

ENDOMETRIOSIS

Diagnosis

Clinical

Cyclic pain can become constant over time

Non-responsive to NSAIDs and BCPs

Laparoscopic (Martin 2006)

Scarred dark lesions

Multiple other appearances

Histologic (Batt 1989 and 2003)

Glands, stroma and hemosiderin

Individual components

Fibromuscular metaplasia

History

Cyclic pain can become constant over time

Symptoms may precede diagnosis by 8 years (average).

Non-responsive to NSAIDs and BCPs

Examination

Focal tenderness

Uterosacral nodules

Increased findings on examination during menses

Mass

Cystic ovary

Rectovaginal mass

Blood Tests

CA-125 can be used for longitudinal observation

Anti-endometrial antibodies are experimental.

Sonography

Ovarian endometrioma – Ground glass appearance

The cyst persists over time

Laparoscopy

Scarred dark lesions

Multiple other appearances

Histology diagnosis for unusual appearances

Low malignant potential tumor

Metastatic breast cancer

Histologic confirmation is research topic

Histologic Criteria for the Diagnosis of Endometriosis (Batt 1989 and 2003)

Grade 1: Possible residua of resorbed endometriosis, i.e. hemosiderin, calcium, nerve, blood vessels and smooth muscle.

Grade 2: Consistent with endometriosis, i.e. hemosiderin, characteristic glands, or stroma.

Grade 3: Definite endometriosis, i.e. characteristic glands and stroma with hemosiderin.

Grade 4: Grade III with structures conveying an organoid pattern, i.e. glandular-stromal layer overlying well developed smooth muscle layer.

Batt RE, Smith RA, Buck GM, et al. A case series - peritoneal pockets and endometriosis: rudimentary duplications of the mullerian system. *Adolesc Pediatr Gynecol* 2:47, 1989.

Batt R, Mitwally MF. Endometriosis from thelarche to midteens: pathogenesis and prognosis, prevention and pedagogy. *J Pediatr Adolesc Gynecol*. 16:333-347, 2003

Histologic Criteria for the Diagnosis of Endometriosis (*Preliminary Research*)

Grade 1: Peritoneal vesicles, red polyps, yellow polyps, hypervascularity, scar, adhesions.

Grade 2: Chocolate cyst with free flow of chocolate fluid.

Grade 3: Dark, scarred (or puckered, pigmented) lesions, red lesion on fibrous scarred background, chocolate cyst with mottled red and dark areas on white background.

Grade 4: Dark, scarred (or puckered, pigmented) lesions at first surgery.

Martin DC. Applying STARD criteria to the laparoscopic identification of endometriosis. *Fertil Steril* 86 (Suppl 2): s269, 2006 (Abstract)

INITIAL INFERTILITY EVALUATION

Dan C. Martin, M.D.

Evan Dunn 2009 (M3 Oct 2007)

Corey Scofield 2009 (M3 Oct 2007)

Causes in women include ovulatory disorders such as PCOS, adhesions, tubal blockage, prolactinemia, endometriosis, fibroids, endometrial scar...

Diagnosis of infertility

Failure to conceive after 12 months of adequate, unprotected sex.

Start evaluation at 6 months if there are known medical factors such as PCOS, tubal adhesions, > 35 Years Old

Fecundability is the probability of conceiving in one month.

7.7 % in first year of trying in healthy couples

Endometriosis with no other factors

6.8 % with 1 to 2 years of infertility

4.4 % with 3 to 8 years of infertility

None with 8 to 13 years of infertility

Endometriosis with other factors

4.9 % with 1 to 2 years of infertility

3.3 % with 3 to 8 years of infertility

0.6 % with 8 to 13 years of infertility

History

General health

Previous pregnancies

Menstrual cycle

Hirsutism

Weight changes

Examination

BMI

Excess hair

Uterine size and contour

Cultures for infection

Chlamydia

GC

General Blood Tests

Prolactin - breast milk hormone

Thyroid - check of the thyroid gland.

Ovulation Testing

Blood progesterone

6 to 8 Days after ovulation

Day 21 to 24 of cycle

Serial sonograms

Urine ovulation tests

Positive 12 to 36h before ovulation
Urine ovulation monitors
Positive at ovulation
Early reaction 2 to 4 days before ovulation
Billing's mucus observation
Saliva observation for ferning
Basal body temperature chart.

Semen Analysis

Avoid sex for two to five days.
Have the sperm specimen at the lab within one hour.

Hysterosalpingogram (HSG) is an X-ray of the uterine cavity and tubes

Laparoscopy

Hysteroscopy and D&C if the lining is abnormal.

OTHER TESTS

Sonogram (ultrasound) is to check on the thickness of the uterine lining (6mm to 12 mm) and ovulation changes in the ovaries.

Sonohysterogram for cavity contour, polyps, sub-mucous myomata

Endometrial Aspiration or Biopsy

This is done in the office on day 10-12 after ovulation.

This confirms progesterone changes in the uterine lining.

Post-Coital Test (PCT, Sims Huhner's Test, mucus - sperm check)

This is scheduled near ovulation. This is like a Pap smear

The test is 6 to 18 hours after sex. .

Estradiol – Ovarian hormone that prepares mucus and lining.

LH/FSH - brain hormone that controls ovaries and testes.

DHEAS – male-like hormone from the adrenal gland.

Androstenedione – male-like hormone from the ovary.

Free Testosterone - male hormone from the adrenal gland or ovary.

Day 3 FSH and E2 to check ovarian reserves - works best over 40

Clomid challenge test to check ovarian reserves - works best over 40.

Blood type and Rh, hepatitis, syphilis, HIV

Rubella (German measles) titer to determine immunity.

T-mycoplasma or ureaplasma may be associated with miscarriages.

Lupus anticoagulant may be associated with miscarriages.

Anticardiolipin antibodies may be associated with miscarriages.

Chromosome analysis to check for inherited problems.

Chlamydia immunoglobulin for old or deep infection.

Blood or body chemistry levels to check for overall health.

TREATMENT

Ovulatory disorders

Clomiphene

Femara

Menopausal gonadotropins
HCG
Dostinex / Parlodel
Thyroid / Tapazole

Adhesions
Surgery
IVF

Tubal occlusion
IVF
Surgery

Endometriosis
Observation
Medication – BCPs, Lupron, Danazol, AI
Surgery

Myomata
Observation at less than 3 cm and no cavity distortion
Surgery

MALE

History
Previous Pregnancies
General Health

Exam
Testicular size

Lab
FSH, Testosterone
TSH
Prolactin