



# New trends in tubal surgery in the era of IVF

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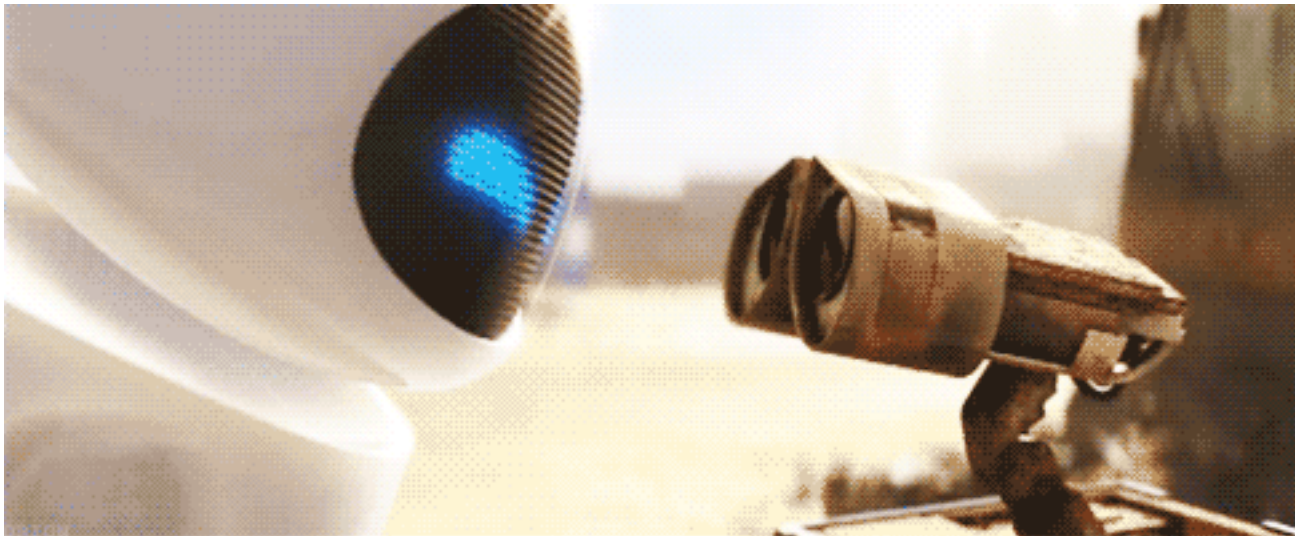
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Stérilité (CRES)

Lyon-FRANCE



American Hospital of Paris 2015

- No conflict of interest in this presentation
- A Watrelot

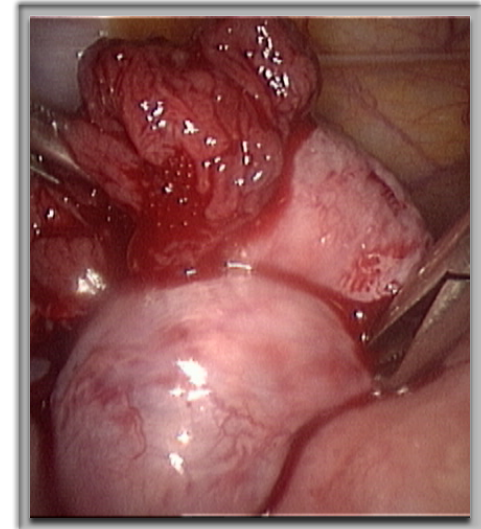


- Tubal surgery is dead only the obituary remains?

Feinberg, Levens, De Cherney, Fertil./Steril.2008

# No !

- Tubal surgery is a complementary tool to ivf
- New trends in tubal surgery





# New trends

1. New tool for Diagnostic , Patient Selection and ovarian drilling
2. New tubal pathology
3. New approach of hydrosalpinges and ivf

# 1- the New tools

- Fertiloscopy(1998)
- Diagnostic and tretment (ovarian drilling)



**FERTILOSOCOPY**



# Interest of trans vaginal approach

- Early diagnosis of endometriosis
- Diagnosis of tubal pathology non seen with hysterosalpingogram(=35%)
- Treatment: ovarian drilling, minimal endometriosis and small endometrioma, adhesiolysis



# FLY study: results

- Local anesthesia
  - No scar
  - Safe: no pneumoperitoneum, no Trendelenburg position, no risk of vessel injury
  - Short procedure (10')
  - Compared with laparoscopy=**identical**  
Kappa score between 0.75 and 0.92\*\*
- + adjonction of salpingoscopy

• **Conclusion: fertioscopy should replace laparoscopy in infertile patients with no obvious pathology**

- =EBM level Ib

# Strategy

- Diet

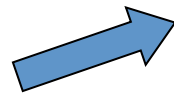
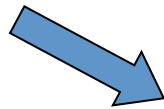
- Clomiphene citrate

- 

- Drilling

FSH

=2therapeutic line



# Evolution

- Wedge resection per laparotomy
- Laparoscopic wedge resection
- Laparoscopic ovarian drilling
- Fertiloscopic ovarian drilling

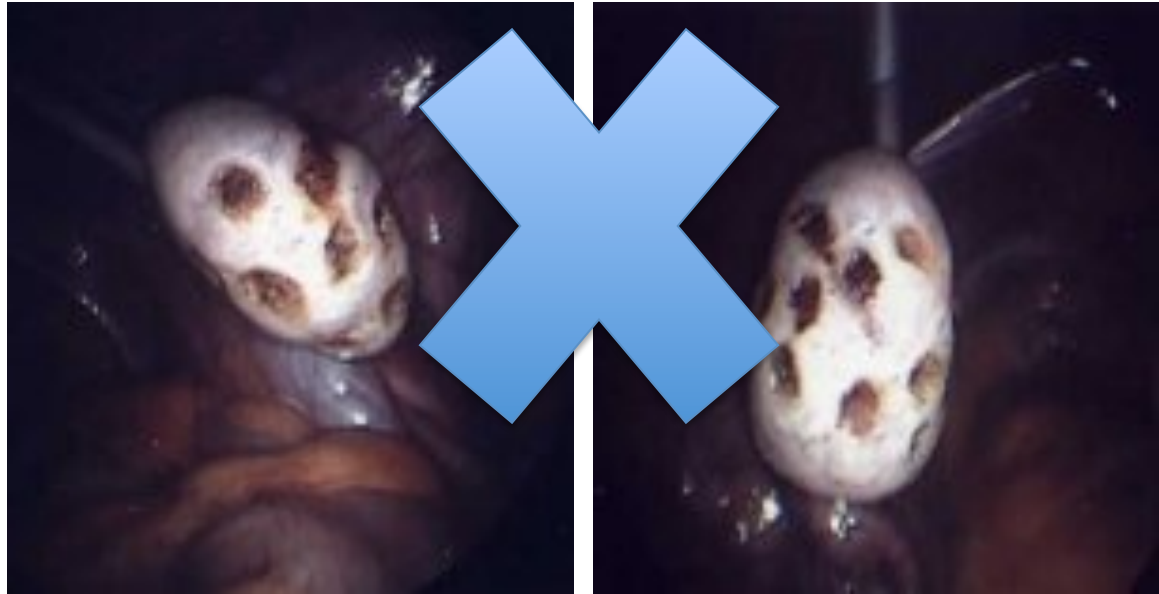
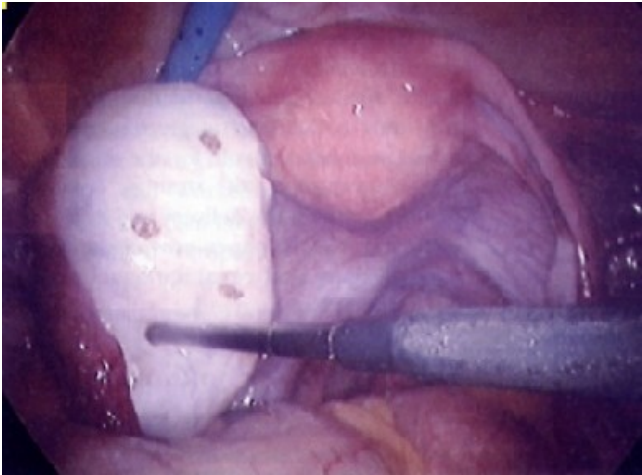


