

ENDOMETRIOSIS (endometrial disease)

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Dishormonal, immune-and genetically caused disease in which the outside of the uterus occurs benign overgrowth of tissue morphological and functional properties similar to the endometrium

Endometriosis (Endometrial disease)

- Frequency
- Endometriosis is the third place in the structure of gynecological diseases after inflammatory processes and uterine fibroids
- 7-59% of women of reproductive age
- 12-27% of the operated patients with gynecological problems
- 6-44% - for infertility

Endometriosis (Endometrial disease)

- Pathological changes, referred to today as "endometriosis", have been described about 1,600 years BC in Egyptian papyrus Ebert
- The term "endometriosis" was first proposed in 1892 pre Bell Blair
- "Endometriosis is almost epidemic of XX century - from menarche to menopause» MR Cohen, 1982.

Risk Factors

- Age 25-40 years
- Higher socio-economic status
- Obstetric and gynecological surgery history
- Family history of endometriosis
- Combination with uterine myoma and / or endometrial hyperplasia

Basic theories of endometriosis

- Endometrial origin of endometriosis
- Metaplastic conception
- Embryonic and disontogenetic theories

Endometrial origin of endometriosis

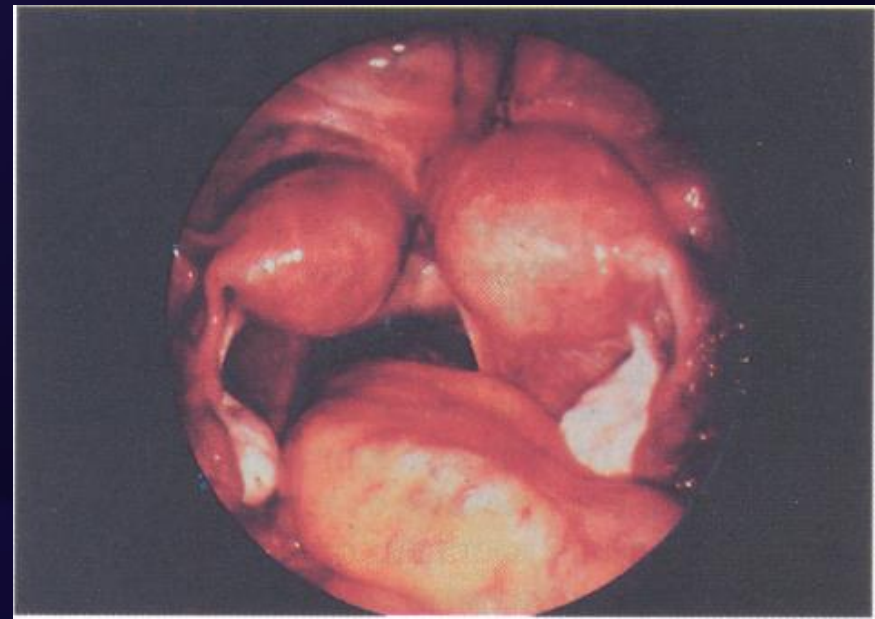
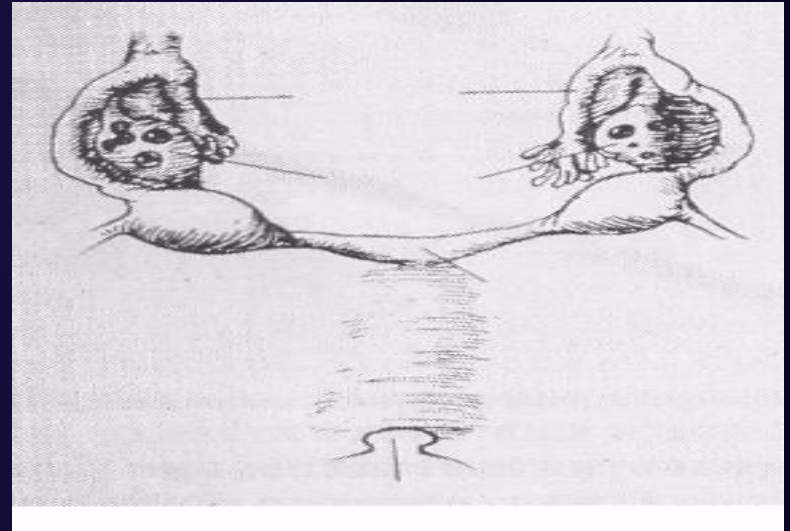
- Development of endometrioid heterotopias of endometrial elements displaced in the thickness of the uterine wall or transferred with retrograde menstrual bleeding into the abdominal cavity and spread to various organs and tissues: intrauterine medical manipulation (abortion, cervical dilatation and curettage of the endometrium, manual examination of the walls of the uterus, cesarean section, myomectomy).

