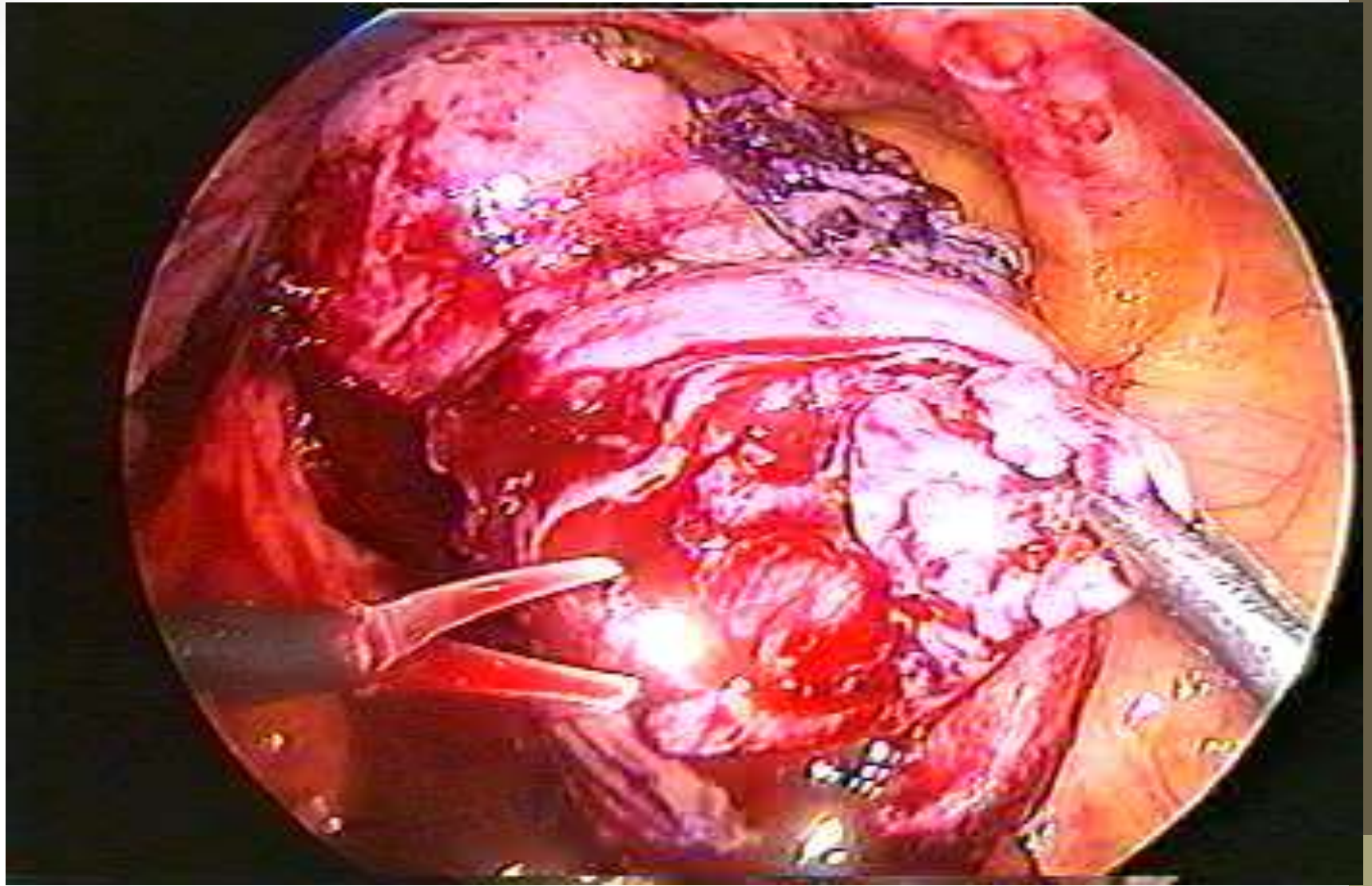
## PELVIC COURSE OF URETER

- The ureter passes downwards and slightly medially on psoas muscle.
- Enters the pelvis by crossing anteriorly to the iliac vessels, which occurs at the bifurcation of the common iliac artery.
- Ureter runs posterior to the ovary and then deep to the broad ligament and through the cardinal ligament.
- Uterine artery crosses it anteriorly in the rectouterine fold of peritoneum.



