Fertiloscopy
from diagnostic to treatment

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« ideal » endoscopy

- Mini invasive
- Safe
- Has to be able to evaluate:
  - Tubal permeability
  - Tubo-peritoneal environment
  - Tubal mucosa
  - Uterine cavity

fertiloscopy

- Hydropelviscopy
- Dye test
- Salpingoscopy
- Microsalpingoscopy
- Hysteroscopy

CRES 2002
**RATIONALITY:**

The more the nuclei are dye stained, the more damaged the mucosa is (Marconi 1999)

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**fertiloscopy**

Should fertiloscopy replace diagnostic laparoscopy?
Rationale for fertiloscopy

- The fly study
- = Fertiloscopy Laparoscopy

fertiloscopy

- Hydropelviscopy
- Dye test
- Salpingoscopy
- Microsalpingoscopy
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The « FLY » International study
Study's objectives

• Evaluation of the diagnostic performance of fertiloscopy,
• compared to diagnostic laparoscopy performances
• In the infertility assessment

METHODOLOGY (1)

• Prospective multicentric study
• Approved protocol: CCPPRB Lyon – Léon Bérard (21/12/99)
• Fertiloscopy first, then laparoscopy
• 2 surgeons A and B randomized
• Video recording mandatory
• Control by 2 independent reviewers

METHODOLOGY (2)

• Sensibility and specificity and diagnostic indexes
• Concordance study, calculation of kappa index on 6 sites
  RT, LT
  RO, LO
  P, Ut
INCLUSION CRITERIA

- Age: 18-43
- Endoscopy scheduled for:
  - Unexplained infertility
  - Ovarian disorders
  - Donor insemination failure, IUI failure
  - Control after tubal surgery or suspicion of cornual blockage

RESULTS (1)

Files received: 92
Files studied: 81 (92%)
Mean age: 32 (OR: 4.8)
Duration of infertility 4 years (OR: 2.5)
Primary infertility: 68%

RESULTS (3)
RESULTS (4)

RESULTS (5)

RESULTS (7)

accuracy of description of findings

Sensitivity of fertiloscopy: 84%
(CI 95% : 0.76-0.92)
(Specificity of fertiloscopy : 68%)

Sensitivity of laparoscopy : 85%
(CI 95% : 0.77-0.93)
(Specificity of laparoscopy : 65%)
RESULTS (8)

- Laparoscopies avoidable: 75 (93%)
  Non avoidable: 6 (7%)
- Discordances (8+ -) et (9- +) (=21%)
  - Without clinical impact: 16 cases (19.8%)
  - With clinical impact: 1 case (1.2%)
- Consistent with the hypothesis of a discordance rate less than 1% (unilateral binomial test)

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<tr>
<th>site</th>
<th>kappa</th>
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<tr>
<td>OG</td>
<td>0.80</td>
</tr>
<tr>
<td>OD</td>
<td>0.75</td>
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<tr>
<td>TG</td>
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<tr>
<td>TD</td>
<td>0.91</td>
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<td>P</td>
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CONCLUSIONS

- Even without salpingoscopy (not taken in account in the « FLY » study), fertiloscopy is an attractive alternative to laparoscopy.
- Others study have shown its better cost-effectiveness.
- The « FLY » study results: fertiloscopy should replace diagnostic laparoscopy in infertile patients with no obvious pathology.
Operative fertiloscopy

Considerations for operative fertiloscopy

- Simple
- Reproducible
- At least as good as the same procedure performed by laparoscopy
- Procedures limited due to the coaxial operative channel
- Need of specific tools

Operative procedures

- Opening of the tubes
- Endometriosis
- ADHESIOLYSIS
- OVARIAN DRILLING
Adhesiolysis and fertiloscopy

- Efficient for adhesions which may affect tubo-ovarian relationship

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Ovarian drilling

5 french Bipolar electrode in the operative channel

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TECHNIQUE

- HYDROPELVISCOPY
- Visualization of ovarian ligament
- Bilateral drilling (10-15 holes by side)
- Saline solution is left in place
- New option= ADEPT™
OVARIAN DRILLING

Ovarian drilling in:
- PCO syndrome

RESULTS
- N=41
- Operative time: 13’
- No complication
- Spontaneous ovulation: 29 (70.7%)
- Pregnancy rate (3-6 months): 13 (31%)
Advantages of ovarian drilling

- Efficacy
- Decrease the number of miscarriages
- Cheap procedure
- Best results if practiced after failure of clomiphene citrate and before IVF

Ovarian drilling and fertiloscopy

- Fast
- Easy
- Less risky than other surgical method
- Ambulatory

Personnal results

- July 1997- March 2002
- 700 cases + 41 ovarian drilling
- 582 diagnostic
- 118 operative (16.8%)
- 108 followed by operative laparoscopy (15.4%)

474 « normal » (67.7%)
474 so-called »normal »
- Salpingoscopy abnormal = 38 (8,1%)
- Microsalpingoscopy abnormal = 161 (161/474 = 34%)
- NORMAL = 313 (313/700 = 44%)

results
- False route = 11
- Rectal injury = 2 (0,28%)
- Infection = 1 (0,14%)
- Abnormal bleeding = 1 (0,14%)
- Endometriosis = 101 (14,4%)
- Post PID = 125 (17,7 %) + infra PID = 161 (23%)
- Normal = 313 (44%)

Follow-up post fertiloscopy
- Surgical option 227 (32.4%)
  Laparoscopic 109 (15.5%)
  Fertiloscopic 118 (16.8%)
- Medical option (IIU, IVF) 474 (67.7%)
conclusions

- Fertiloscopy is a routine diagnostic procedure
- Is considered today as the gold standard in patients with no obvious pathology
- Has to be performed before ART
- Demonstrate the need of further studies on tubal assessment (microsalpingoscopy)
- Operative fertiloscopy becomes a reality

Conclusion (1)

Conclusion (2)

DUE TO THE SAFETY AND MINI-INVASIVENESS OF TUBO–PERITONEAL EXPLORATIONS, THERE IS NO JUSTIFICATION TO PRACTICE IVF BEFORE A THOROUGH PELVIC EVALUATION