# Drilling par fertiloscopie





# Risks:POF+ADH



# Results(2014)

<b>N</b>	<b>280</b>	
1st drilling	261	
Ovulation (spontaneous)	124	(47,5%)
Spontaneous pregnancy	98	( 37,9%)
Pregnancy after stimuylation	59	(22,6%)
Overall pregnancy	157	(60,1%)
miscarriages	21	(13,3%)
Multiple pregnancy	1 (twins)	
Time to conceive	2-8 months (average 4,1 months)	
2 <sup>nd</sup> drilling (after 1st pregnancy	19	
pregnancy	9	(47,3%)

# Conclusions

- **Recommandation HAS** (04/2008)
  1. OD est une alternative à la stimulation
  2. Fertiloscopie est aussi efficace que la coelioscopie,
  3. Un second drilling peut être proposé en cas de récurrence après une première grossesse

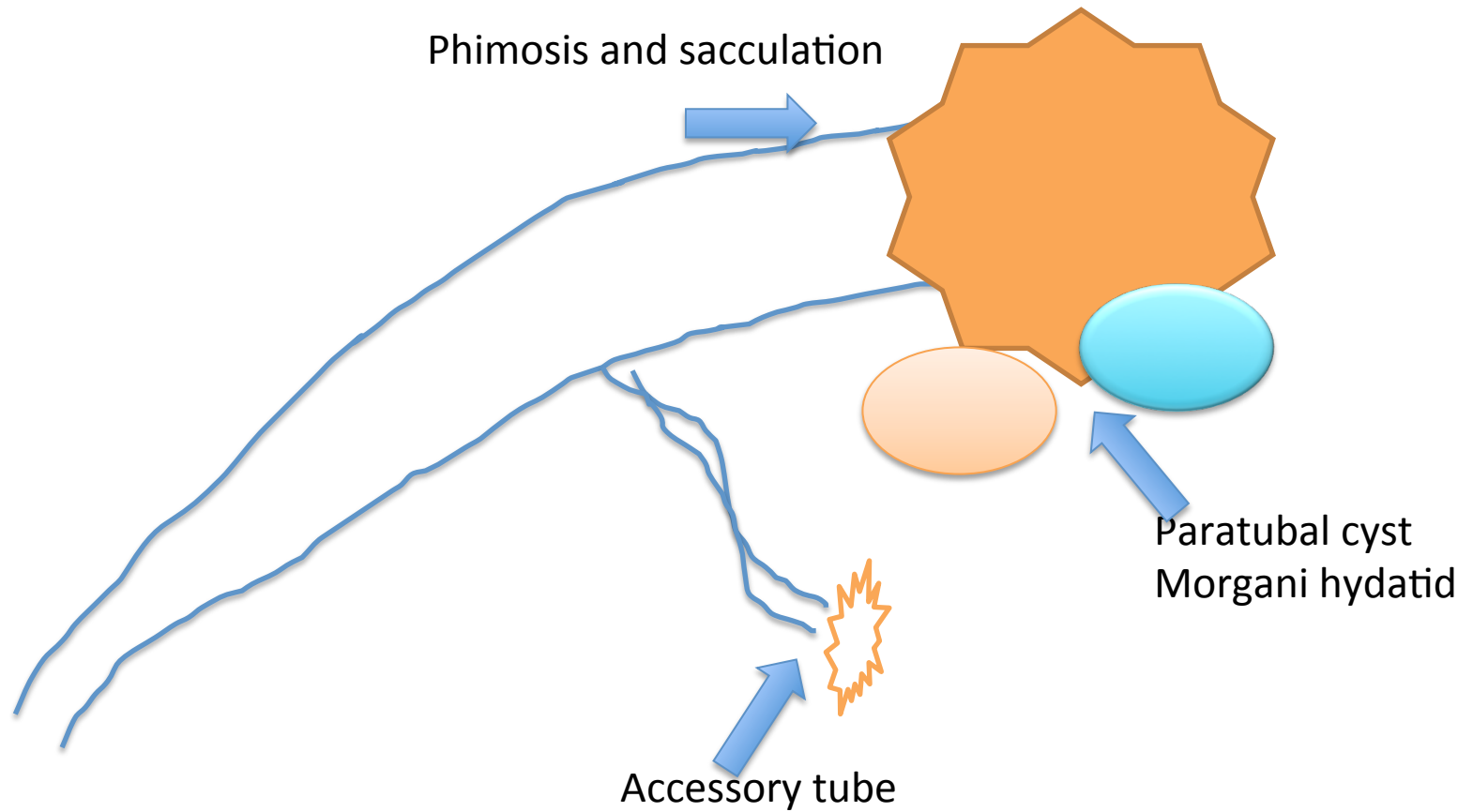
## 2. The New tubal pathology: the concept of subtle tubal lesions

# What are « subtle » tubal abnormalities?

- Morphologic abnormalities:

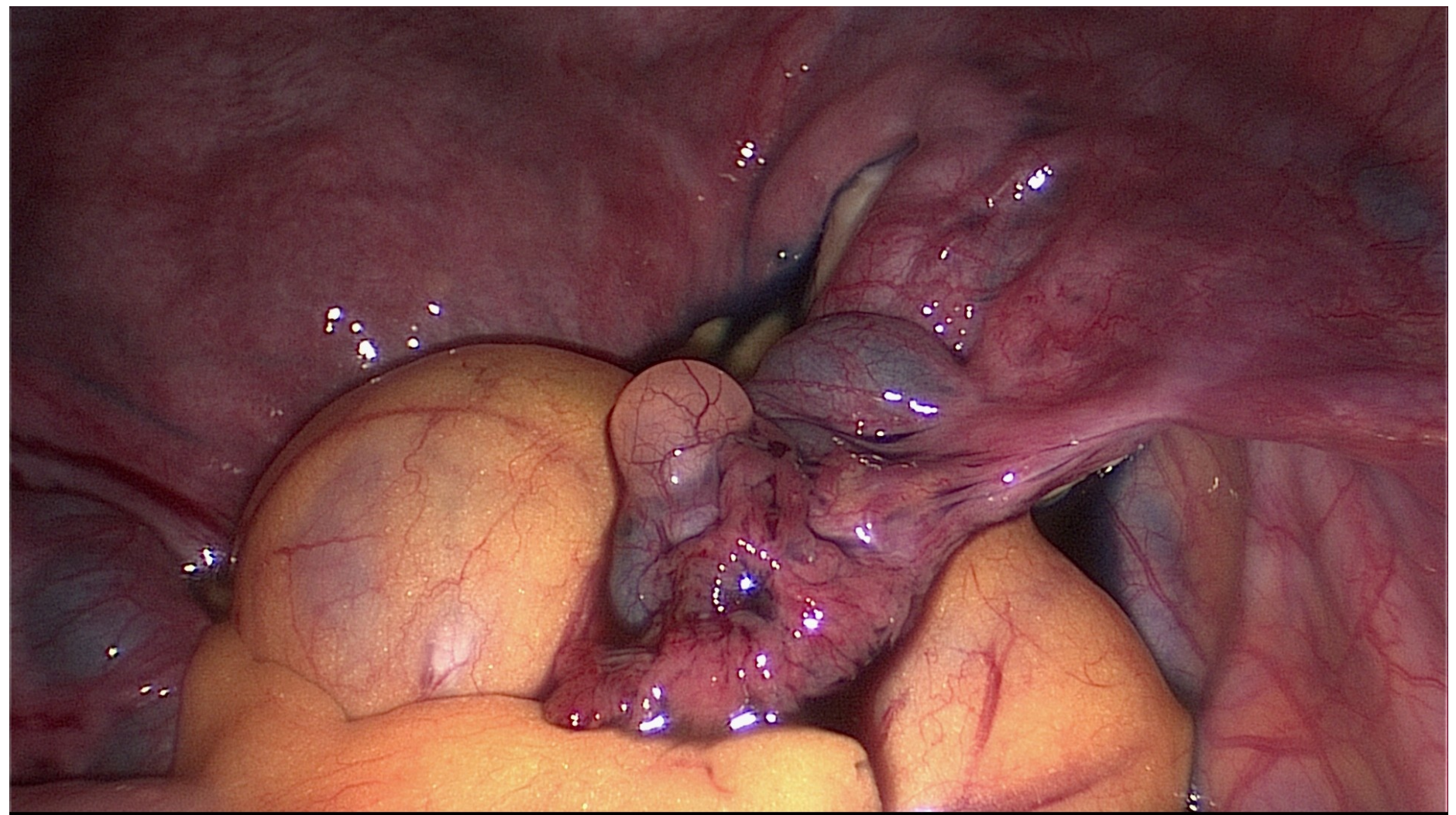
→ (serous and muscularis)=ampullary  
sacculations,tubal cysts,accessory tube etc..