# ENDOMETRIOSIS AND CARCINOMA

- Malignant transformation of endometriosis occurs in 0.7-5%.
- The most common malignancies arising in endometriosis is endometrioid adenocarcinoma and clear cell adenocarcinoma.
- It is speculated that epithelium of endometriotic cysts undergoes initiation, giving rise to dysplastic or intraepithelial neoplastic epithelium.



# Surgical Treatment

- Aspiration and drainage
- Coagulation
- Excision / Fulgration
- Resection of Endometrioma
- Lysis of Adhesions, Cul-de-sac Reconstruction
- Hysterectomy +/- BSO





# Is Surgery effective for pain associated with endometriosis?

- To surgically treat endometriosis is effective in reducing endometriosis-associated pain.

Jacobson et al., 2009 Laparoscopic surgery for pelvic pain associated with endometriosis. Cochrane Database Syst Rev 2009:CD001300.

- Both ablation and excision of peritoneal endometriosis to reduce endometriosis-associated pain. However excision of lesions is preferential with regard to the possibility of retrieving samples for histology.

Healey et al. Surgical treatment of endometriosis: a prospective randomized double-blinded trial comparing excision and ablation. Fertil Steril 2010;94:2536 –2540.

When I'm on my period



- For ovarian endometrioma, cystectomy should be performed instead of drainage and coagulation, as it reduces endometriosis-associated pain .

Hart et al. Excisional surgery versus ablative surgery for ovarian endometriomata. Cochrane Database Syst Rev 2008:CD004992.

- Surgical removal of deep endometriosis is recommended, as it reduces endometriosis-associated pain and improves quality of life

DeCicco et al. Bowel resection for deep endometriosis: a systematic review. BJOG 2011;118:285 – 291.

- Women with suspected or diagnosed deep endometriosis should be referred to a centre of expertise that offers all available treatments in a multidisciplinary context



# Surgery and endometriosis-associated infertility

- Suppression of ovarian function (by means of hormonal contraceptives, progestagens, GnRH analogues or danazol) to improve fertility in minimal to mild endometriosis is not effective.

Hughes et al. Ovulation suppression for endometriosis. Cochrane Database Syst Rev 2007:CD000155

- In infertile women with AFS/ASRM Stage I/II endometriosis, operative laparoscopy (excision or ablation of the endometriosis lesions) including adhesiolysis, than performing diagnostic laparoscopy only, to increase ongoing pregnancy rates .

Nowroozi et al. Laparoscopic surgery for subfertility associated with endometriosis. Cochrane Database Syst Rev 2010:CD001398.

- In infertile women with ovarian endometrioma ,excision of the endometrioma capsule, instead of drainage and electrocoagulation of the endometrioma wall, to increase spontaneous pregnancy rates. However counsel patient regarding the risks of reduced ovarian function after surgery and the possible loss of the ovary.

Hart et al., 2008 Excisional surgery versus ablative surgery for ovarian endometriomata. Cochrane Database Syst Rev 2008:CD004992.

- In infertile women with AFS/ASRM Stage III/IV endometriosis, operative laparoscopy to be considered, instead of expectant management, to increase spontaneous pregnancy rates
- Crude spontaneous pregnancy rates of 57– 69% (moderate endometriosis) and 52– 68% (severe endometriosis) after laparoscopic surgery, which are much higher than the crude pregnancy rates of 33% (moderate) and 0% (severe) after expectant management.

Vercellini et al. Reproductive performance, pain recurrence and disease relapse after conservative surgical treatment for endometriosis: the predictive value of the current classification system. Hum Reprod 2006;21:2679– 2685



# CASE 1

Patient X, 34 years P0L0 female came with primary infertility, dysmenorrhoea since 2 years

On examination:

GPE: normal

Per abdomen: soft, no mass palpable , non tense, non tender

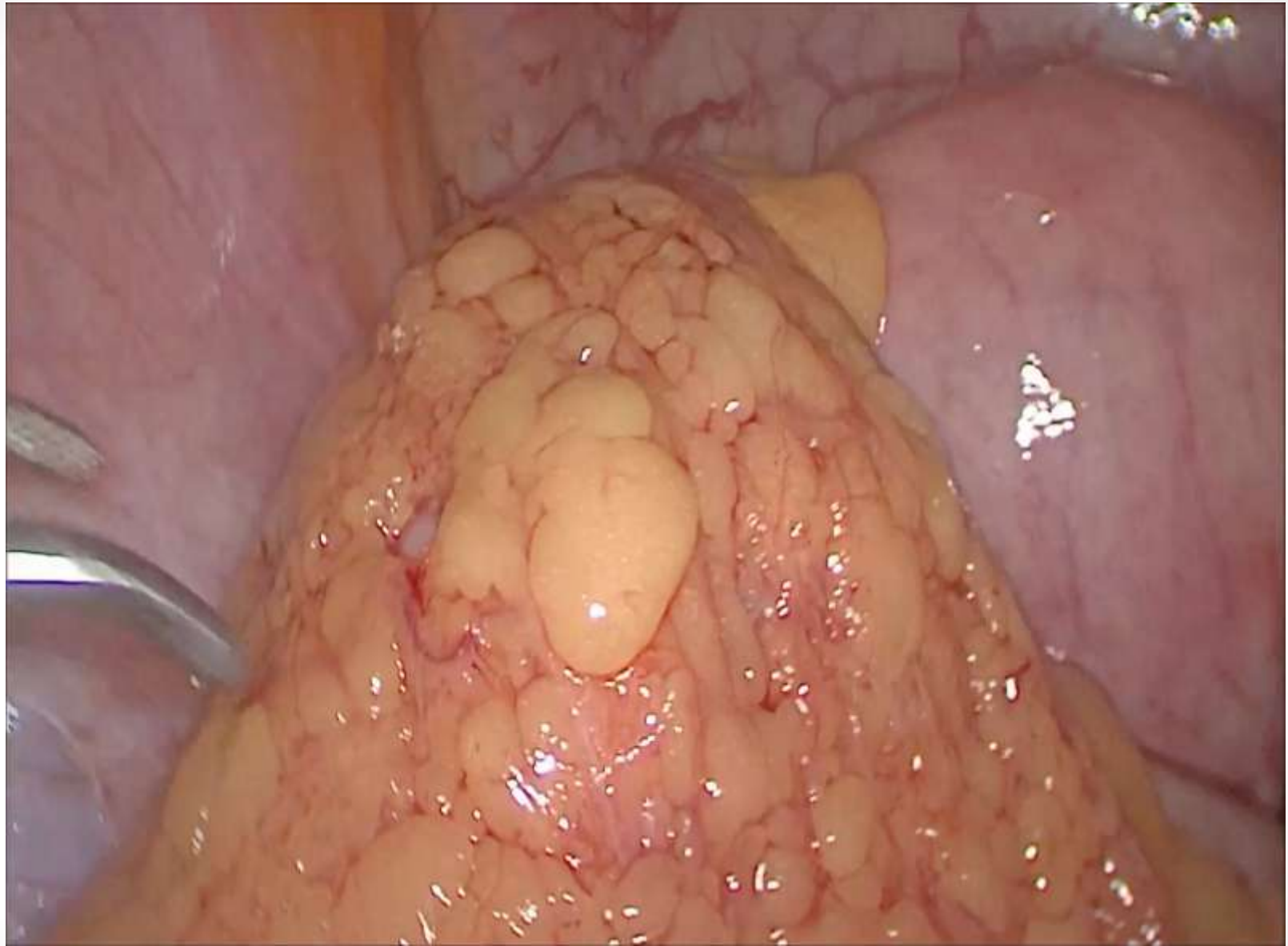
Per vaginal : Uterus anteverted, normal size, mobility restricted, left fornix mass fullness present

USG:1.6 \*2.2 cm left ovarian endometriotic cyst with

Diagnosis: P0L0 , primary infertility left endometriotic cyst

Procedure done: Diagnostic and operative laparoscopy with left endometriotic ovarian cystectomy, with adhesiolysis, fulguration of endometriotic implants with CPT





# CASE 2

Patient X, 26 years P0L0 female came with primary infertility since 2 years .

On examination:

GPE: normal

Per abdomen: soft, no mass palpable , non tense, non tender

Per vaginal : Uterus anteverted, normal size, mobility restricted, left fornix mass fullness present

USG: 3.7 \*5.2 cm thin walled left ovarian cyst with low level internal echos

Diagnosis: P0L0 , primary infertility , bilateral endometriotic cyst

Procedure done: Diagnostic and operative laparoscopy with bilateral endometriotic ovarian cystectomy, with adhesiolysis



# CASE 3

Patient X, 41 years P2L2 previous 2 LSCS female came with c/o pain abdomen since 6 months.

