Endometriosis for the Primary Care Physician

Joseph NASSIF, MD
Associate Professor
Department of Obstetrics and Gynecology
Objectives

• Be able to suspect endometriosis clinically
• Know the place of lab and imagery tests in the diagnosis of endometriosis
• Know the current clinical guidelines of endometriosis management
Outline

• Introduction

• Guidelines

• Conclusion
Mrs YM, 31 y.o.

- Dysmenorrhea = 7/10
- Dyspareunia = 8/10
- Chronic Pelvic Pain = 6/10
- Primary infertility since 3 years
- Workout (including husband’s) normal except on pelvic US & MRI : endometrioma + deep pelvic endometriosis
Mrs YM, 31 y.o.

- Do we order Ca 125 in this case?
  - 1 – Yes
  - 2 – No
  - 3 – I do not know
  - 4 – I will do like my colleague
  - 5 – I will wait until the end of the talk to decide
Mrs YM, 31 y.o.

• Do we do a laparoscopy to confirm the diagnosis?
  • 1 – Yes
  • 2 – No
  • 3 – I do not know
  • 4 – I will do like my colleague
  • 5 – I will wait until the end of the talk to decide
Mrs YM, 31 y.o.

• We will start the following treatment to improve her fertility:
• 1 – OCPs
• 2 – Progestins
• 3 – GnRh analogs
• 4 – Pain killers
• 5 – None of the above
DEFINITION

It is a *BENIGN* disease with presence of endometrial tissue, composed of both glandular and stromal elements, growing at an extrauterine site.
DEFINITION

It is a *BENIGN* disease with presence of endometrial tissue, composed of both grandular and stromal elements, growing at an extrauterine site

**BUT**

if you ask a woman who is suffering from this disease, she would **NEVER** use the word “*BENIGN*”....
Epidemiology

• 10 to 15% of women in reproductive age
• 1 - 7 % : tubal ligation
• 12 - 32 %: laparoscopy for pelvic pain
• 9 - 50 % : laparoscopy for infertility
• 6.7 % : laparoscopy with no past infertility
• 50 % : teenagers laparoscopy for evaluation of chronic pelvic pain or dysmenorrhea
Diagnostic Delay

9 years !!!
Epidemiology

• Patients ignore or minimize the symptoms...
  – “normal” vs “abnormal” menstrual experiences
  – fear of being seen as unable to cope
  – traditional “taboo”

• Physician misses or minimizes the symptoms...
  – Normalisation of symptoms by doctors
  – Intermittent supression of symptoms with hormones
  – Diagnostic investigations

*Ballard et al, Fert & Steril 2006 Vol 86, No 5
A qualitative study of women’s experience of reaching a diagnosis of Endom
ECONOMIC IMPACT

• INDIVIDUAL
  • Lost days at work
  • Primary Care Physician visits
  • Gynecologist visits
  • Drugs: Analgesic, anti-inflammatory, LHRH antagonist
  • Ultrasound, MRI
  • Surgery

• SOCIAL
Pathophysiology

- Retrograde menstruation
- Coelomic metaplasia
- Immunologic
- Lymphatic dissemination
- Hematogenous dissemination
- Genetic
Pathophysiology

Sampson
Speculated 100 years ago
And we believed it since ....

Viable cells in menstruation

Retrograde menstruation
Koninckx PR et al. J.Reprod.Med. 1980; 24:257-260. but in >90% of women

Viable cells in PF

Implantation potential
In humans, in primates, in nude mice, in vitro

Metaplasia
Insights to Physiopathology

Pathogenesis: Fibro-muscular hyperplasia is a host-tissue reaction

Nisolle et al.
Three Types

• Endometrioma

• Superficial Endometriosis

• Deep infiltrating endometriosis
  – Bladder
  – Bowel
  – Recto vaginal space
Extra Genital Endometriosis

- Lungs
- Eyes
- Brain
- Lymphatic system
- Never reported in SPLEEN
Symptoms

• Pain
  – Secondary dysmenorrhea +++
  – Cyclical +++

• Infertility
Range of symptoms

- Dysmenorrhea
- Deep dyspareunia
- Chronic pelvic pain
- Bowel or bladder symptoms
- Abnormal uterine bleeding
- Chronic fatigue
- Low back pain
- Infertility
Infertility

• 20-25% pregnancy/month in normal couples
• At 12 months of unprotected intercourse, 87% of couples achieve a pregnancy
Infertility