Endometrial origin of endometriosis

- During gynecological operations elements of the mucous membrane of the uterus can get into the bloodstream and lymph and spread to other organs and tissues

Embryonic and disontogenetic theory

- Abnormal balances Mullerian channel: endometriosis clinically active at a young age, frequent combination with uterine malformations, urinary system, gastrointestinal tract



Metaplastic concept

- Metaplasia of the peritoneum or embryonic coelomic epithelium (hormonal disorders, chronic inflammation, mechanical injury): the possibility of becoming a endometrial -like tissue endothelium of lymphatic vessels, the mesothelium of the peritoneum and pleura, renal tubular epithelium, etc.
- Cases of endometriosis in men, the detection of endometriosis in girls before menarche, extragenital endometriosis,.

Leading pathogenetic factors

Hormone-dependent diseases

- Rare before menarche and rarely occurs in postmenopausal women
- Stabilizes and regresses during pregnancy or artificial hormone amenorrhea
- Hormone therapy has a significant effect on endometrial heterotopias that contain estrogen, androgen and progesterone receptors

Leading pathogenetic factors

Hormone-dependent diseases

- Excretion of estrogen has no classical cyclical , it messy and forms hyperestrogeny background (high estrone , which at elevated enzyme activity 17β - hydroxysteroiddehydrogenaze converted into potent estrogen - 17β - estradiol).
- In 25-40 % of cases - normal biphasic menstrual cycle, but they violated the mechanism of cytoplasmic progesterone binding and biological action occurs perversion hormones (progesterone level - binding receptors in endometriosis 9 times lower than normal) .

Leading pathogenetic factors

- Dysfunction of the immune system: T-cell immunodeficiency, inhibition of the function of T-suppressors, polyclonal B-cell activation, the activation of delayed hypersensitivity actions
- Genetic and constitutional-hereditary characteristics
- Lack of antioxidant system
- Prolonged stress protective and adaptive reactions and reduced non-specific resistance of the organism

Leading pathogenetic factors

- Pain syndrome - in small foci formed much more prostaglandin E and F2 α , than in large
- Development of ectopias - peritoneal inflammation and local increase in angiogenesis due to increasing amounts of fluid peritoneal activated macrophages and lymphocytes , increase in the level of specific proinflammatory cytokines and angiogenic growth factors with activity
- Endometrial implants - sources of proinflammatory cytokines and growth factors - increased recruitment of capillaries and activated cells in the heterotopia

Leading pathogenetic factors

- Epidermal growth factor contained in the peritoneal fluids
- one of the factors, growth enhancers heterotopias
- Source epidermal growth factor - cells and macrophages
endometrioid heterotopias
- Endometriosis have receptors for epidermal growth factor – autostimulation of epidermal growth factor production by cells of endometriosis - an even greater increase in epidermal growth factor

Pathomorphology of endometriosis

23 kinds of superficial endometriotic lesions - red, hemorrhagic vesicles, scar tissue, and cell cavity with "chocolate" content nodes and cysts, adhesions combination, infiltrates and cavities with tarry contents (hemosiderosis)

