

DYSMENORRHEE. ENDOMETRIOSE. ADOLESCENCE

De l'ignorance à l'obsession...

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75007 PARIS



ENDOMETRIOSE: UNE SYMPTOMATOLOGIE PRECOCE ?

CHARACTERISTICS OF ENDOMETRIOSIS IN ADOLESCENTS

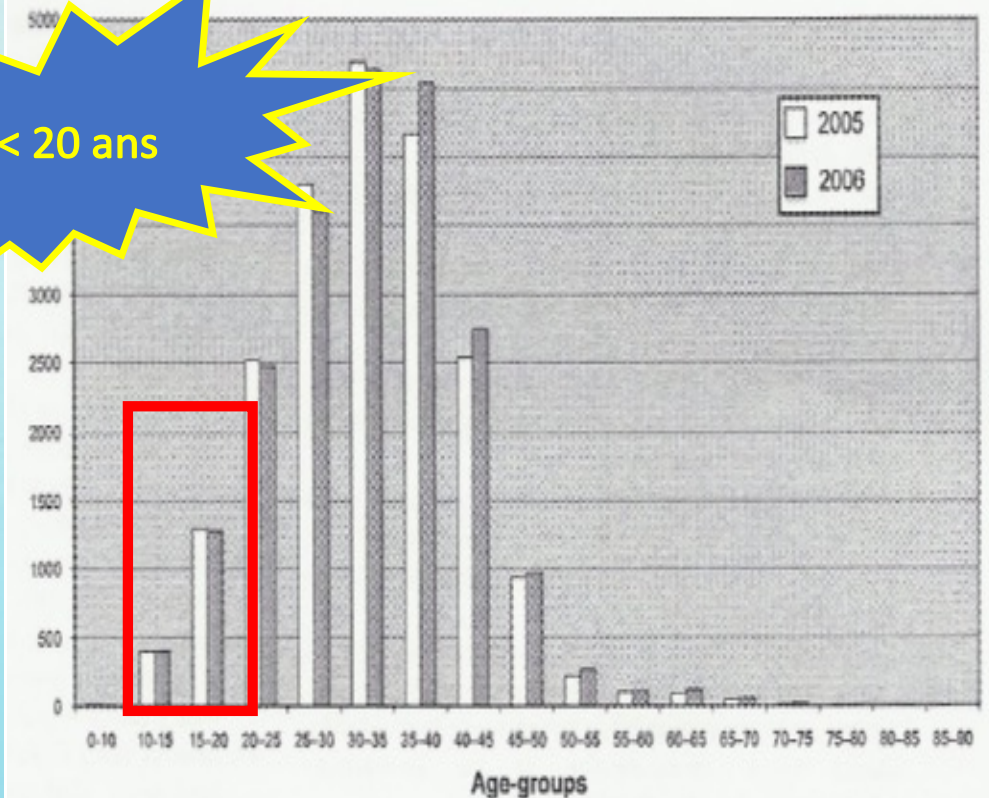
Characteristic	Frequency
Incidence*	19%-73%
Prevalence*	47%
Incidence in premenarcheal girls who have initiated puberty	25%-38%
Symptom onset before age 20 in adults with endometriosis	66%
Average time from onset of symptoms to diagnosis	9.28 y
Varied presentation in adolescents:	
Classic dymenorrhea	64%-94%
Other acyclic pain	36%-91%

* In population presenting with chronic or cyclic pelvic pain.

J. SANFILIPPO

113. 935. 947 *Obstet Gynecol* 2009

AGE AU 1^{er} DIAGNOSTIC



Dietmar Hass et al
Arch Gynecol Obstet (2012) 286:667-670

DYSMENORRHEE. ENDOMETRIOSE. ADOLESCENCE

Une étape initiale complète mais prudente

Interrogatoire

Contexte familial

Examen clinique ?

Echographie

Sus pubienne?

Vaginale...

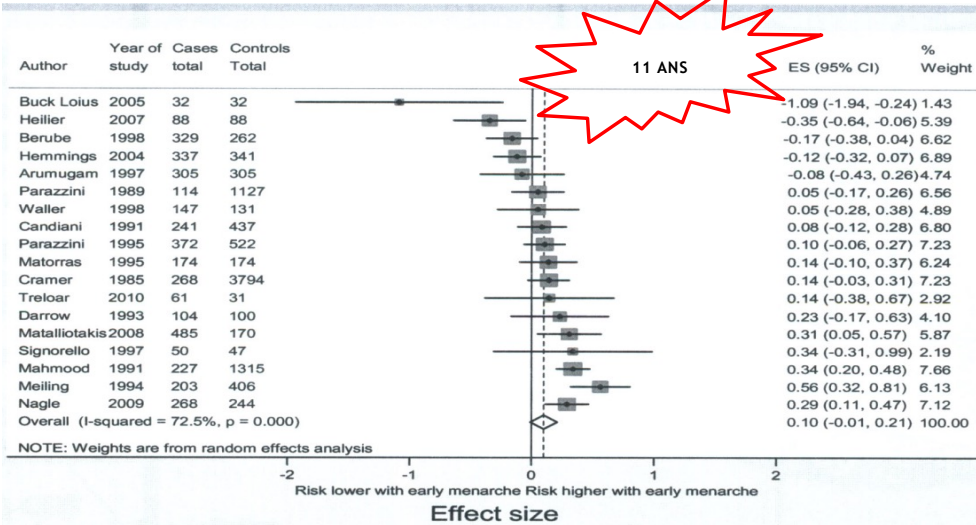
Rectale??...

CA125 plasmatique



INTERET DE LA TELECONSULTATION?...