→ but with patent tubes



## Subtle tubal abnormalities

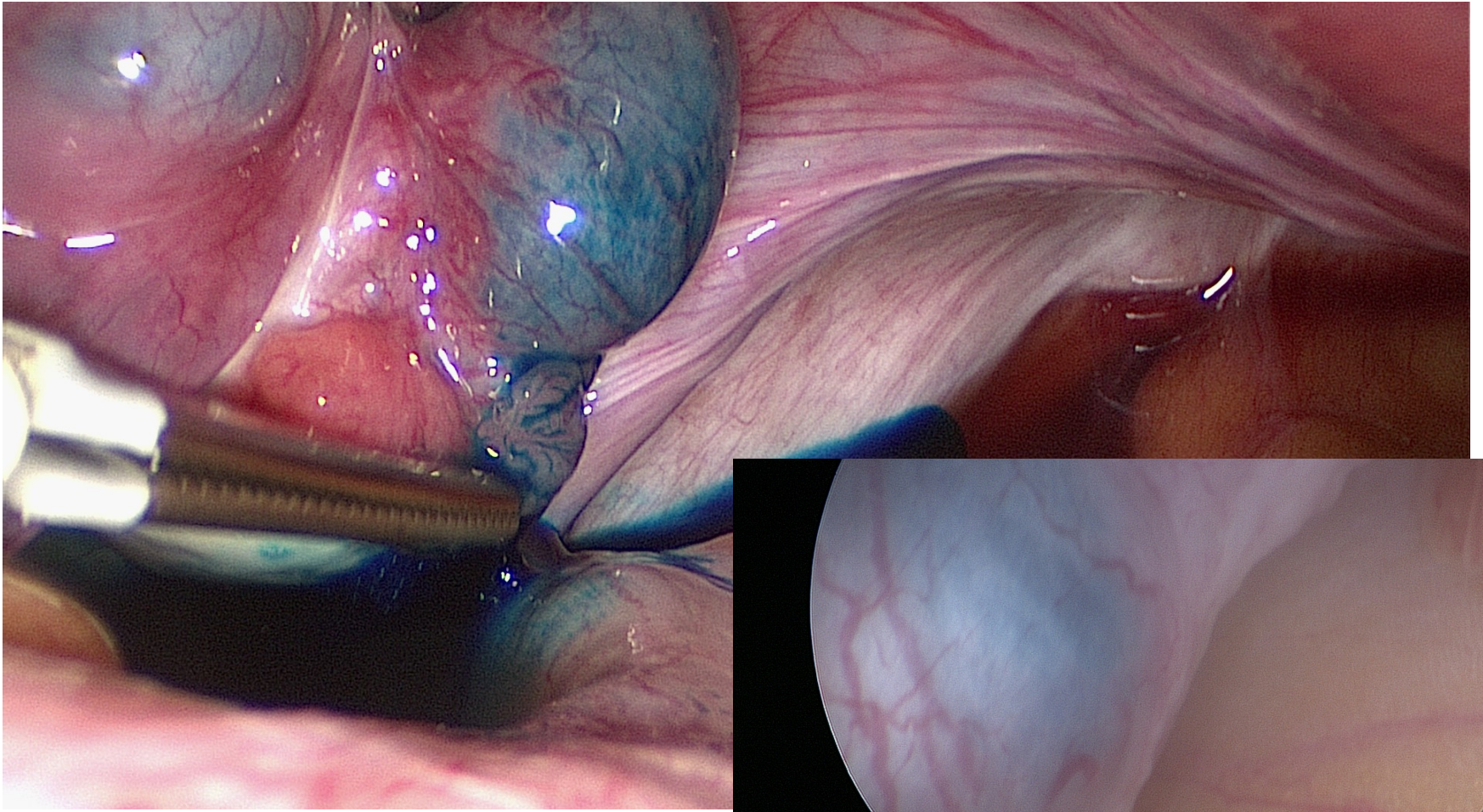




Morgani hydatid



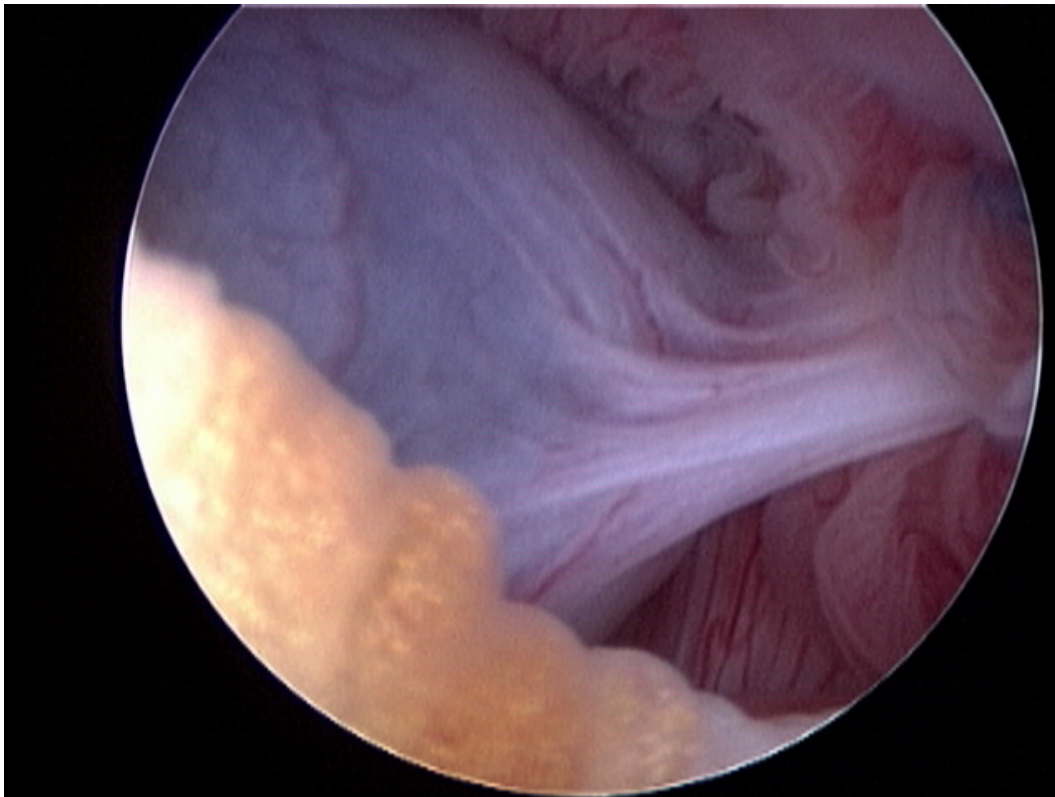
sacculation





# What is the impact on fertility?

- Ovum pick up mechanism



# Few publications

- 10 between 1955 and 2012 (source Pubmed)
  - 6« historic » (Do Rego 1955,Bret 1957,Zolcinski 1964,Tulosan 1987,Cohen 1987,Yablonski 1990,Fakih 1994)
  - 4« recent » ( Cesboy 2010,Gandhi 2012,Rasheed 2011,Watrelot 2011)