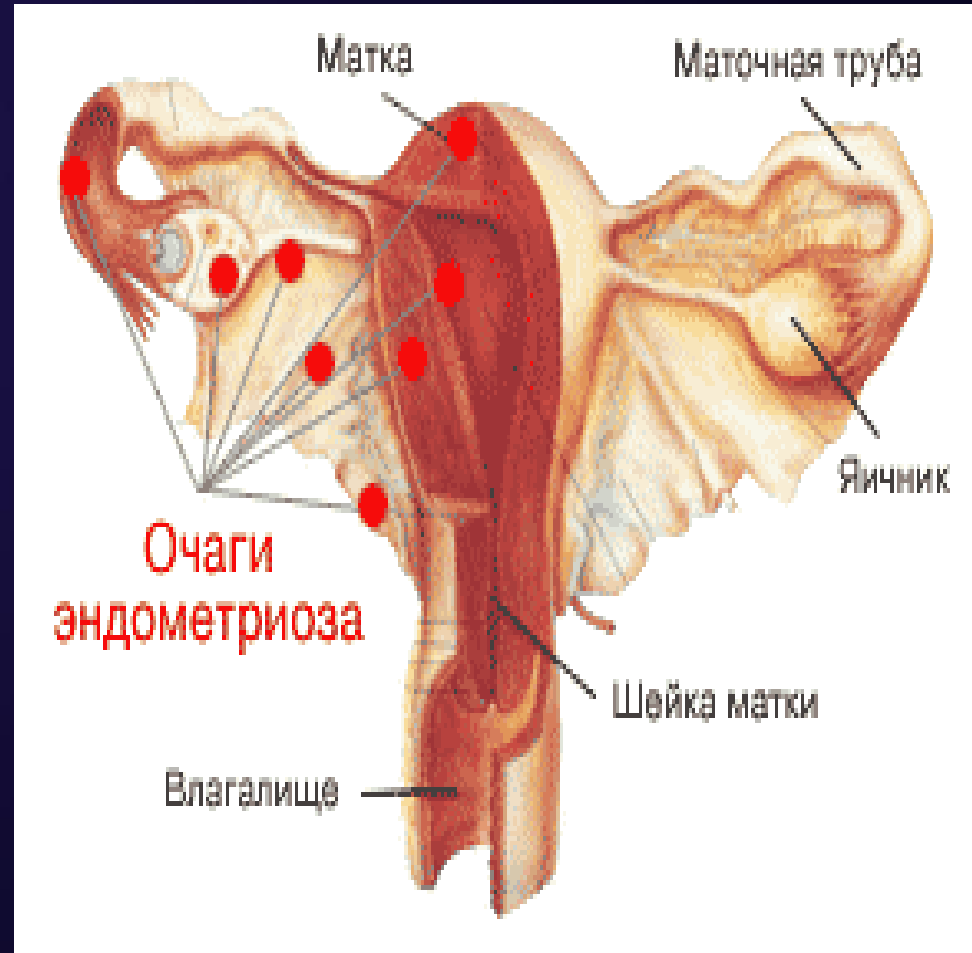


Classification of endometriosis

Depending on the localization of endometrial heterotopies:
genital and extragenital.

Genital endometriosis

- INTERNAL - the body of the uterus, isthmus, interstitial tubal departments
- EXTERNAL- vulva, vagina and vaginal portion of the cervix, retrocervical region, ovaries, fallopian tubes, peritoneum lining the pelvic organs