IS EARLY AGE AT MENARCHE A RISK FACTOR FOR ENDOMETRIOSIS? A SYSTEMATIC REVIEW AND META-ANALYSIS OF CASE-CONTROL STUDIES



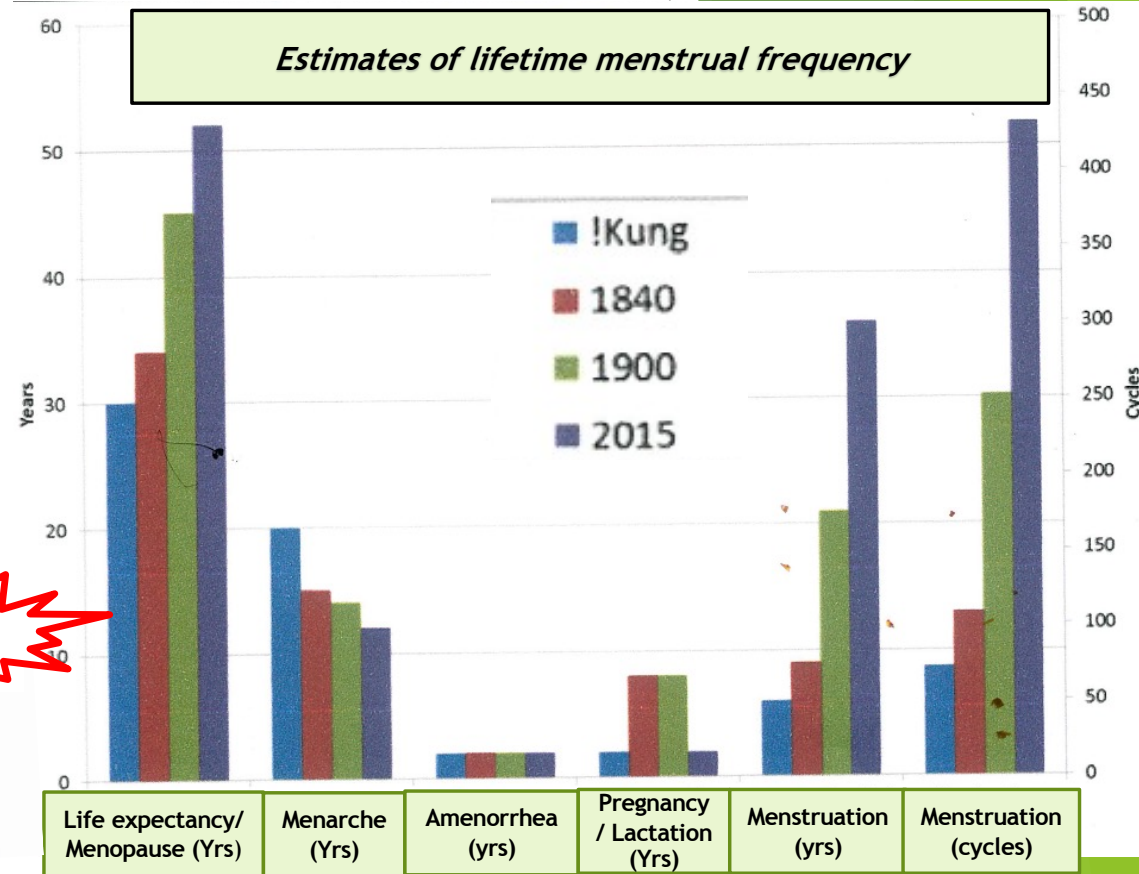
Forest plot of 18 included studies evaluating association between early menarche and endometriosis. Nnoaham. Age at menarche and endometriosis risk. Fertil Steril 2012.

Kelechi E. Nnoaham, M.D.,^{a,c} Premila Webster, M.D.,^a Jharna Kumbang, M.D.,^b Stephen H. Kennedy, M.R.C.O.G.,^c and Krina T. Zondervan, D.Phil.^{c,d}

Variable	Nineteenth century	Twenty-first century
Menarche	16 years	12.5 years
Mean no. of children per woman	5-6	1-2
Mean duration of exclusive breast lactation	1-2 years	4-6 months
Mean no. of menstruations between menarche and 25 years of age	~50	~150
Mean no. of menstruations during the menarche-to-FFTP interval	~20	~200
Mean no. of lifetime ovulatory menstruations	40-160	400-460

Human Reproduction, 2024, 39(1), 1-17

Paolo Vercellini ^{1,2,*}, Veronica Bandini ¹, Paola Viganò ^{1,2}, Giorgia Di Stefano ², Camilla Erminia Maria Merli ², and Edgardo Somigliana ^{1,2}



ENDOMETRIOSE, ANTECEDENTS FAMILIAUX : UNE REALITE THEORIQUE

En pratique:
Un intérêt au diagnostic précoce
Mais un risque à l'obsession

2008

Familial aggregation of endometriosis in the Yale Series

Objective: to investigate the familial aggregation and the risk of endometriosis among the female relatives of women with endometriosis.
Patient(s): 485 women with endometriosis underwent surgical investigation between August 1996 and February 2002.

	Endometriosis (n = 485)	Controls (n = 197)	OR	95% CI	χ^2	P value
Endometriosis in mothers (%)	19 (3.9%)	1 (0.5%)	7.99	1.06-60.1	4.59	0.032
Endometriosis in sisters (%)	27 (5.6%)	1 (0.5%)	11.55	1.56-83.59	7.87	0.005
Endometriosis in our cases (%)	46 (9.5%)	2 (1%)	10.21	2.45-42.5	14.09	<0.001

First-degree relatives	Cases	n%
Mothers	2	4
Mother and two daughters	1	2
Mother with daughter and grandmother	16	33
Mother and one daughter	2	4
Sisters	25	51
Two sisters		
One sister		

X 10

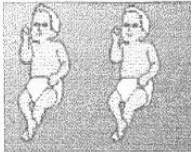
Conclusion(s): Women with endometriosis have a tenfold increased risk of endometriosis in their first-degree relatives

Ioannis M. Matalliotakis et al Arch Gynecol Obstet (2008) 278: 507-511

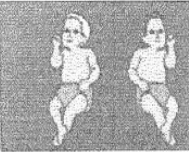
ÉTAT DES CONNAISSANCES
Endométriose et génétique : les gènes sont-ils responsables de la maladie ?

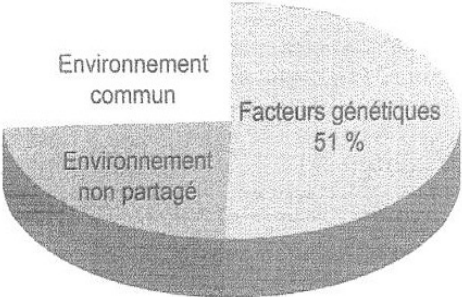
Héritabilité de l'endométriose

Jumeaux monozygotes



Jumeaux dizygotes





Environnement commun: 49%
Facteurs génétiques: 51%
Environnement non partagé: 0%

2013

Family history (1st degree relatives)

Authors (year)	Country	n	Sisters (%)	Mothers (%)	Mothers or sisters (%)	Controls (%)
Simpson et al. (1980)	USA	123	5.8	8.1	6.9	1.0
Lamb et al. (1986)	USA	43	3.8 ^a	6.2 ^a	4.9 ^a	1.9 ^a
Moen and Magnus (1993)	Norway	515	4.8	3.9	4.3 (OR: 7.2)	0.7
Coxhead and Thomas (1993)	UK	64	—	—	9.4	1.6
Kennedy et al. (1998)	UK	29	—	—	14.3	—
dos Reis et al. (1999)	Brazil	81	—	—	8.6	0
Stefansson et al. (2002)	Iceland	750	(RR: 5.2)	—	—	—
Kashima et al. (2004)	Japan	339	8.8 (RR: 5.7)	—	—	1.5
Matalliotakis et al. (2008)	USA	485	5.6 ^b	3.9 ^b	9.5 ^b (OR: 10.2) ^b	1.0 ^b

Endometriosis mother exposure	Daughters N (%)	Sis N (%)	Rate ratio (95% CI)
YES (n = 24 691)	12 389	455 (3.7)	2.12 (1.89-2.37)
NO (n = 98 764)	52 371	908 (1.7)	

X 2.12

Adapted from Dalsgaard et al., Hum Reprod (2013) Dalsgaard et al., Hum Reprod (2013)

B. Borghese^{a,*,b,c}, D. Vaiman^{b,c}, D. de Ziegler^a, C. Chapron^{a,b,c}

EFFECTS OF PRENATAL ENVIRONMENTAL EXPOSURES ON THE DEVELOPMENT OF ENDOMETRIOSIS IN FEMALE OFFSPRING

Background: the findings of studies investigating the relationships between prenatal environmental exposures and the development of endometriosis have not always been conclusive.

Methods: current studies that investigated the effects of prenatal environmental exposures on the development of endometriosis in female offspring.