On examination:

GPE: normal

Per abdomen: soft, no mass palpable , non tense, non tender

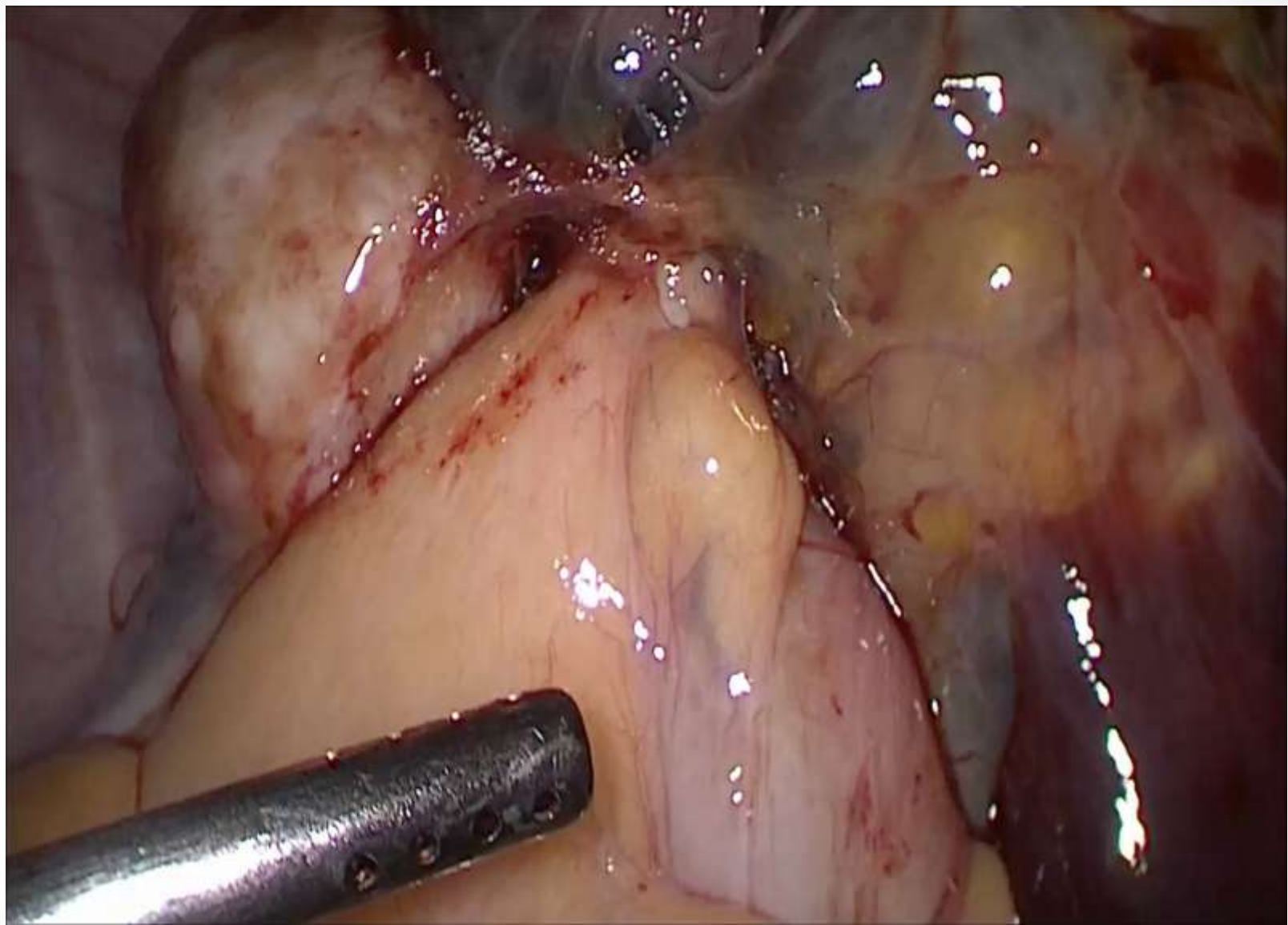
Per vaginal : Uterus anteverted, normal size, mobility restricted, right fornix mass present 4\*5 cm

USG: Right ovarian endometriotic cyst 4.2 \* 4.7 cm

Diagnosis: P2L2 previous 2 LSCS with right endometriotic cyst

Procedure done: Diagnostic and operative laparoscopy with right salphingo oophorectomy, with adhesiolysis, fulguration of endometriotic implants.