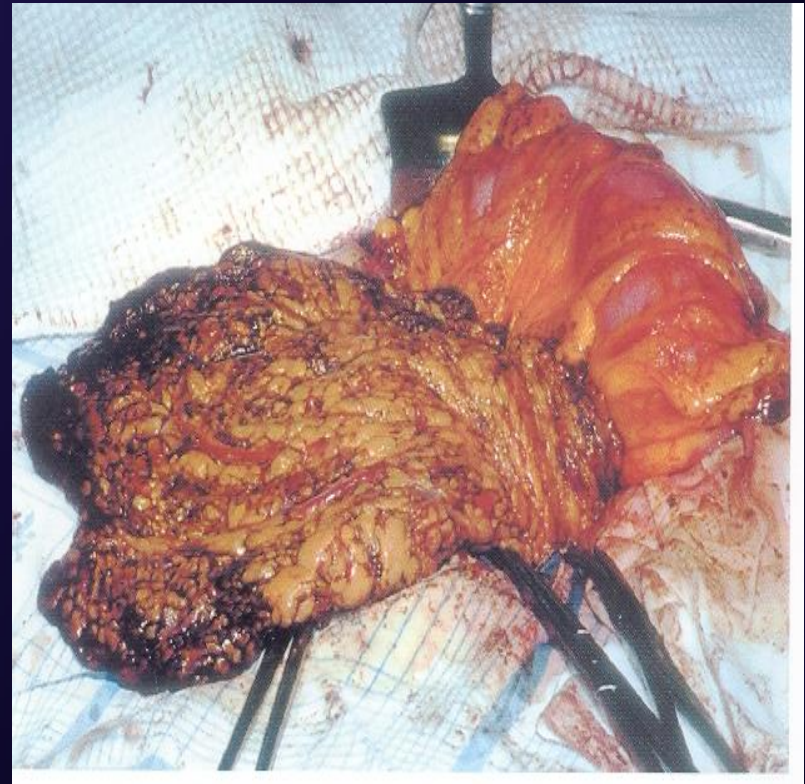
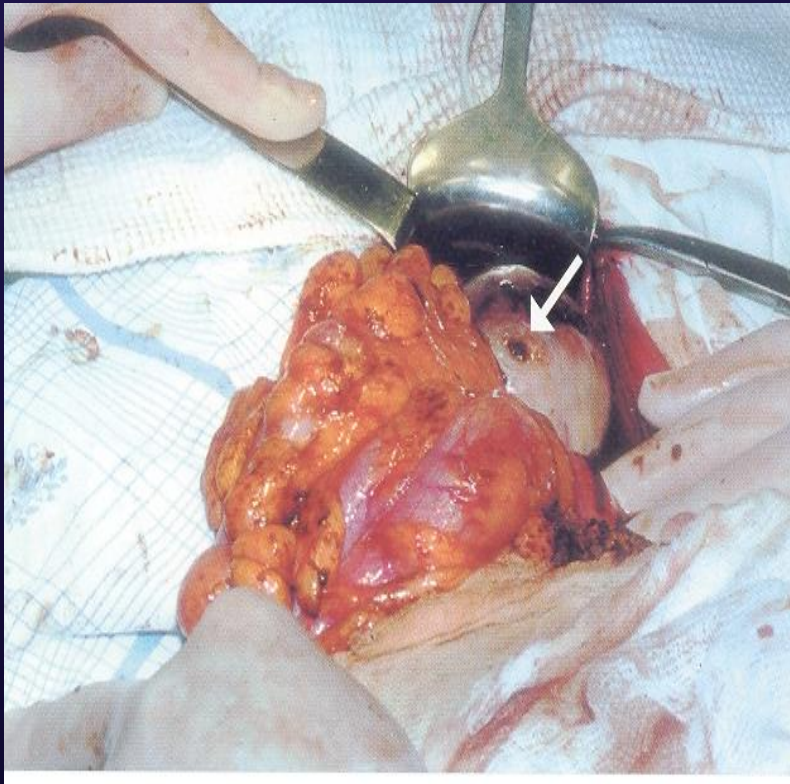
Extragenital endometriosis (not topographically associated with the genitals)

- ENDOMETRIOSIS of SKIN
- ENDOMETRIOSIS of upper and lower extremities
- ENDOMETRIOSIS of SPINE, pleura, lungs, diaphragm
- ENDOMETRIOSIS of urinary organs
- ENDOMETRIOSIS of intestine, omentum, POSTEOPERATIVE SCARS AND NAVEL