Results: prenatal exposure to estrogenic substances (such as ethinyl estradiol and diethylstilbestrol) and environmental toxins (such as 2,3,7,8-tetrachlorodibenzo-p-dioxin, polychlorinated biphenyls, and bisphenol A) may increase the incidence of endometriosis in female offspring. Exposure to cigarette smoke may protect against the development of endometriosis in female offspring mainly because of its antiestrogenic effects.

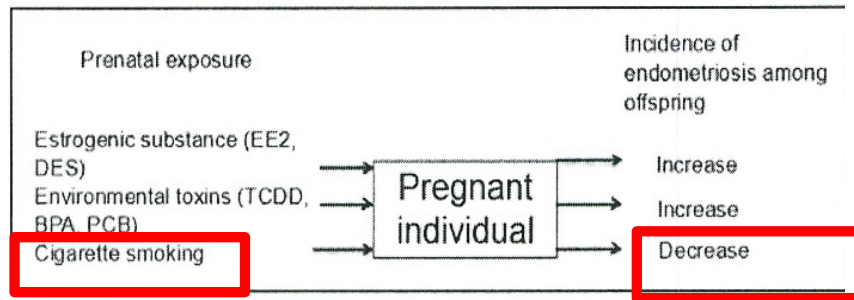
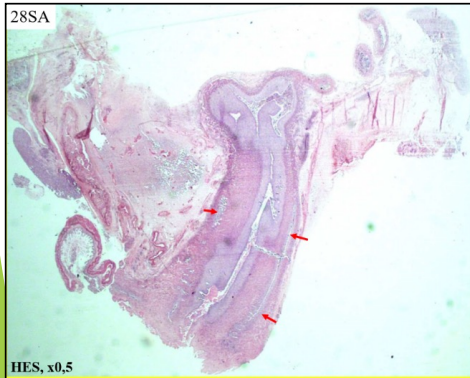


Figure 1. Prenatal exposures affect the incidence of endometriosis among offspring.

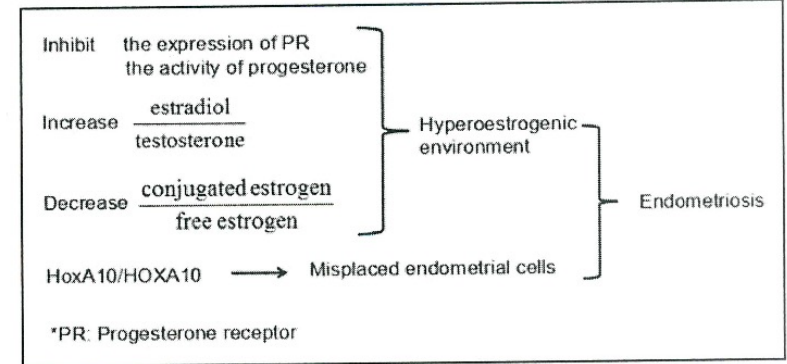


Figure 3. The pathways related to the toxicity of BPA during pregnancy. BPA indicates bisphenol A.

DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

QUE FAUT-IL ATTENDRE DE L'INTERROGATOIRE ?

- ▶ Le saignement utérin néonatal
 - ▶ Ivo BROSENS et al; Gynecol Obstet vol 17, n°1, 2016: 74-78
- ▶ L'exposition infantile aux perturbateurs endocriniens
 - ▶ Ming Wei et al; Reproductive Sciences 2016, vol 23(9) 1129-1138
- ▶ L'âge à la ménarche
 - ▶ Nnoaham et al; Reprod (2012)
- ▶ La précocité de la dysménorrhée
 - ▶ Ioannis M. Matalliotakis et al; Arch Gynecol Obstet (2008) 277: 389-393
- ▶ Les antécédents chirurgicaux pelviens
 - ▶ Lafay-Pillet, Chapron et al; Hum Reprod 2012
- ▶ L'absentéisme scolaire cataménial
 - ▶ Charles Chapron et al; Fertility and Sterility vol 95, N°3, March 1, 2011
- ▶ L'acné
 - ▶ Jing Wie et Marina Kvaskoff; Human Reproduction, vol 29, N°11, pp 2592-2599, 2014

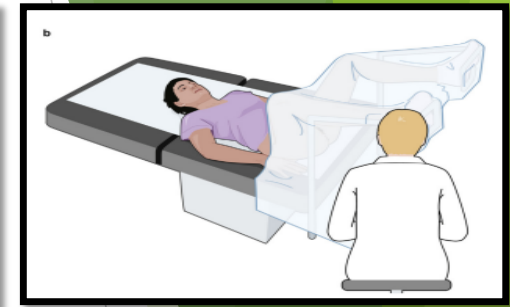
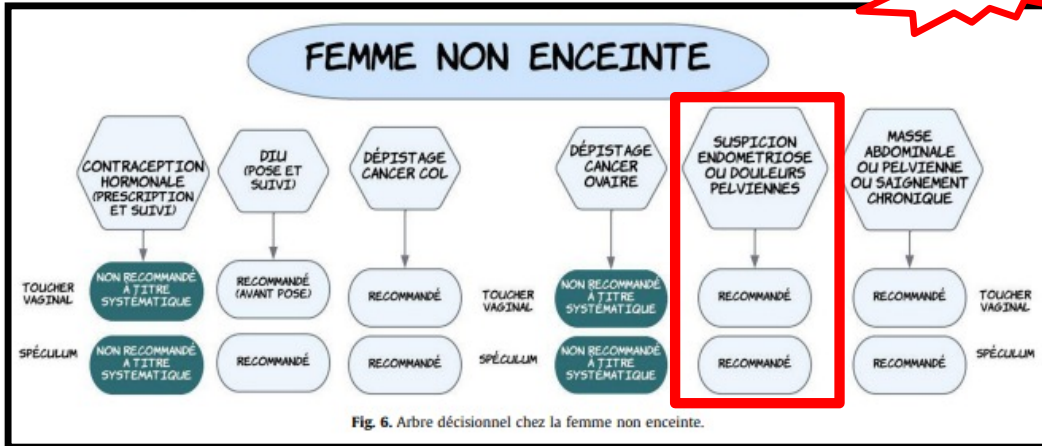
En pratique: pas grand-chose...

ADOLESCENTE ET SUSPICION D'ENDOMETRIOSE: LES BONNES PRATIQUES DE L'EXAMEN CLINIQUE

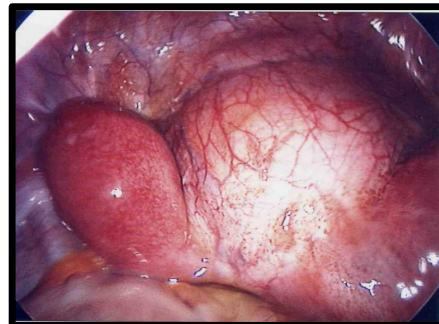
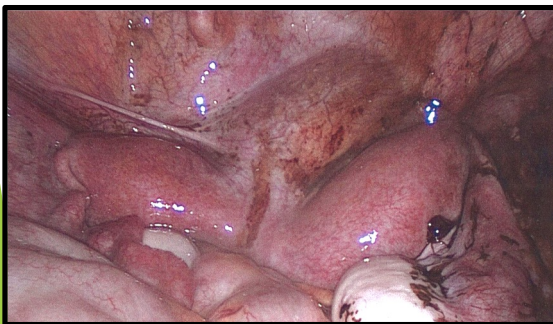
Recommandations pour la pratique clinique

Examen pelvien en gynécologie et obstétrique : recommandations pour la pratique clinique

2023



Xavier Deffieux et al
Gynécologie, Obstétrique, Fertilité & Sénologie 2023



LE T.V EST-IL SOUHAITABLE DES LA PREMIERE CONSULTATION ?