- Women with endometriosis: nb MΦ and cytokines in peritoneal fluid
- Peritoneal fluid inhibits sperm function and ciliary function in vitro, which could impair fertilization
- Eutopic endometrium may not function normally, which could impair implantation
- Progesterone resistance may also be involved and related to a reduction in the concentration of progesterone receptors and progesterone coactivators (eg, Hic-5) in the endometrium of women with endometriosis

De Ziegler, 2010
Infertility

- Pelvic adhesions => reduced fertility by
  - impairing oocyte release
  - blocking sperm entry into the peritoneal cavity
  - inhibiting tubal pickup
  - mechanisms in mild/moderate disease probably also apply to advanced stage disease

- Compared to women with early stage endometriosis or tubal factor infertility
  - Premature depletion of the ovarian follicle pool
  - Abnormal folliculogenesis
  - Reduced fertilization potential of oocytes

- A history of previous bilateral ovarian surgery may also play a role; women with a previous oophorectomy and a contralateral ovarian cystectomy appear to have poor responses to ovarian stimulation and a low pregnancy rate
Physical exam

- Variable = f(location of the disease)
- Tenderness in the posterior fornix
- Tenderness of uterosacral ligaments
- Nodule in the rectovaginal septum
- Thickening and induration of US ligaments
- Pain with uterine mobilisation
- Tender, enlarged adnexal masses
- Fixation of the uterus in a retroverted position
Differential Diagnosis

- Pelvic inflammatory disease
- Irritable bowel syndrome
- Interstitial cystitis
- Adenomyosis
- Ovarian neoplasms
- Pelvic adhesions
- Colon diseases
- Splenosis
- Diverticular disease
- Allen-Masters syndrome
Diagnosis

• Gold standard = laparoscopy

• Clinical

• Imaging

• Final diagnosis = Pathology
Treatment

• Expectant management
• Medical Treatment
• Surgical
  – Conservative
  – Radical
Management of deep endometriosis

J Nassif *, P Trompoukis, S Barata, A Furtado, B Gabriel, A Wattiez

Gynecology Department, IRCAD/EITS and Strasbourg University Hospitals, 1 Place de l'hôpital, 67091 Strasbourg Cedex, Strasbourg, France
*Corresponding author. E-mail address: josephnassif@hotmail.com (J Nassif).

Abstract  Deep endometriosis is still a challenging disease in terms of diagnosis and treatment. About 10–12% of women of reproductive age will have a form of endometriosis. This can affect pelvic as well as extra pelvic locations. Risk of malignant transformation has been studied over a long period of time. Medical and surgical treatments can be proposed to patients for endometriosis-associated pain depending on the severity of symptoms and location of the disease. Results and outcomes are different according to different publications. Understanding of the benefit of surgical treatment on fertility is increasing. The place of medical and surgical treatment in recurrent symptoms or disease is also of interest. Presented here is a review on the management of endometriosis in the light of recent data. Further investigations in many fields of endometriosis are still required.

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KEYWORDS: endometriosis, infertility, laparoscopy, outcomes
Endometriosis of Bladder: Outcomes after Laparoscopic Surgery

Elias Kovoor, MRCOG*, Joseph Nassif, MD, Ignacio Miranda-Mendoza, MD, and Arnaud Wattiez, MD

From IRCAD (Research Institute Against Digestive Cancer) and University Hospitals Strasbourg (Hautepierre Hospital and CMCO [Centre Medico-Chirurgical et Obstetrical] Hospital), Strasbourg, France.

ABSTRACT

Study Objective: To describe outcomes after laparoscopic excision of deep bladder endometriosis.

Design: Retrospective study (Canadian Task Force classification II-3).

Setting: University hospitals.

Patients: Twenty-one consecutive patients with endometriotic nodule on the bladder (infiltrating detrusor muscle) from a series of 169 patients were included in the study. The primary outcome studied was resolution of bladder symptoms. Secondary outcomes included complication rates, recurrence rates, and pregnancy rates after laparoscopic surgery.

Interventions: Laparoscopic excision of bladder endometriosis.

Measurements and Main Results: Laparoscopy was feasible in all cases without the need for conversion. Median follow-up was 20 months. Ten patients (47.6%) underwent partial cystectomy, and the remaining patients underwent partial-thickness
Prevalence and Management of Urinary Tract Endometriosis: A Clinical Case Series
Boris Gabriel, Joseph Nassif, Pantelis Trompoukis, Sonia Barata, and Arnaud Wattiez

OBJECTIVE
To report on the prevalence, surgical management, and outcome of urinary tract endometriosis (UTE) in a cohort of 221 patients undergoing laparoscopic surgery for severe endometriosis. UTE can cause significant morbidity, such as silent kidney or progressive renal function loss. Its frequency is underestimated and data on laparoscopic management are scarce.