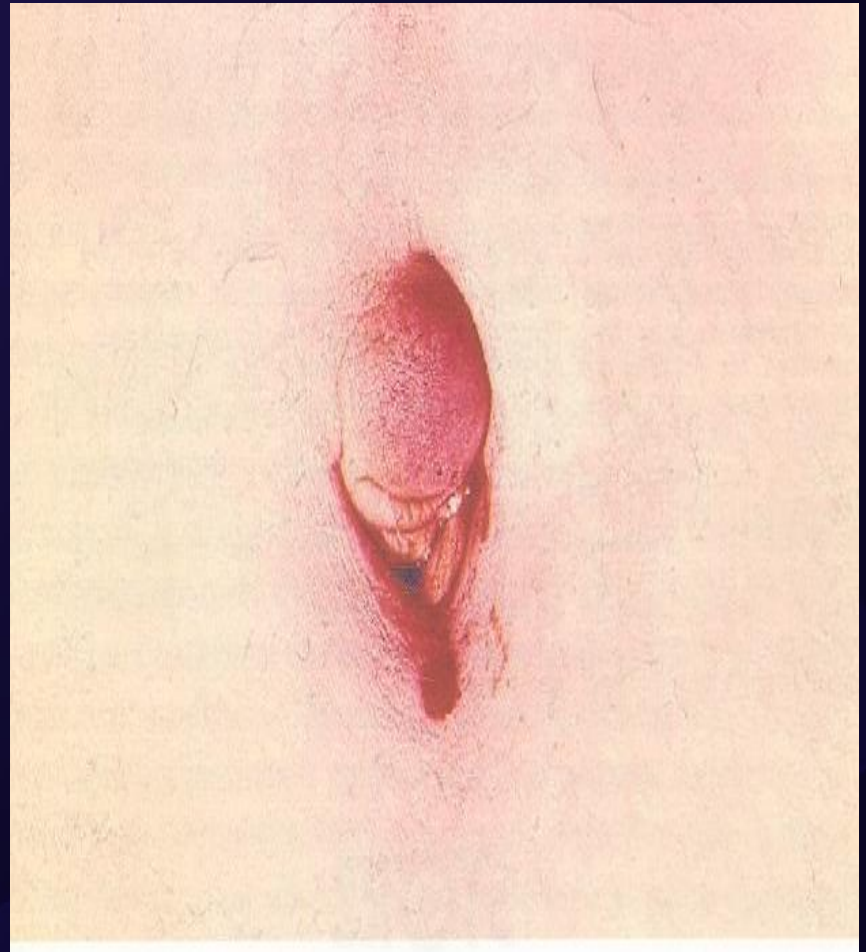
ENDOMETRIOSIS of appendix and sigmoid colon



ENDOMETRIOSIS of BOWEL AND sigmoid intestine



Postoperative scar endometriosis and navel



Clinical forms of endometrial disease (V.P.Baskakov et al., 2002)

Endometrial disease

Genital form:

- uterus
- ovarian
- salpinx
- pudenda
- retrocervical endometriosis
- vagina
- pelvic peritoneum

Mixed form

Extragenital form

- bowel
- urinary tract
- postoperative scarring
- lungs
- other bodies

Clinical features of endometriosis

- Pain, associated with the menstrual cycle
- Drawing pain in the abdomen and lower back during the entire month
- Increased pain on the eve of menstruation
- Sharply painful menstruation
- Pelvic pain, dyspareunia
- Menstrual disorders, dysmenorrhea, menorrhagia, metrorrhagia, irregular menstruation, blood discharge before and after menstruation
- Infertility - primary or secondary

Clinical features of endometriosis

- Lack of communication between pain intensity, localization and prevalence of endometriosis lesions
- 30-50% of patients-not complain of pain

Endometriosis of cervix

- Trauma during childbirth, DEC, surgery on the cervix
- Affected vaginal part of the cervix, the distal portion of the mucosa of the cervical canal.
- Appearance: Strip, "eyes", "mulberry", "Nabothian cyst" form with the presence of ectopic closed glands, chronic cervicitis view, most clearly manifested in the late luteal phase. Individual lesions may before or during menstruation opened and emptied. Foci after menstruation and reduced fade.