# CASE 4

Patient X, 49 years female P2L2 previous LSCS , prev open cholecystectomy came with c/o menorrhagia, dysmenorrhoea 6 months.

On examination:

GPE: normal

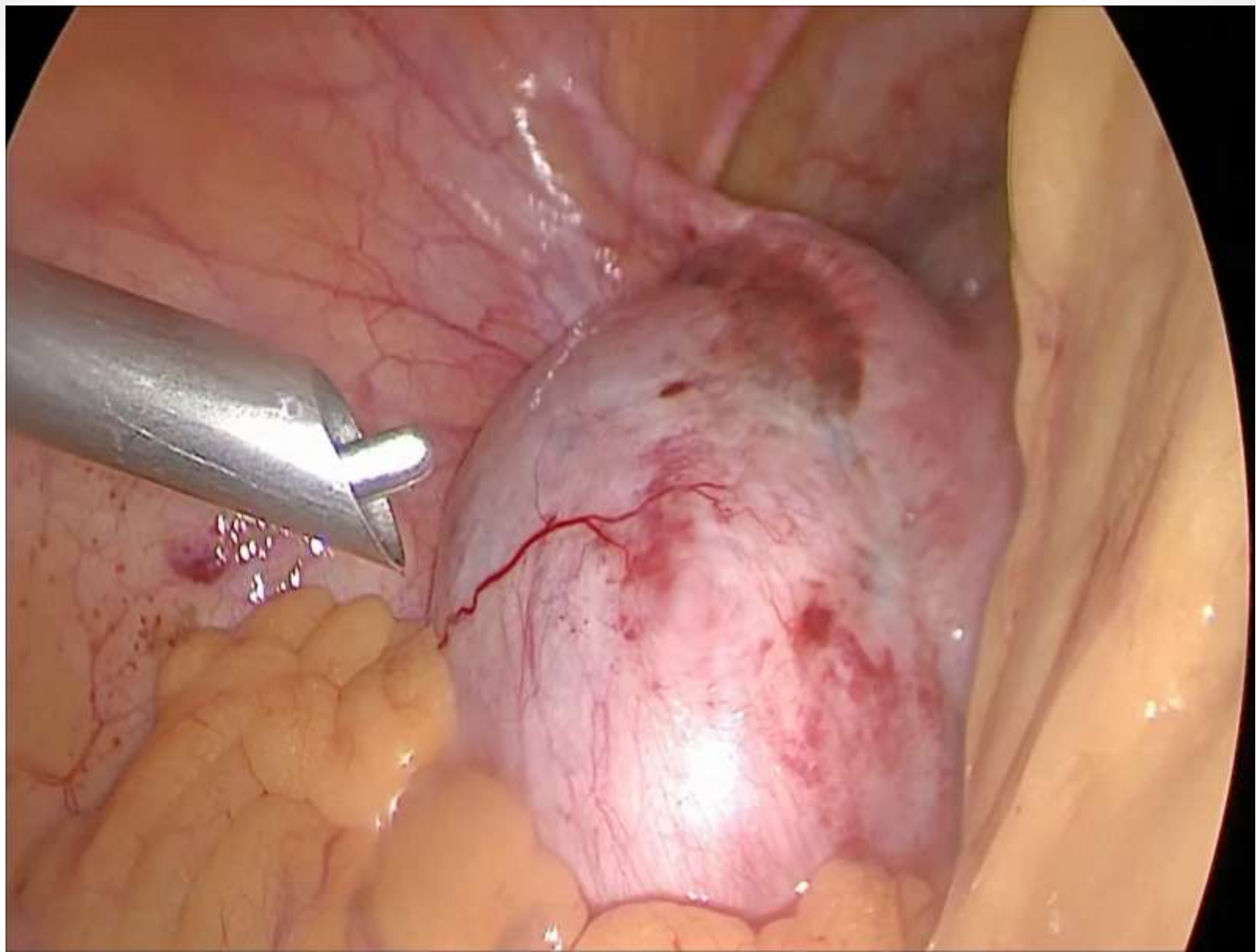
Per abdomen: soft, no mass palpable , non tense, non tender