# Impact on infertility?

- Yablonski M, Sarge T, Wild RA  
Fertil Steril 1990 54(3) 455-8
- 100 fertile women(cs) vs 100 infertile women(lsc)
- Previous history of pid :NS
- Previous endometriosis:NS
- Tubal patency:NS



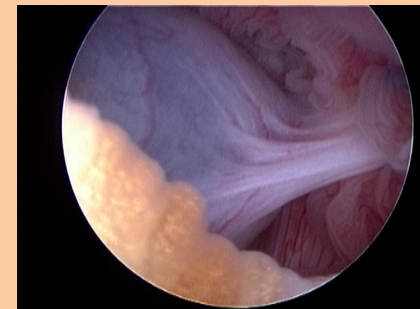
# Infertile women

- Fimbrial agglutinations=25%
- Accessory tubes=13%
- Accessory ostia=10%
- Phimosi= 13%
- Sacculations=7%
- $P < 0,05$



### 3.Rasheed: May 2011 (European J Obstet. Gynecol)

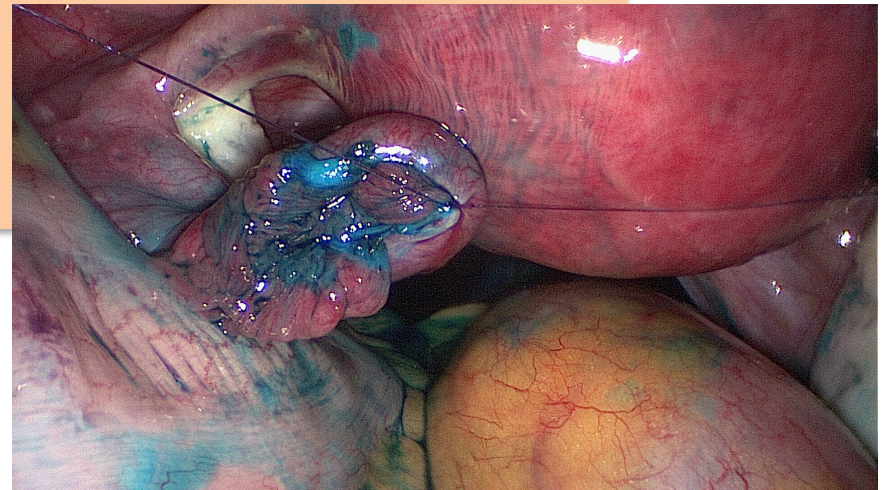
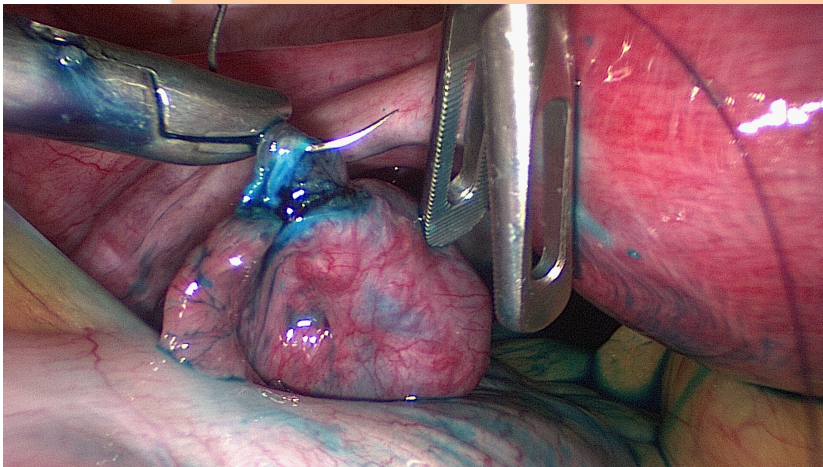
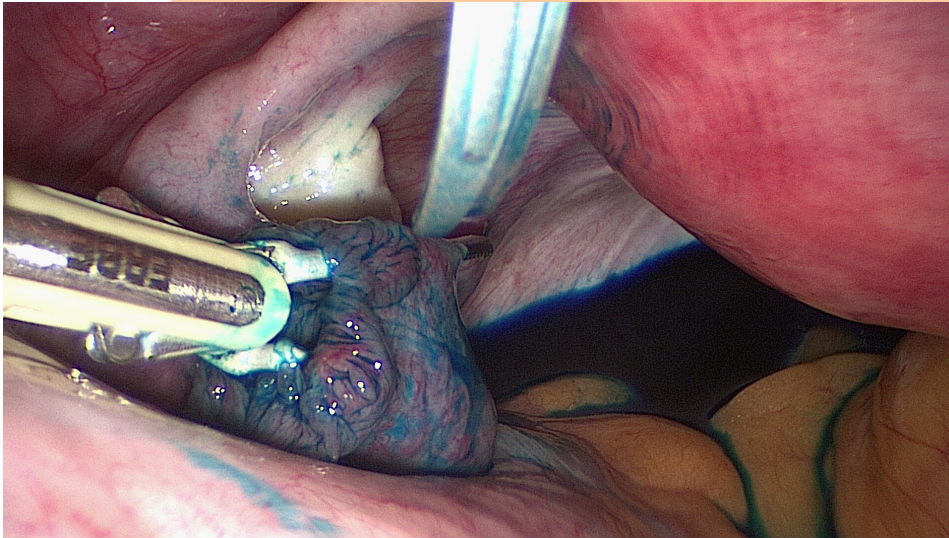
- 213 patients unexplained infertility (UI) + Hydatid of Morgani
- Control group no treatment, study group:laoaroscopic excision
- hydatid of Morgani 52%in UI vs 25% in explained infertility  $p<0,001$
- Pregnancy rate treated: 58,7% non treated:20,6%  $p<0,001$
- When bilateral 85,7% vs 5,3%  $p<0,001$
- When fimbrial 85,6% vs 9,1%  $p<0,001$
- When single 57,6% vs 30,3%  $p<0,001$
- Logistic analysis: bilaterality and fimbrial location are the most characteristics impeding pregnancy (OR 7,27 and 3,67 respectively)







# Hypoplasia->fimbrioplasty



# Personal results

- Ben Mokthar, S. Chauvin, G. Watrelot, A  
Operative hysteroscopy: 2011 GynObst.