DYSMENORRHEE. ENDOMETRIOSE. ADOLESCENCE

RECOS
CNGOF
2017

A.I.N.S
Oestroprogestatifs faiblement dosés
Microprogestatifs

SUCCES
Traitement à poursuivre
Surveillance régulière

ECHEC

Centres de référence

Examen gynéco

Echographie

± IRM selon protocole
spécifique

Contraception orale continue

(Macroprogestatifs)
Dienogest

ECHEC

SUCCES

Traitement à poursuivre
Surveillance régulière

COELIOSCOPIE

Early noninvasive diagnosis of endometriosis:

Dysmenorrhea and specific ultrasound findings are important indicators in young women

- ▶ **Objectives:** to diagnose endometriosis in young patients $\leq 25y$ with severe dysmenorrhea through specific ultrasonographic examination findings and to correlate the symptoms.
- ▶ **Patient(s):** women aged 12 – 25 years with severe dysmenorrhea.
- ▶ **Intervention(s):** 371 women aged 12-25 years. January 2016 and december 2021
- ▶ **(transrectal** in presexually active girls).

2023

ETG normales
45.8%

ENDOMETRIOSE
35.3%

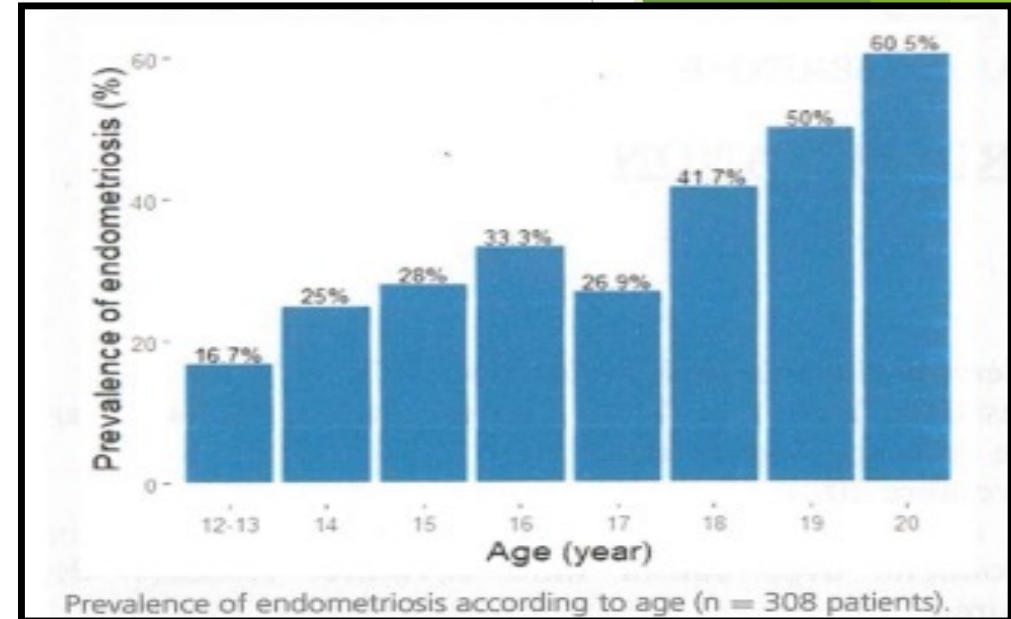
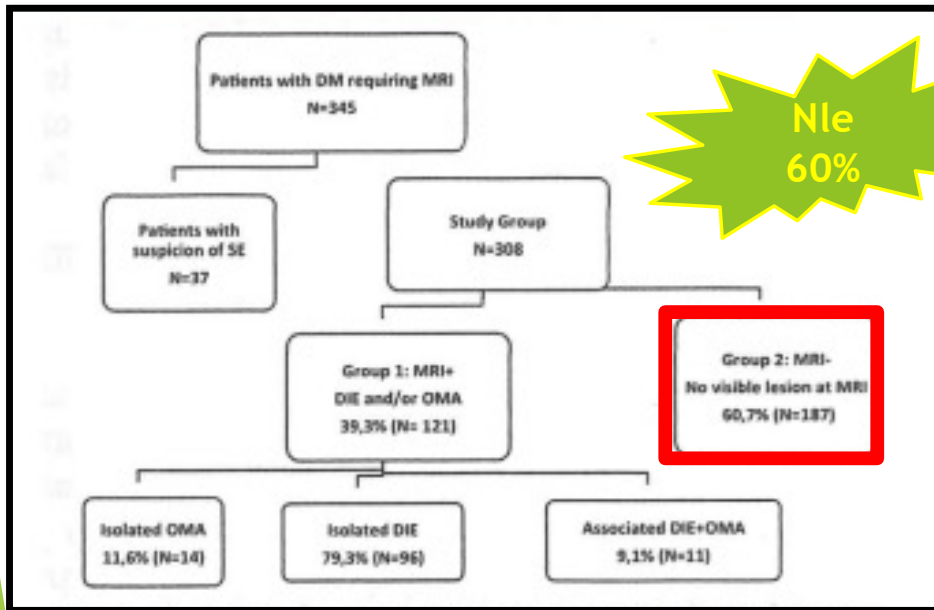
ETG NORMALE	170	45,8 %
ENDOMETRIOSE	131	35,3%
-ENDOMETRIOME	54	41,2%
-ADENOMYOSE	67	51,1%
-LOCALISATION PROFONDE	70	53,4%
-UTERO-SACRE	63	48,1%

Dysménorrhée + Dyspareunie	59%
Dysménorrhée + symptômes digestifs	63%
Dysménorrhée + hyperménorrhée	45%

Adolescent endometriosis: Prevalence increases with age on magnetic resonance imaging scan

2023

- ▶ **Objective:** to evaluate the prevalence on magnetic resonance imaging (MRI) of ovarian endometrioma (OMA) and deep infiltrating endometriosis (DIE) in adolescents presenting with severe dysmenorrhea.
- ▶ **Patient(s):** 345 adolescents aged 12-20 years referred to the radiologic MRI department unit between september 2019 and june 2020.



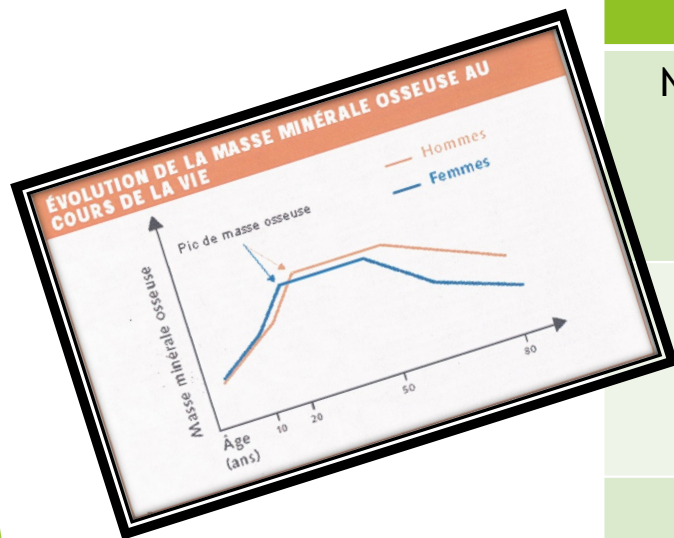
Endometriosis: <i>OMA and/or DIE</i>	121 (39.3%)
Adenomyosis	41 (13,3%)


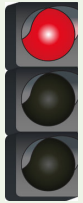

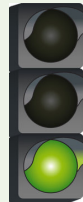

PROBLÈMES PRATIQUES
 PROTOCOLE SPECIFIQUE
 UN ÂGE LIMITE DE LA PATIENTE ?
 ARTEFACTS: CONTRACTIONS MYOMÉTRIQUES OU ADÉNOMYOSE
 EPAISSISSEMENT DES UTERO-SACRES ? ...