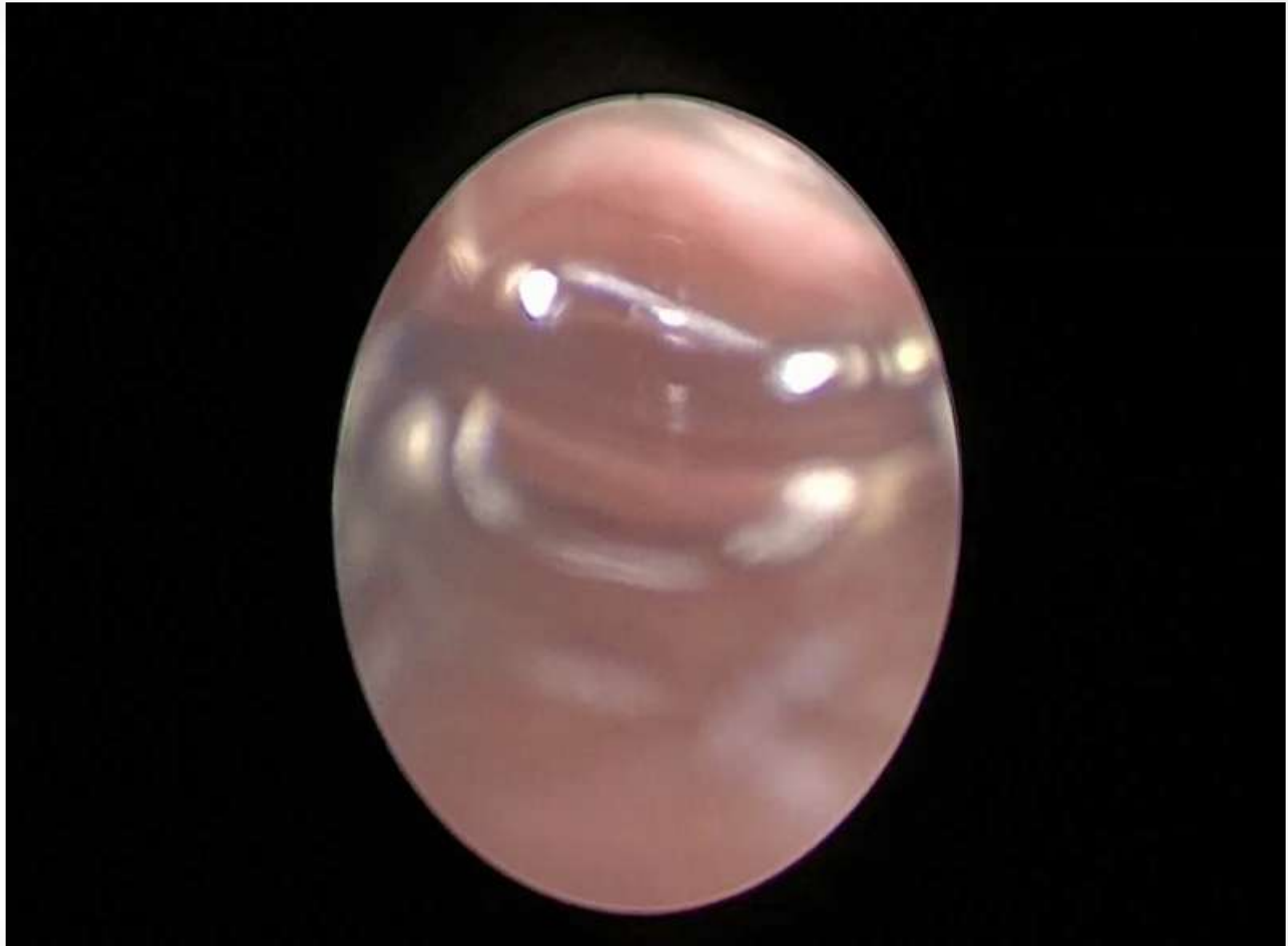
Per vaginal : Uterus anteverted, size, mobility restricted,