67 cases infertility: 1-13 years (range 3 years)

67/341 cases (19,6%)

Ampullary Hypoplasia (sacculation)=18

Phimosiis/fimbrial agglutinations=25

Accessory tubes=8

Paratubal cysts (>1.5cm)=17

Pregnancy after 6 months: 34 (50,7%)

ectopic =0

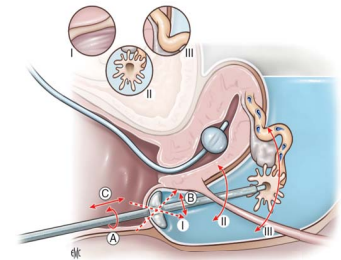


Fig 08

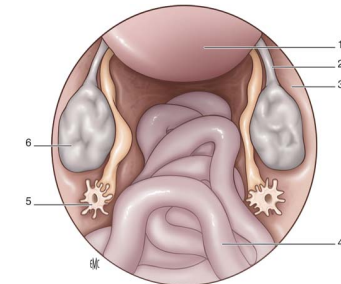


Fig 09

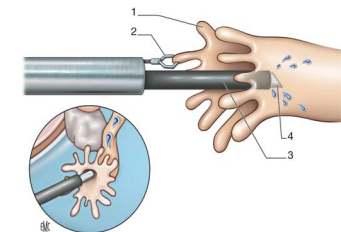


Fig 10





# 3 New approach for hydrosalpinges and ivf



- Deleterious effect of hydrosalpinx on ivf results are now well known thus the proposal of salpingectomy for patients in IVF

# Hydrosalpinx and ivf outcome

- Strandell et al. 1999 Hum. Reprod. 14;2762

group	patient	PR	miscarriage	Live birth
salpingectomy	112	36,6%	16,2%	28,6%
NO salpingectomy	92	23,9%	26,3%	16,3%

# Salpingectomie vs salpingoplastie

## salpingectomie

- Efficace
- Psychologiquement difficile à supporter
- Définitif

## salpingoplastie

- Autorise une (ou plusieurs) grossesse spontanée
- Techniquement plus difficile
- Risque de récurrence



# Hydrosalpinx et grossesse salpingoplastie vs salpingectomie

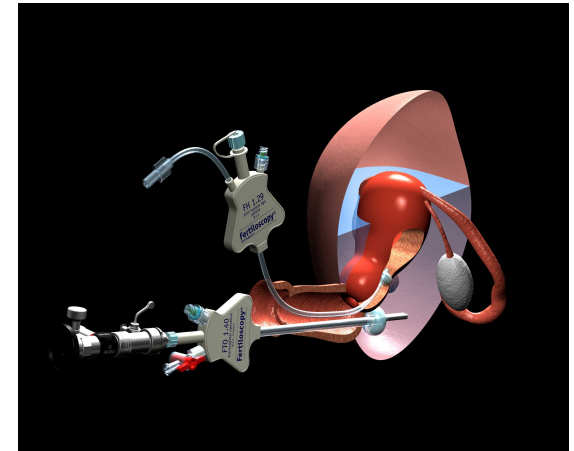
- Salpingoplastie résultat identique à la FIV:
- Si selection précise
- Si technique précise par
- équipe entraînée

# Experienced hands results

- 2 non-specialist hospitals :
  - Term delivery: 2/40 (5%) (Watson et al BJOG 1990)
- 
- Specialized hospital: Leeds:33/97( 34%)
    - (Singhai,LI BJOG 1991)
    - Lyon (cres) 185/580 (31,8%)  
(WatreLOT,Chauvin RBMonline 2007)

# selection

- Good prognosis if
  - Healthy mucosa
  - Normal/thin wall
- 
- Interest of salpingoscopy
  - via transvaginal
  - or transumbilical route



## Laparoscopy vs laparotomy

**Table 3** Pregnancy rates 1 year after distal surgery for patients treated at Centre de Recherche et d'Etude de la Stérilité.

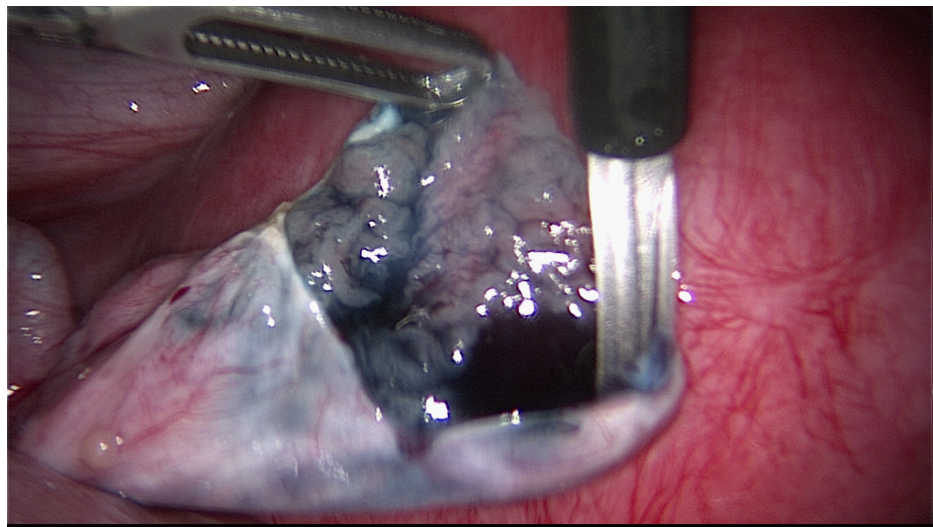
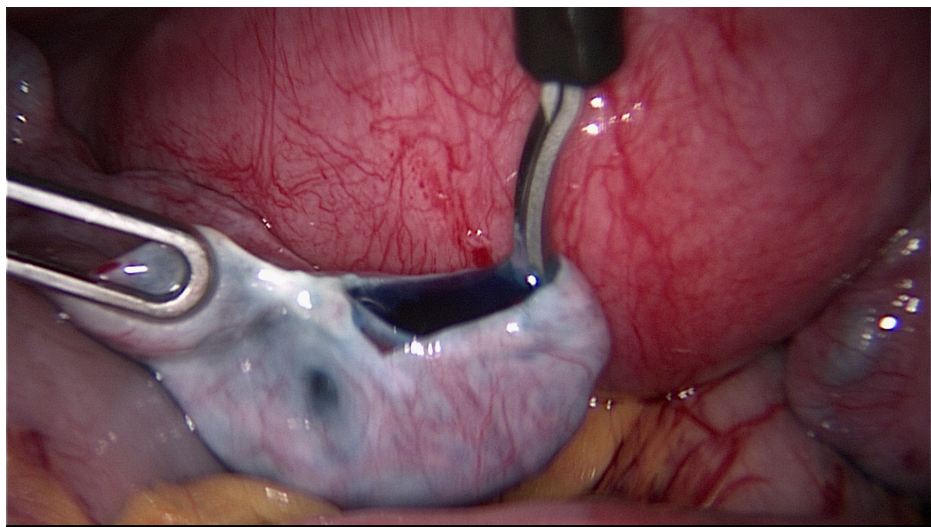
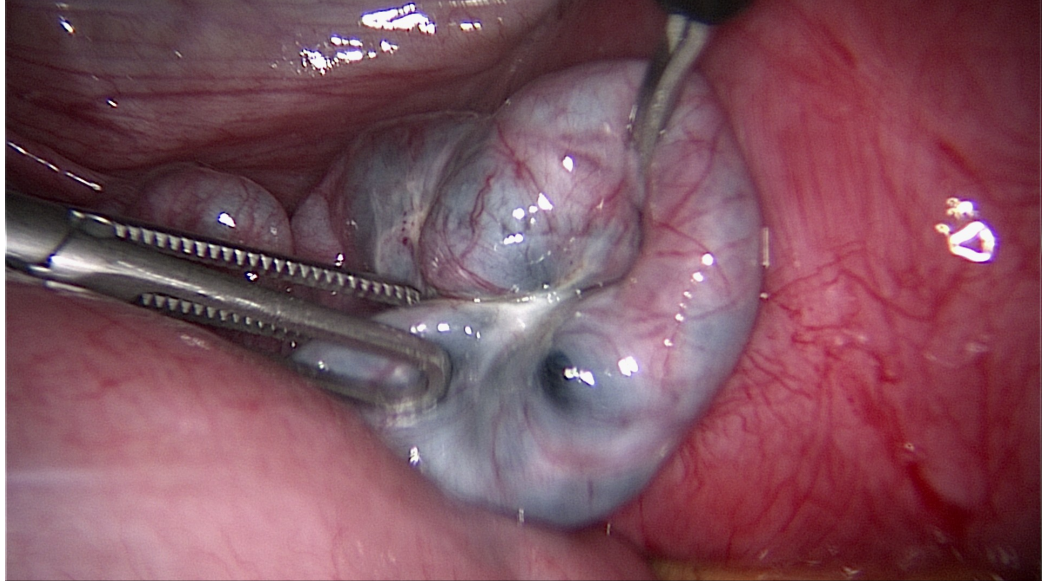
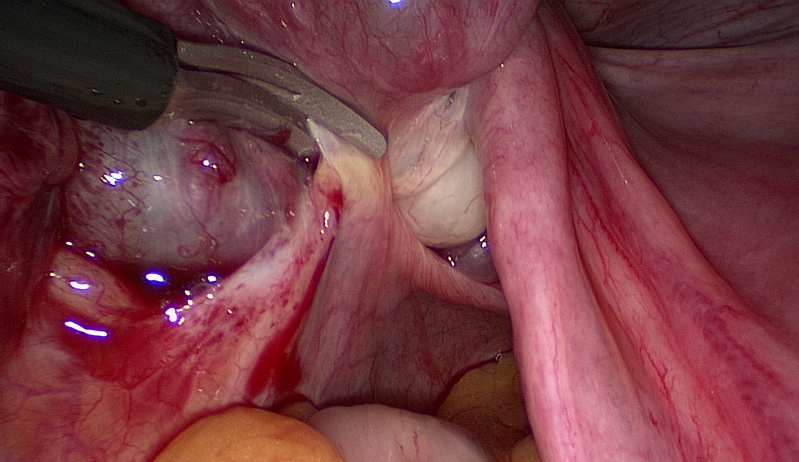
	<i>Microsurgery (1986–1998)</i>	<i>Laparoscopy after salpingoscopy (1998–2008)</i>
Phimosi (fimbrioplasty)		
No. of cases	823	468
Pregnancies ( <i>n</i> , %)	448 (54.4)	236 (50.4)
Hydrosalpinx (salpingostomy)		
No. of cases	489	247
Pregnancies ( <i>n</i> , %)	89 (18.2)	119 (48.1)