Anne-Elodie Millischer et al . *Fertility and Sterility*. 2023.

DYSMENORRHEE. ENDOMETRIOSE. ADOLESCENCE

► Peut-on encore prescrire des progestatifs chez l'adolescente?



Molécule		Nom Commercial
Noréthistérone acétate Cyprotérone acétate Lynestrénol Danazol		Primolut-Nor Androcur Orgamétril Danatrol
Nomégestrol acétate Promégestone Médroxyprogestérone acétate		Lutényl Surgestone Gestoral
Clormadinone acétate Médrogestone		Luteran Colprone
Dienogest Dydrogestérone Progestérone		3 génériques Duphaston Utrogestan
Drospirenone		Slinda



**RECOS CNGOF
2017
Microprogestatifs**

DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

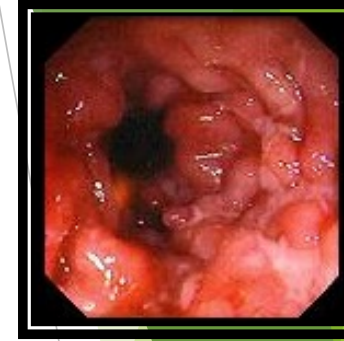
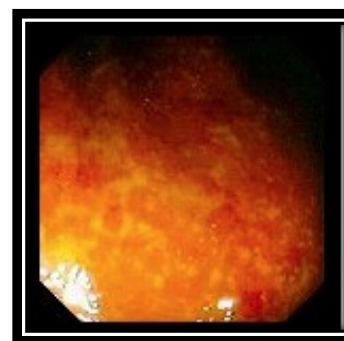
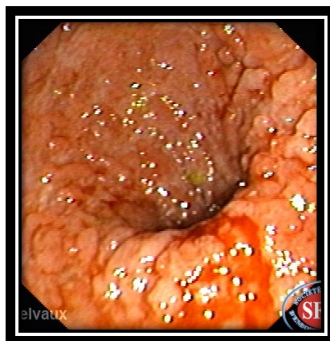
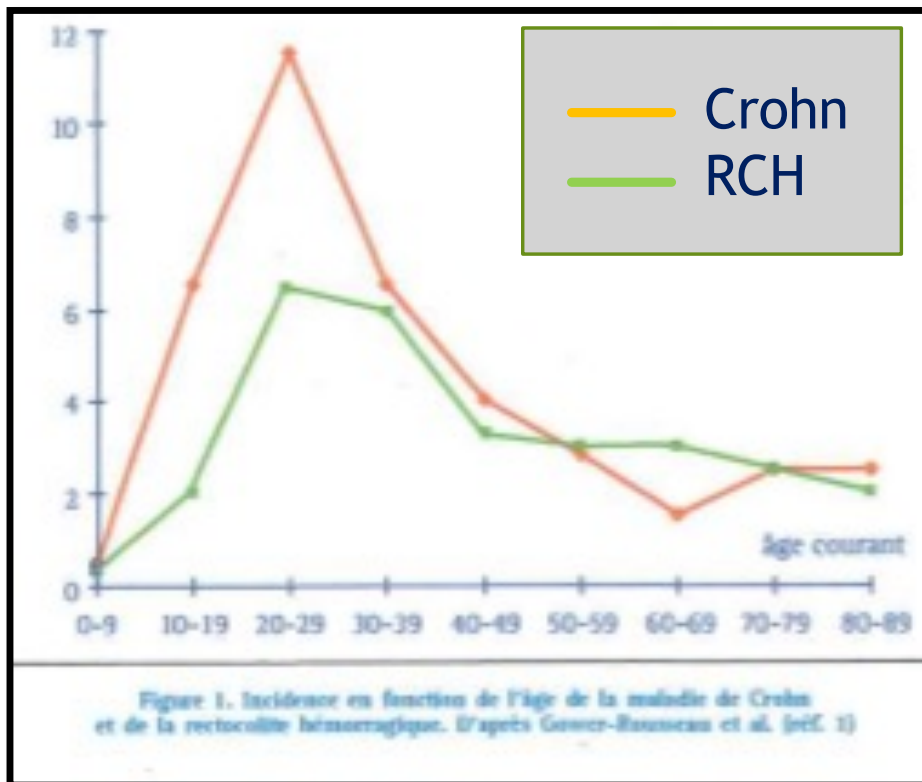
ADOLESCENT ENDOMETRIOSIS: ASSOCIATED COMORBIDITIES

Autoimmune inflammatory diseases	Systemic lupus erythematosus
	Multiple sclerosis, Rheumatoid arthritis
	Sjogren's syndrome
Chronic pain conditions	Migraines, Fibromyalgia
	Interstitial cystitis
	Chronique fatigue syndrome
	Irritable bowel syndrome
Endocrine diseases	Hypothyroidism
Respiratory conditions	Allergies, Asthma
Psychosocial disorders	Depression, Anxiety, Sexual abuse

Adaptated from Youngster *et al.*, Curr Opin Pediatr (2013)

AJOUTER DE L'AMBIGUITE A L'INCERTITUDE

PRENDRE UN AVIS COLOPROCTOLOGIQUE AVANT LA COELIOSCOPIE ELIMINER LES MICI



Endometriosis and its coexistence with **irritable bowel syndrome** and pelvic inflammatory disease: findings from a national case-control study-part 2

HE Seaman, KD Ballard, JT Wright, CS de Vries

▶ DOSER LA CALPROTECTINE FECALE

2008 The Authors Journal compilation
RCOG 2008
BJOG An International Journal of Obstetrics and Gynaecology

DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

QUID DE LA PRATIQUE EXTENSIVE DE LA COELIOSCOPIE ?

		Nb patientes	Coelio normale %	Endométriose %
Vercellini	1989	47	40	38
Kontovradis	1999	98	40	24,5
Reese	1996	67	6	73
Laufer	1997	46	10,9	67,4
Opoku	2012	117	?	98,3

Adolescents presenting with pelvic pain that is not responsive to OCPs and NSAIDs have 69,6 - 73% prevalence of endometriosis.