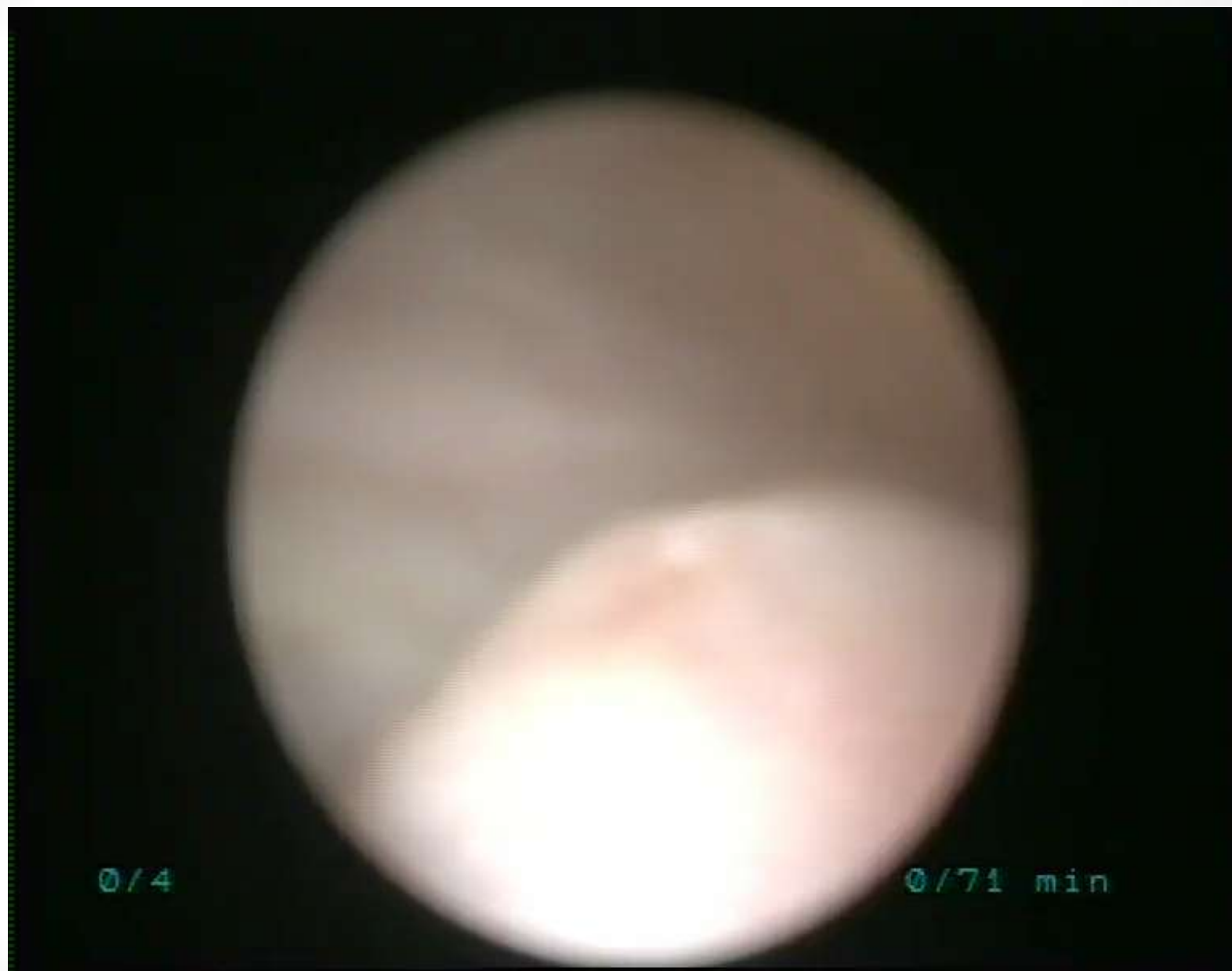
USG: 2\*2.3 cm right endometriotic cysts