Lost to follow-up are considered as failure.

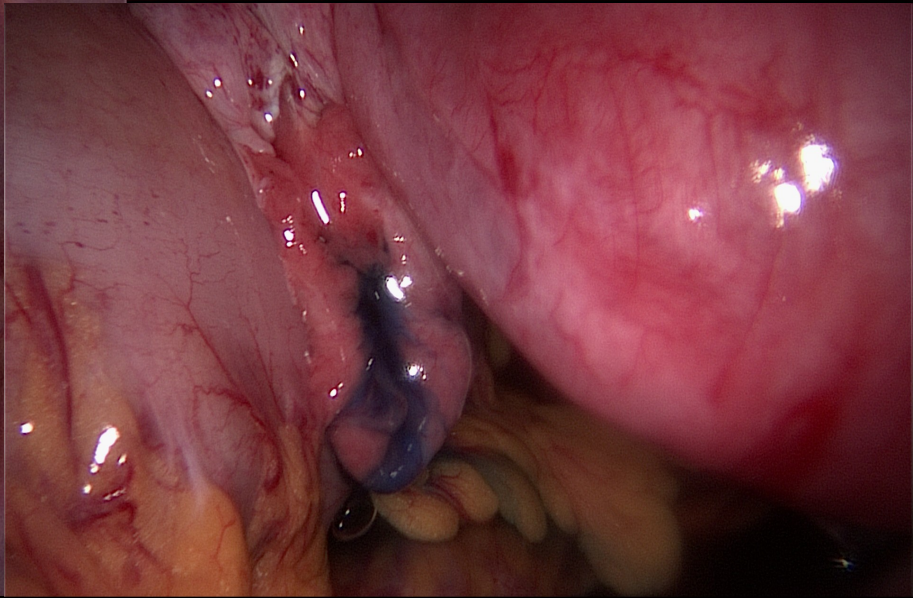
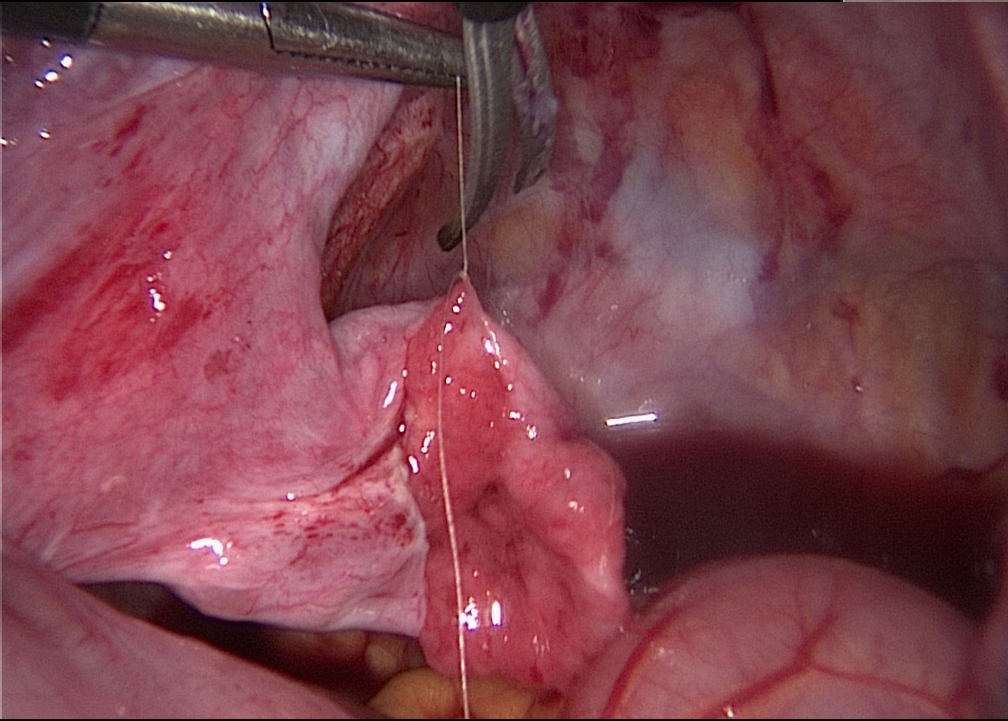
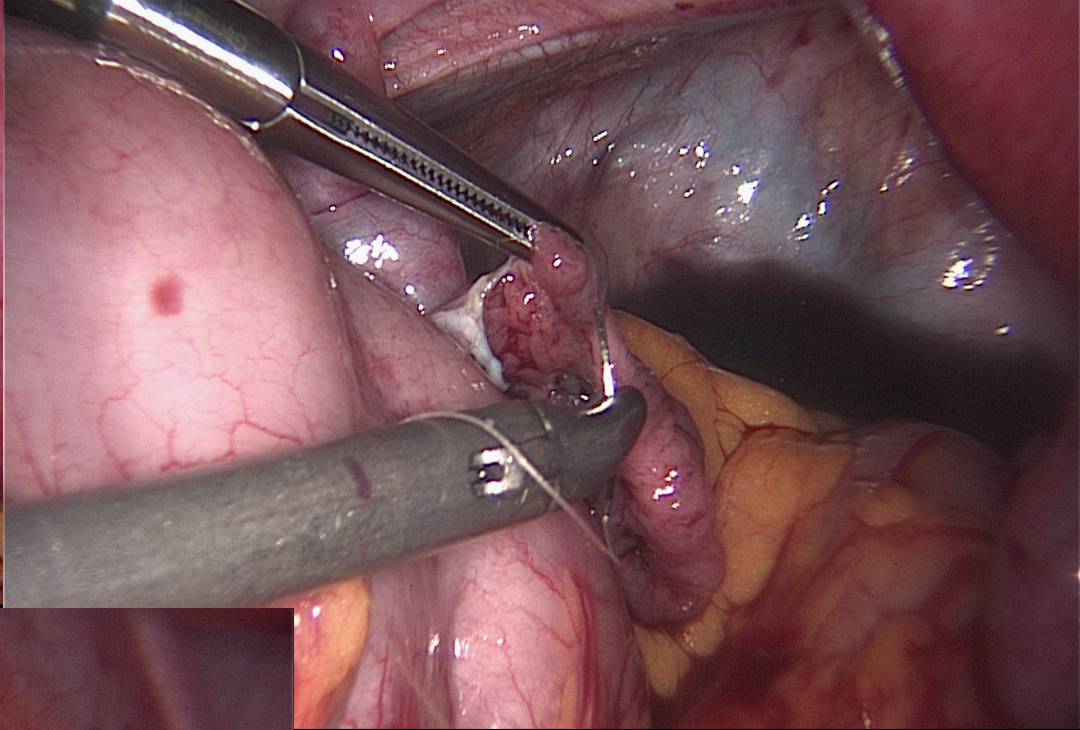
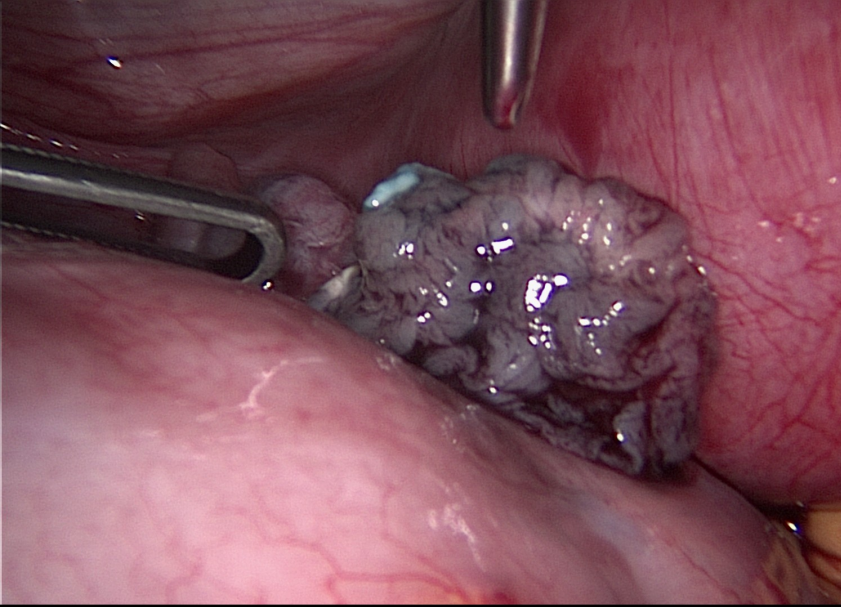
Reproductive BioMedicine Online (2011) 23, 53–62