Endometriosis of the cervix - Diagnosis

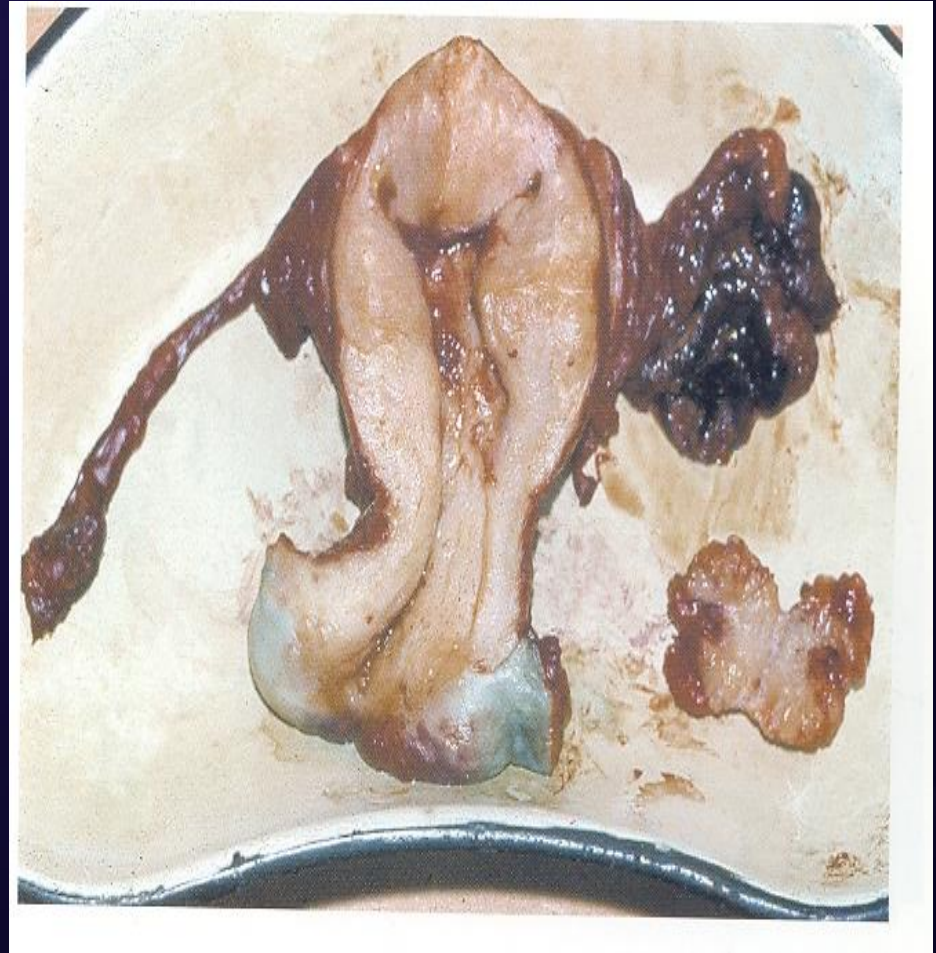
- Complaints - may be the appearance of brown spotting and dark spotting on the eve of menstruation or during sexual intercourse
- Pain - cervical atresia with endometriosis or uterine isthmus
- Oncocitological study of exo-and endocervix
- Simple and extended colposcopy , biopsy histological examination of the impact of the cervix and cervical scrapings
- Cervicoscopy- paracervical spread endometriosis on the side of the mucous membrane defects.
- In the presence of acyclic spotting and bleeding contact - hystercervicoscopy and separate diagnostic curettage, if necessary - biopsy of the cervix