Diagnosis: P2L2 previous LSCS with adenomyosis, bilateral tubo ovarian mass

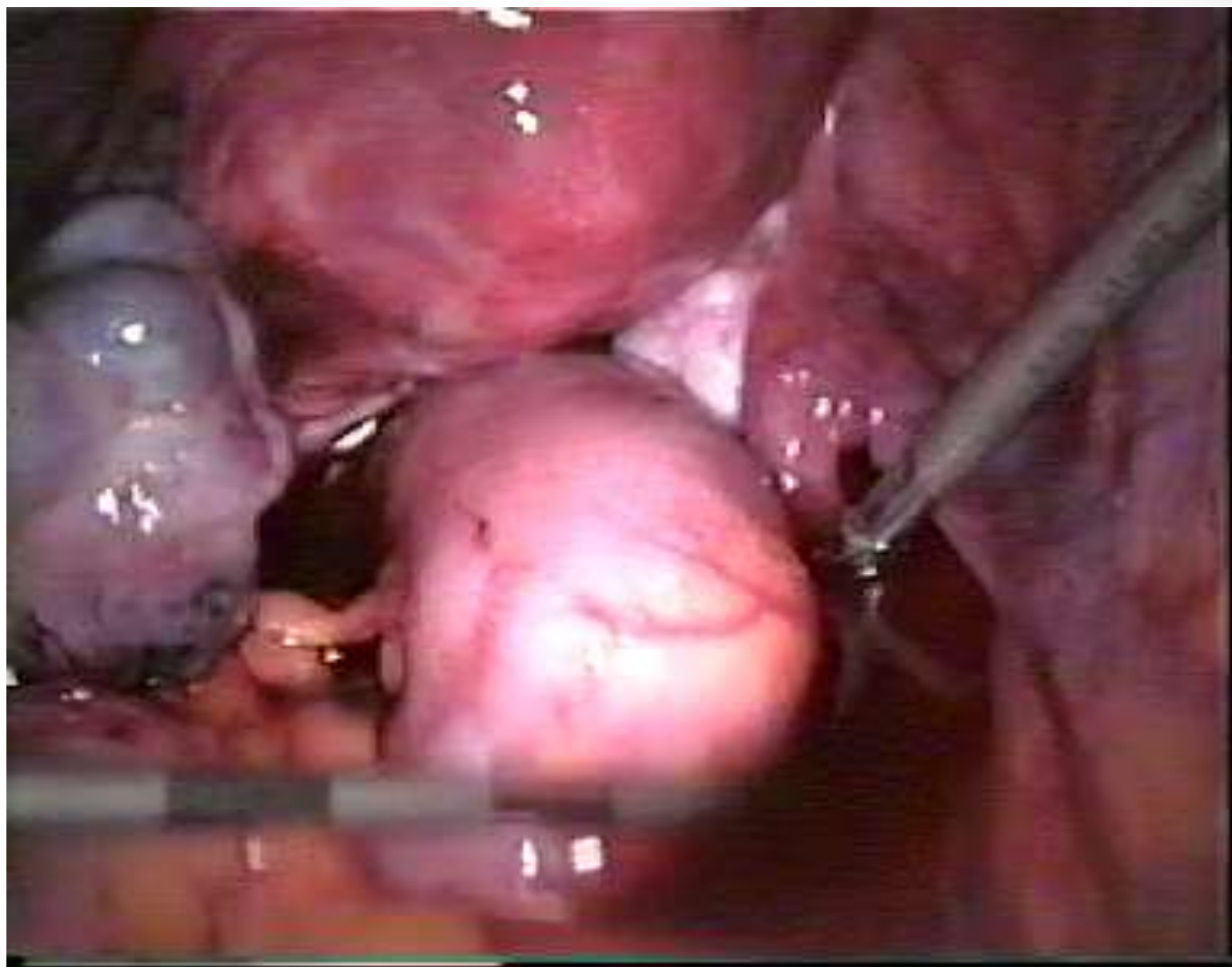
Procedure done: Diagnostic and operative laparoscopy, total laparoscopic hysterectomy with bilateral salphingo oophorectomy, with adhesiolysis .











## TO CONCLUDE....

- Endometriosis is diagnosed by **visual inspection** of the pelvis during laparoscopy, ideally with histological confirmation; positive histology confirms the diagnosis, but negative histology does not exclude it.
- Surgical Excision is the **most Efficacious Approach** with Respect to **Fertility**
- **Ablation** of endometriotic lesions plus **adhesiolysis** in minimal to mild endometriosis is effective in **improving fertility and pain**.



# TO CONCLUDE....

Severe or deeply infiltrating endometriosis should be managed in a facility with the necessary expertise to provide treatment in a **multidisciplinary context**, including **advanced laparoscopic surgery**





**Thank you for your attention**

Any questions?