WatreLOT, A. Chauvin, G.

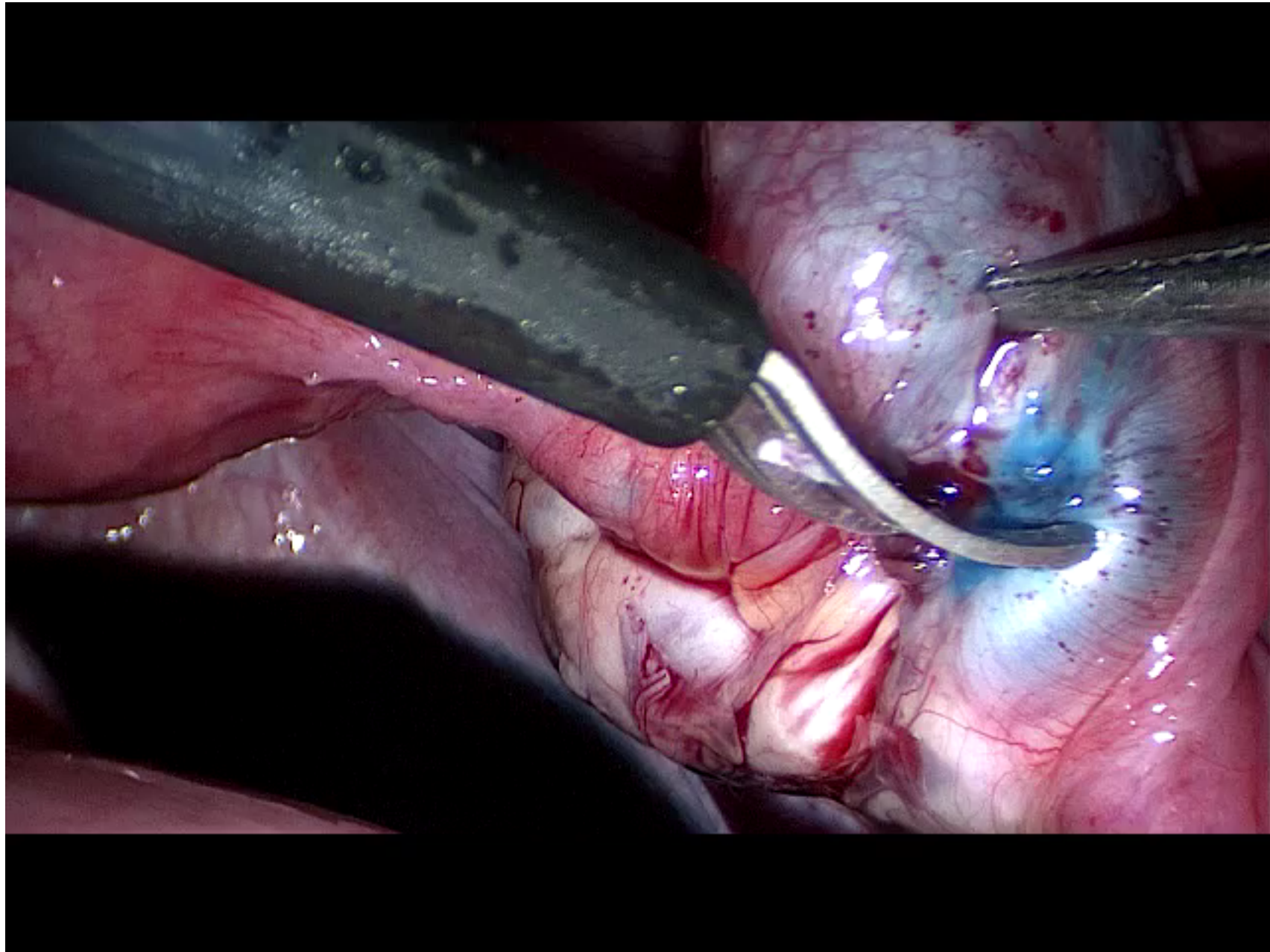


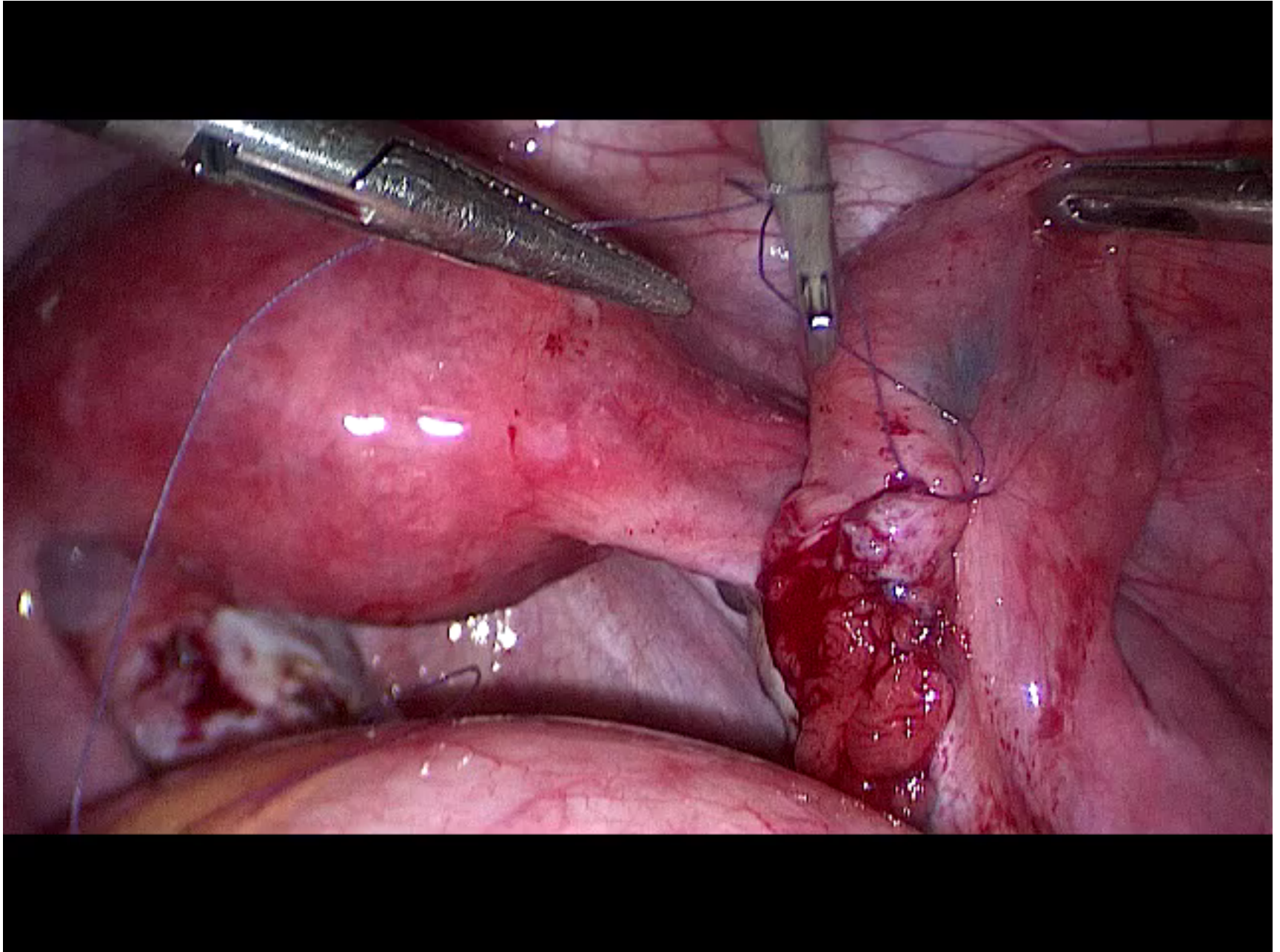








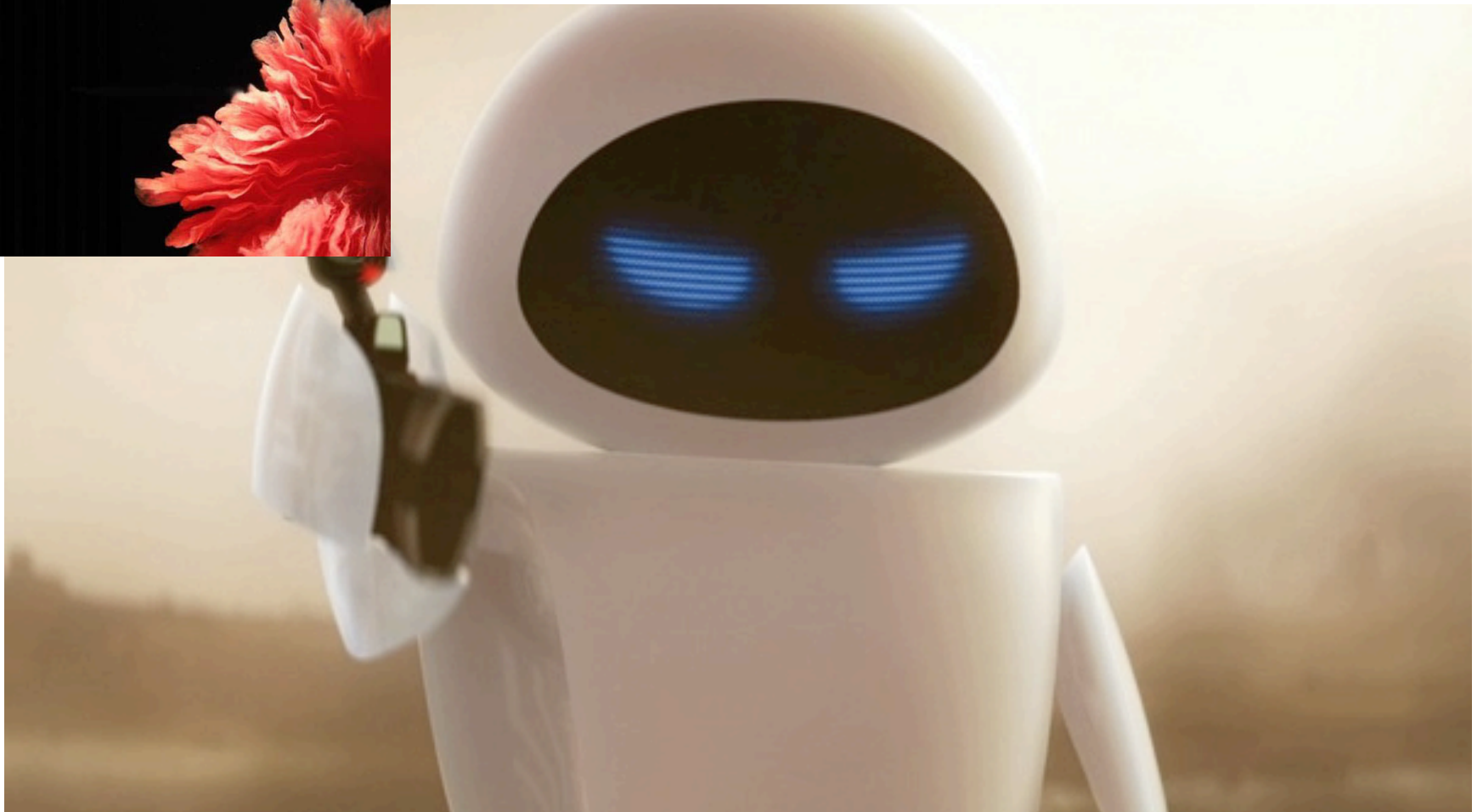




# conclusions

- La chirurgie tubaore n'est pas morte et peut être une alternative à la fiv dans certaines circonstances
- Une endoscopie devrait systématiquement être proposée avant le passage en fiv

# Merci pour votre attention!



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