METHODS
Between 2007 and 2010, 43 patients were eligible for this single-center, retrospective study. The inclusion criterion was the presence of UTE (ie, bladder and/or ureteral endometriosis). All patients were operated laparoscopically.

RESULTS
The prevalence of UTE was 19.5% (43/221). There was no correlation between bladder and ureteral endometriosis ($P > .05$). Ureteral endometriosis was associated with patient's age ($P < .01$). Patients with bladder, but not ureteral, involvement complained more frequently about dysuria, hematuria, and urinary tract infections. Intraoperative and magnetic resonance imaging (MRI) findings revealed a moderate to good correlation. UTE was not associated with rectovaginal or bowel endometriosis, but rather with involvement of the uterosacral ligaments ($P < .01$). Twenty-two patients with bladder endometriosis were treated by mucosal skinning and 11 patients underwent partial cystectomy. Superficial ureteral excision was performed in 4 patients, whereas resection with ureteroureterostomy was done in 9 patients. There was no difference regarding the intra- and postoperative complications in patients with or without UTE.

CONCLUSION
In severe pelvic endometriosis, involvement of the urinary tract is quite common. Laparoscopic management is feasible and safe. Because of the lack of specific symptoms, the preoperative diagnosis of ureteral endometriosis still remains a challenge. Pelvic MRI represents a useful preoperative diagnostic tool. UROLOGY 78: 1269–1274, 2011. © 2011 Elsevier Inc.
Laparoscopic surgery for severe ureteric endometriosis

Ignacio Miranda-Mendoza\textsuperscript{a,c,*}, Elias Kovo\textsuperscript{a}, Joseph Nassif\textsuperscript{a}, Helder Ferreira\textsuperscript{a}, Arnaud Wattiez\textsuperscript{b}

\textsuperscript{a} IRCAD/EITS and Strasbourg University Hospitals, Faculty of Medicine, Strasbourg, France
\textsuperscript{b} Obstetrics and Gynecology Department, IRCAD/EITS and Strasbourg University Hospitals, Faculty of Medicine, Strasbourg, France
\textsuperscript{c} Departamento Obstetricia y Ginecología, Hospital Clínico, Universidad de Chile, Santiago, Chile

Long-term urinary retention after laparoscopic surgery for deep endometriosis

Elias Kovo\textsuperscript{a}, M.R.C.O.G., Joseph Nassif, M.D., Ignacio Miranda-Mendoza, M.D.,
Gerlinde Lang-Avérous, M.D., and Arnauld Wattiez, M.D.

Prevalence and outcome of urinary retention after laparoscopic surgery for severe endometriosis—does histology provide answers?

Boris Gabriel • Joseph Nassif • Pantelis Trompoukis •
Ana Maria Lima • Sonia Barata •
Gerlinde Lang-Avérous • Arnauld Wattiez
Long-term urinary retention after laparoscopic surgery for deep endometriosis

Elias Kooor, M.R.C.O.G.,* Joseph Nassif, M.D.,* Ignacio Miranda-Mendoza, M.D.,*
Gerlinde Lang-Avérus, M.D.,* and Arnauld Wattiez, M.D.*

*Institute for Research Against Cancer of the Digestive System, EITS Department; b Department of Pathology; and c Department of Obstetrics and Gynecology, University Hospitals Strasbourg, Strasbourg, France

Objective: To report on chronic urinary retention after surgery for deep endometriosis and the possible risk factors for this complication.

Design: Descriptive study.

Setting: University hospital.

Patient(s): Four patients with deep endometriosis who developed this complication.

Intervention(s): Laparoscopic surgery, intermittent self-catheterization (ISC).

Main Outcome Measure(s): To identify site(s) of lesion associated with this complication.

Result(s): Four patients developed this complication from damage to the inferior hypogastric plexus involving the sympathetic and/or parasympathetic afferents from the bladder. One patient regained complete bladder function 8 months after surgery, and the others required ISC at the time of writing (13, 24, and 3 months after surgery). Patients with lesions located laterally and deep in the uterosacral ligaments especially near the ischial spines were at high risk. All patients were, however, satisfied with the results of surgery.