Laparoscopic biopsy of suspected lesions of endometriosis is recommended (San FILIPO)

ENDOMETRIOSE: RECOMMANDATIONS CNGOF 2017

→ Examen gynécologique orienté (clinicien référent)

rigidité des cul de sacs vaginaux, perception d'un nodule, annexes fixés, nodules bleutés

ET

→ IRM pelvienne

selon le protocole spécifique interprétée par un radiologue référent

ET/OU

→ Échographie endovaginale de 2^e intention (échographiste référent)

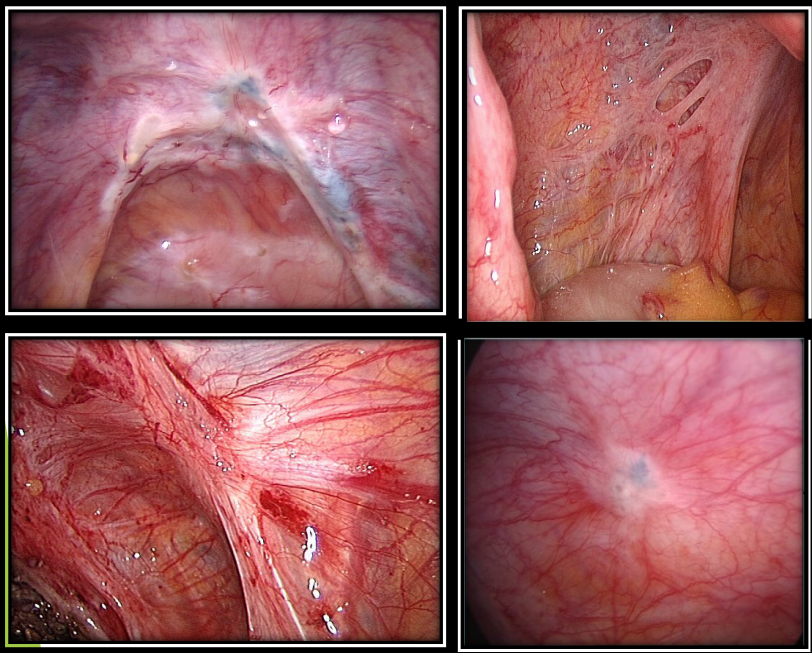
La **coelioscopie diagnostique** peut être indiquée en cas de suspicion clinique avec examens pré opératoires négatifs.

Elle doit s'insérer dans une stratégie de prise en charge des douleurs.

DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

QUE FAIRE LORS DE LA CŒLIOSCOPIE?

- 1- Touchers sous AG
- 2- Bilan complet intra et sous péritonéal
- 3- Biopsies systématiques
- 4- Excision des lésions infiltrantes
- 5- Destruction des autres lésions
- 6- CRO +++
- 7- Système de classification

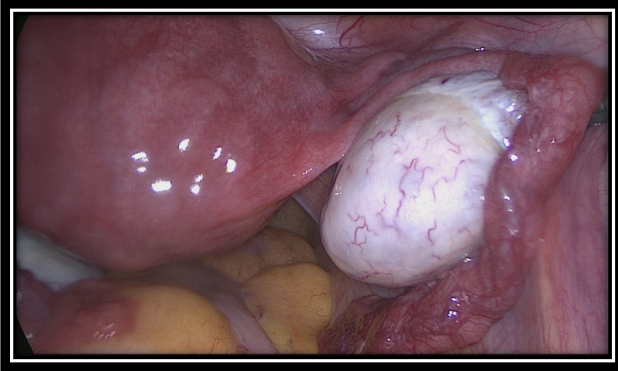


Etudes*	Symptôme principal ayant indiqué la chirurgie	N	Age	nombre de patientes avec des lésions visualisées d'endométriose n(%)	Nombre de patientes biopsiées avec endométriose prouvée histologiquement n(%)
Chatman and Ward	Dysménorrhées	43	12-19	28/43 (65%)	13/18 (72%)
Vercellini et coll	Dysménorrhées	47	11-19	18/47 (38%)	8/11 (72%)
Roman et coll	Dysménorrhées	20	<20	20/20 (100%)	20/20 (100%)
Goldstein et coll	DPC	66	10-19	66/140 (47%)	66/66 (100%)
Reese et coll	DPC	67	11-19	49/67 (73%)	3/3 (100%)
Emmert et coll	DPC	105	11-19	37/105 (35%)	6/14 (43%)
Kontoravdis et coll	DPC	98	16-19	24/98 (25%)	NA
Ventolini et coll	DPC	52	12-18	28/52(54%)	28/28 (100%)
Audebert et coll	DPC	55	12-19	55/55 (100%)	90%

DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

COELIOSCOPIE: La boîte de Pandore

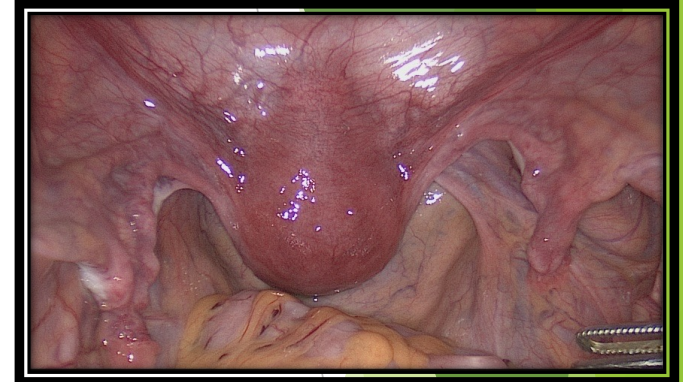
SOPK



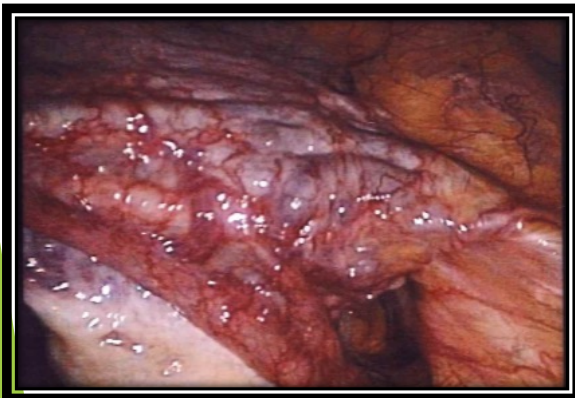
ADHERENCES



RETROVERSION



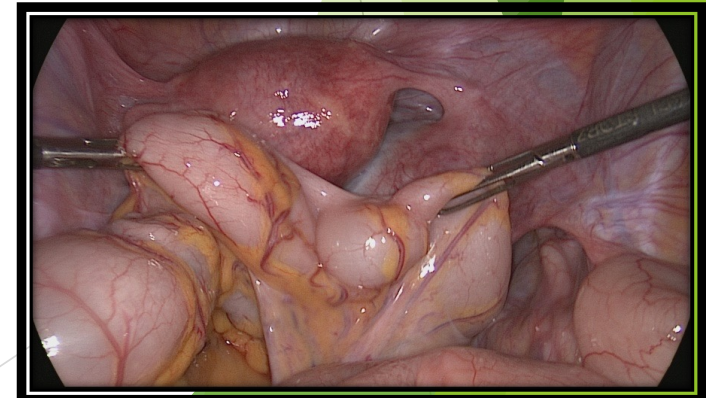
VARICOCELE



APPENDICE



DOLICHO COLON



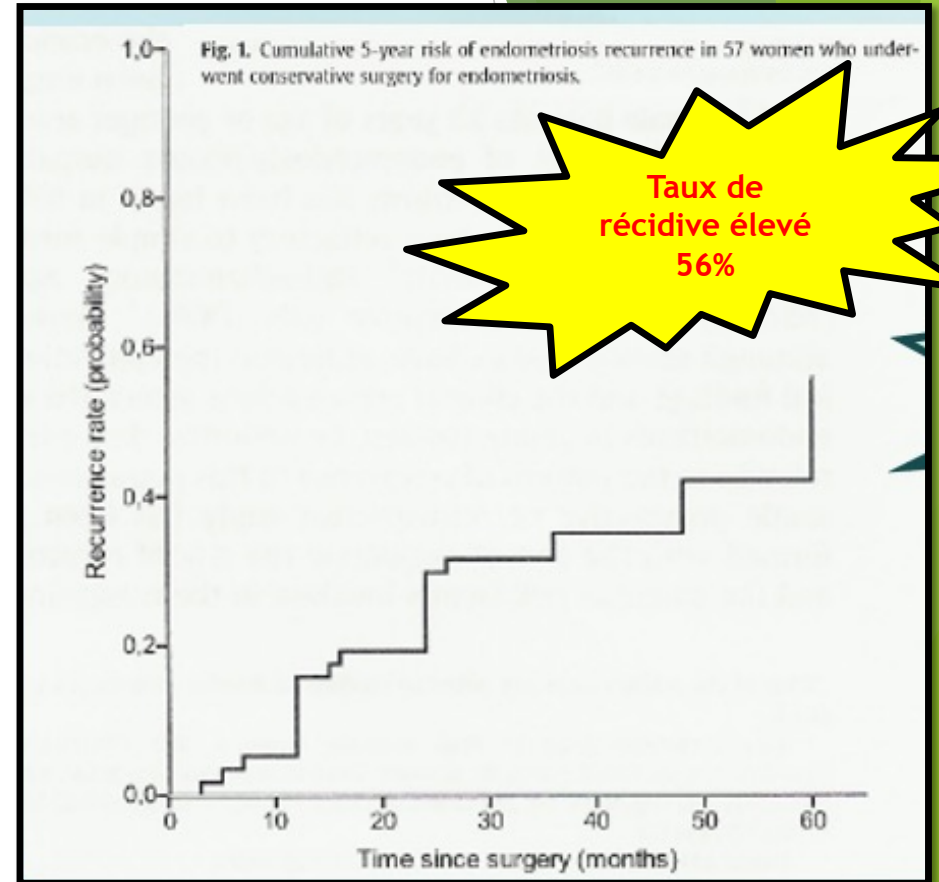
DYSMENORRHEE, ENDOMETRIOSE, ADOLESCENCE

Proscrire les gestes invasifs ovariens
 Ne pas méconnaître les lésions atypiques
 Connaître un taux de récurrence élevé
 Recourir largement au traitement anti gonadotrope d'aval
 Craindre les coelioscopies itératives

Auteur (année)	n	Age	Nbre de coelioscopies itératives	Résultats
Roman (2010)	20	≤ 20	2	Aucune lésion retrouvée
Yeung et al (2011)	17	<20	8	Aucune lésion retrouvée
Tandoi et al (2011)	57	≤ 21	11	Endométriose présente chez toutes
Audebert et de Mouzon (2013)	55	<20	17	Aggravation du stade: 35,4%

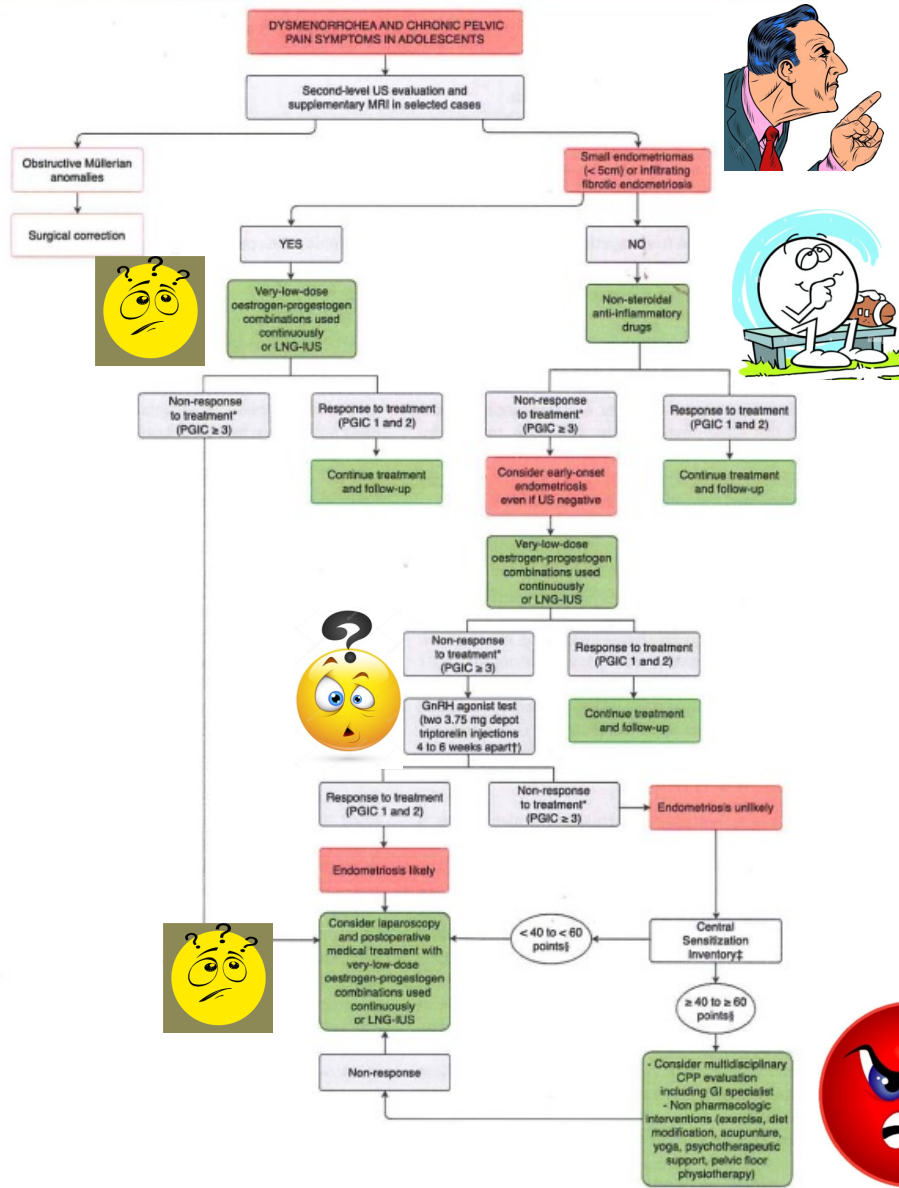
Alain Audebert et al

Médecine de la Reproduction, Gynécologie Endocrinologie, vol 15, n°4, octobre, novembre, décembre 2013



Iacopo Tandoi et al

J Pediatr Adolesc Gynecol 24 (2011) 376-379



Proposal for targeted, neo-evolutionary-oriented secondary prevention of early-onset endometriosis and adenomyosis. Part II: medical interventions

Paolo Vercellini ^{1,2,*}, Veronica Bandini ¹, Paola Viganò ^{1,2}, Deborah Ambruoso ¹, Giulia Emily Cetera ^{1,2}, and Edgardo Somigliana ^{1,2}

Des réserves et des critiques
 Quid des formes minimales?
 Abandon total des progestatifs?
 Passage aux agonistes avec oubli du Dienogest