Conclusion(s): Most such injuries are unpredictable, but in our experience, two of three patients with lesions near the ischial spine developed this complication. Chronic urinary retention after radical endometriosis surgery is rare and often under reported. Although most lesions are unilateral and have a potential for improvement, it is not known how long these effects will last. More data from other centers may help in providing additional information. (Fertil Steril 2011;95:803.e9–e12. ©2011 by American Society for Reproductive Medicine.)
Hematometra following laparoscopic resection of retrocervical and rectovaginal endometriosis

Elias Kvoor, M.D., Joseph Nassif, M.D., Ignacio Miranda-Mendoza, M.D., Emmanuelle Baulon, M.D., and Arnaud Wattiez, M.D.

Institut de Recherche Contre les Cancers de l’Appareil Digestif (IRCAD) and University Hospitals Strasbourg, Strasbourg, France

Objective: To report a case of hematometra following laparoscopic resection of rectovaginal endometriosis extending to the cervix.

Design: Case report.

Setting: University hospital.

Patient(s): A 31-year-old woman with endometriosis and infertility.

Intervention(s): Combined laparoscopic and vaginal surgery.

Result(s): The cervix had retracted into the vaginal scar after surgery, preventing the escape of menstrual blood. The hematometra was drained, and the cervix was repositioned into the vagina with use of a combined vaginal and laparoscopic approach.

Conclusion(s): Retraction of the cervix into the cul-de-sac can occur as a complication of excision of rectovaginal nodules that extend onto the posterior surface of the cervix. Excision of the posterior cervix should avoid deep excision of the posterior lip and should be limited only to the ectocervical margin to avoid such complications. (Fertil Steril® 2010;93:2074.e11–e12. ©2010 by American Society for Reproductive Medicine.)

Key Words: Rectovaginal, cervical, endometriosis, complication, laparoscopy, hematometra
Therapy with a GnRH agonist is an appropriate approach to the management of the woman with chronic pelvic pain, even in the absence of surgical confirmation of endometriosis, provided that a detailed initial evaluation fails to demonstrate some other cause of pelvic pain.
ACOG Level C

• For severe endometriosis, medical treatment alone may not be sufficient.
ACOG Level C

• For severe endometriosis, medical treatment alone may not be sufficient.

• Because endometriosis often is unpredictable and may regress, expectant management may be appropriate in asymptomatic patients.
French Recommendations
Symptoms

• The presence of persistent painful pelvic symptomatology must indicate a search for endometriosis (level C)

• This recommendation is still true in infertile women (level C)
Clinical Exam

• Examination of the retro cervical area with speculum, pelvic exam and eventually DRE is recommended (level C)
Blood Tests

• Ca 125 for diagnostic or prognostic value is not recommended (level A)
Imaging

• Needs expert and dedicated radiologist (professional consensus)
Imaging

• Needs expert and dedicated radiologist (professional consensus)
• Endovaginal US is almost always enough to confirm or reject endometriosis diagnosis (level B)
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• Endovaginal US is almost always enough to confirm or reject endometriosis diagnosis (level B)
• Pelvic MRI might be used in clinical suspicion of deep pelvic endometriosis (level B)
Imaging

- Needs expert and dedicated radiologist (professional consensus)
- Endovaginal US is almost always enough to confirm or reject endometriosis diagnosis (level B)
- Pelvic MRI might be used in clinical suspicion of deep pelvic endometriosis (level B)
- Uro MRI, IVP and Uro scan might be useful in voluminous lesions (level C)
Indication of laparoscopy

- Laparoscopy is the gold standard for diagnosing endometriosis (grade A)
Indication of laparoscopy

• Laparoscopy is the gold standard for diagnosing endometriosis (grade A)

• It is preferable to perform in the same time diagnostic and therapeutic laparoscopy (professional consensus)
Painful Endometriosis

• Hormonal treatment should be suggested in painful endometriosis (level A)
Painful Endometriosis

• Surgical treatment in painful endometriosis is recommended taking into consideration individualized benefit / risk ratio (level A)
Painful Endometriosis

• Surgical treatment in painful endometriosis is recommended taking in consideration individualized benefit / risk ratio (level A)

• In pain recurrences, a medical treatment can be started (professional consensus)
Painful Endometriosis

• Surgical treatment in painful endometriosis is recommended taking in consideration individualized benefit / risk ratio (level A)
• In pain recurrences, a medical treatment can be started (professional consensus)
• Total hysterectomy with BSO and excision of implants is an efficient option in recurrences (level C)
Infertility

• In infertility, it is recommended to start with a laparoscopy in case of clinical or radiological suspicion of endometriosis (professional consensus)
Thank you for your attention!