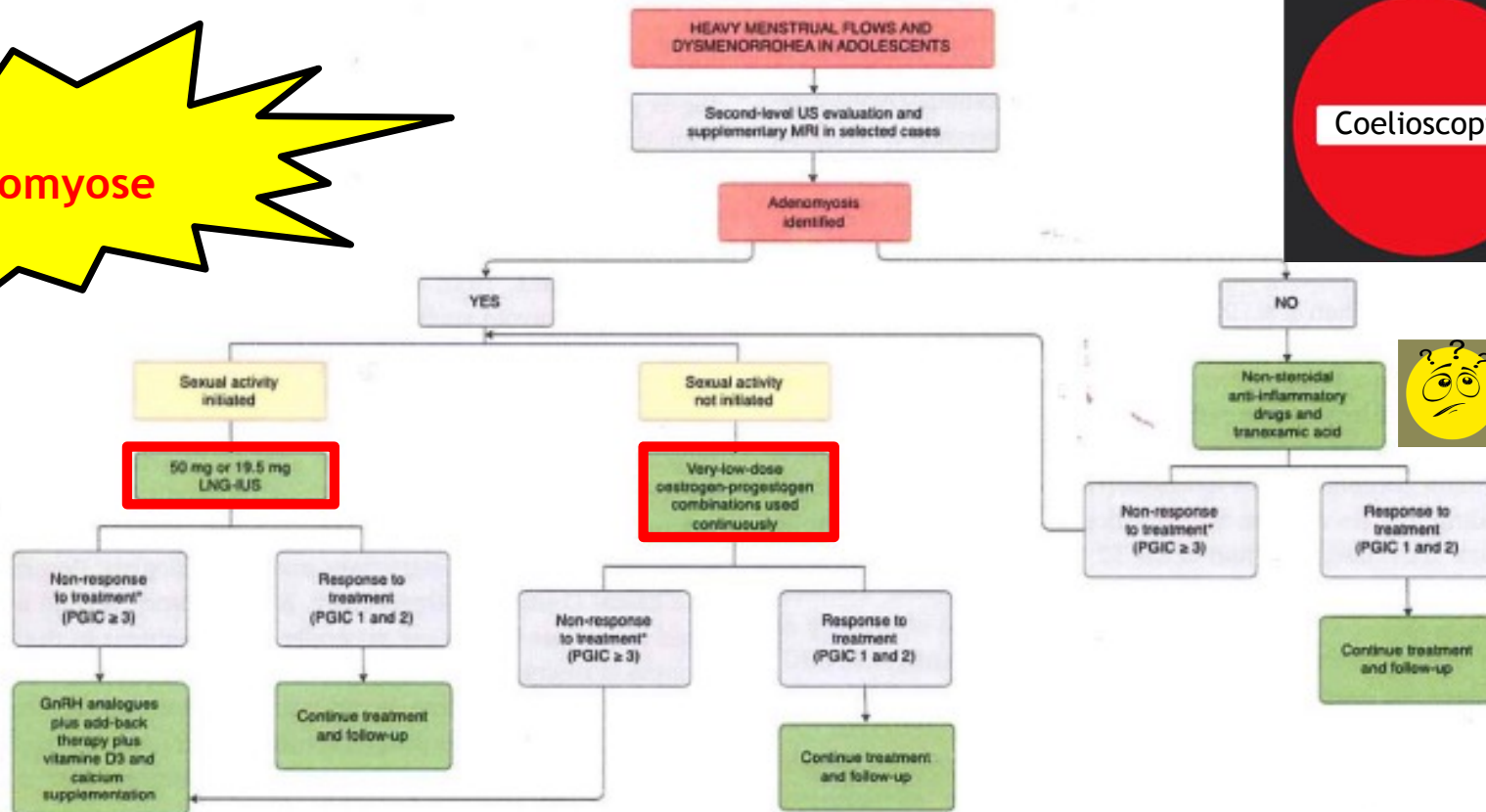
Agoniste de la GNRH
 Traitement de 3^{ème} intention
 Add back thérapie systématique
 Après 16 Ans
 12 mois maximum

Proposal for targeted, neo-evolutionary-oriented secondary prevention of early-onset endometriosis and adenomyosis. Part II: medical interventions

Paolo Vercellini ^{1,2,*}, Veronica Bandini ¹, Paola Viganò ^{1,2}, Deborah Ambruoso ¹, Giulia Emily Cetera ^{1,2}, and Edgardo Somigliana ^{1,2}

Adénomyose

Coelioscopia



EARLY LIFE ABUSE AND RISK OF ENDOMETRIOSIS

UN SUJET EPINEUX A ABORDER AVEC PRUDENCE

Study question: is there an association between physical and sexual abuse occurring in childhood or adolescence and risk of laparoscopically-confirmed endometriosis?

Study design, size, duration: prospective cohort study Nurses' Health study II. 60 595 premenopausal women (1989 to 2013).

Participants: participants completed an exposure to **violence victimization questionnaire in 2001. Cases were restricted to laparoscopically-confirmed endometriosis.** Cox proportional hazards models were used to calculate rate ratios (RR) and 95% confidence intervals (CI).

Main results : 3390 laparoscopically confirmed endometriosis. Risk of endometriosis: severe physical abuse: R.R= 1,20.
: severe sexual abuse: R.R: 1,49.

There was a 79% increased risk of laparoscopically-confirmed endometriosis for women reporting severe-chronic abuse of multiple types (95% CL= 1.44, 2.22).

Holly R. Harris et al
Human Reproduction, Vol 33, N°9 pp. 1657-1668, 2018

Article
Salivary MicroRNA Signature for Diagnosis of Endometriosis

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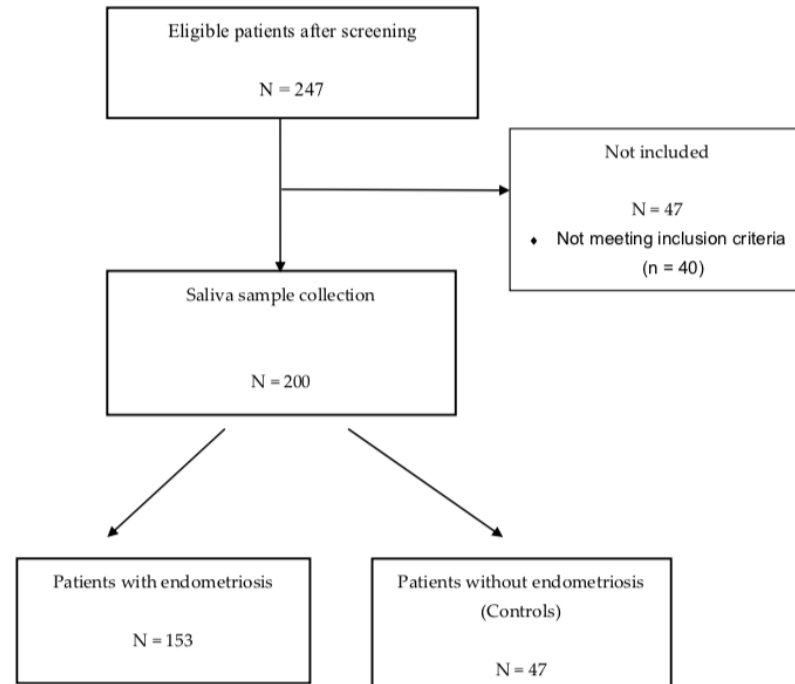


Figure 1. Flow chart of ENDO-miRNA study.

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