Cervical endometriosis- differential diagnosis

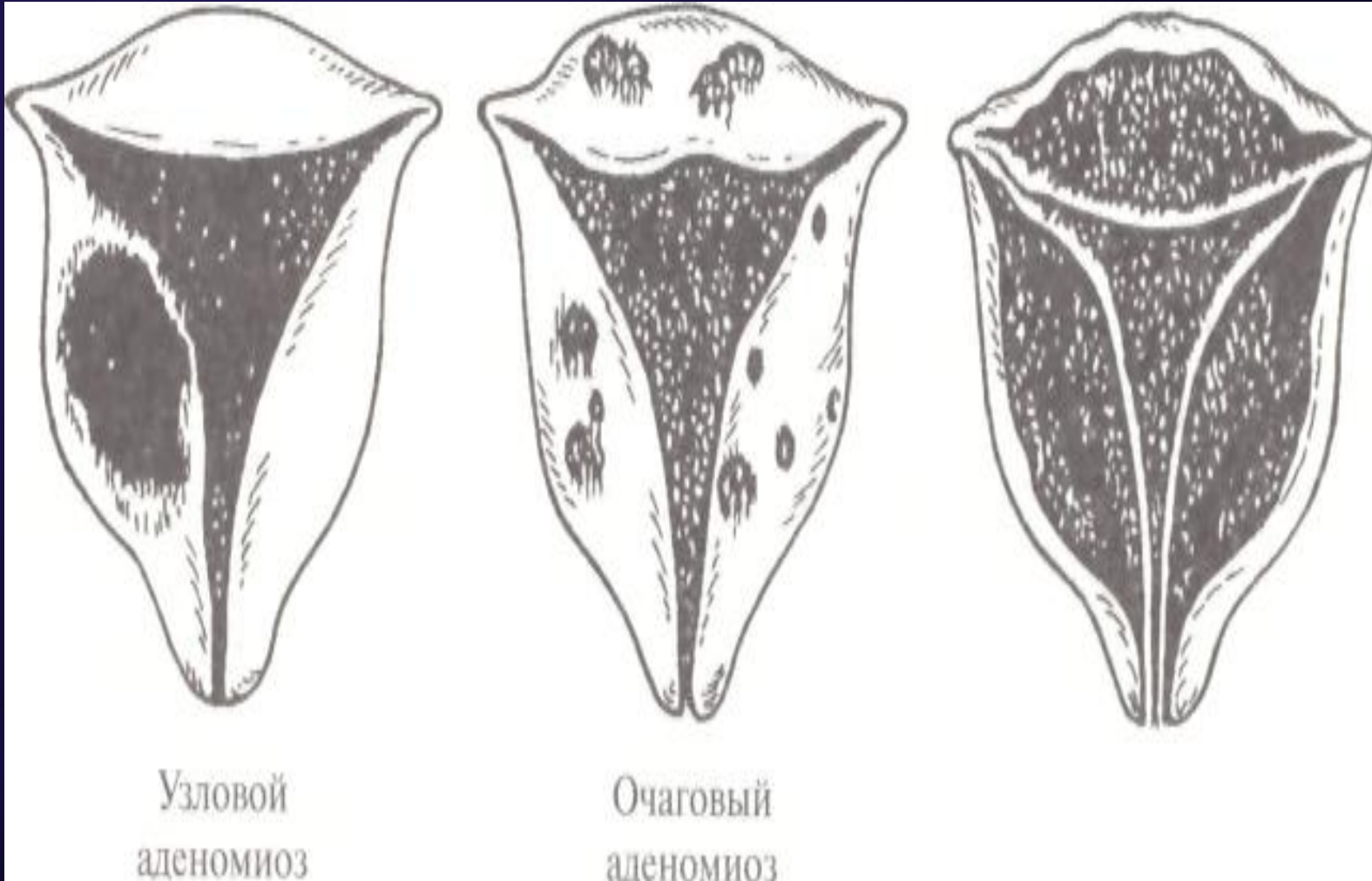
- Adenocarcinoma in situ
- Nabothian cyst with hemorrhagic content
- Nonspecific chronic endometritis and ovarian dysfunction (pre-and postmenstrual spotting)
- Remains of Gartner course

Uterine endometriosis (adenomyosis)

- Variety of endometriosis in which endometrial heterotopias detected in the myometrium

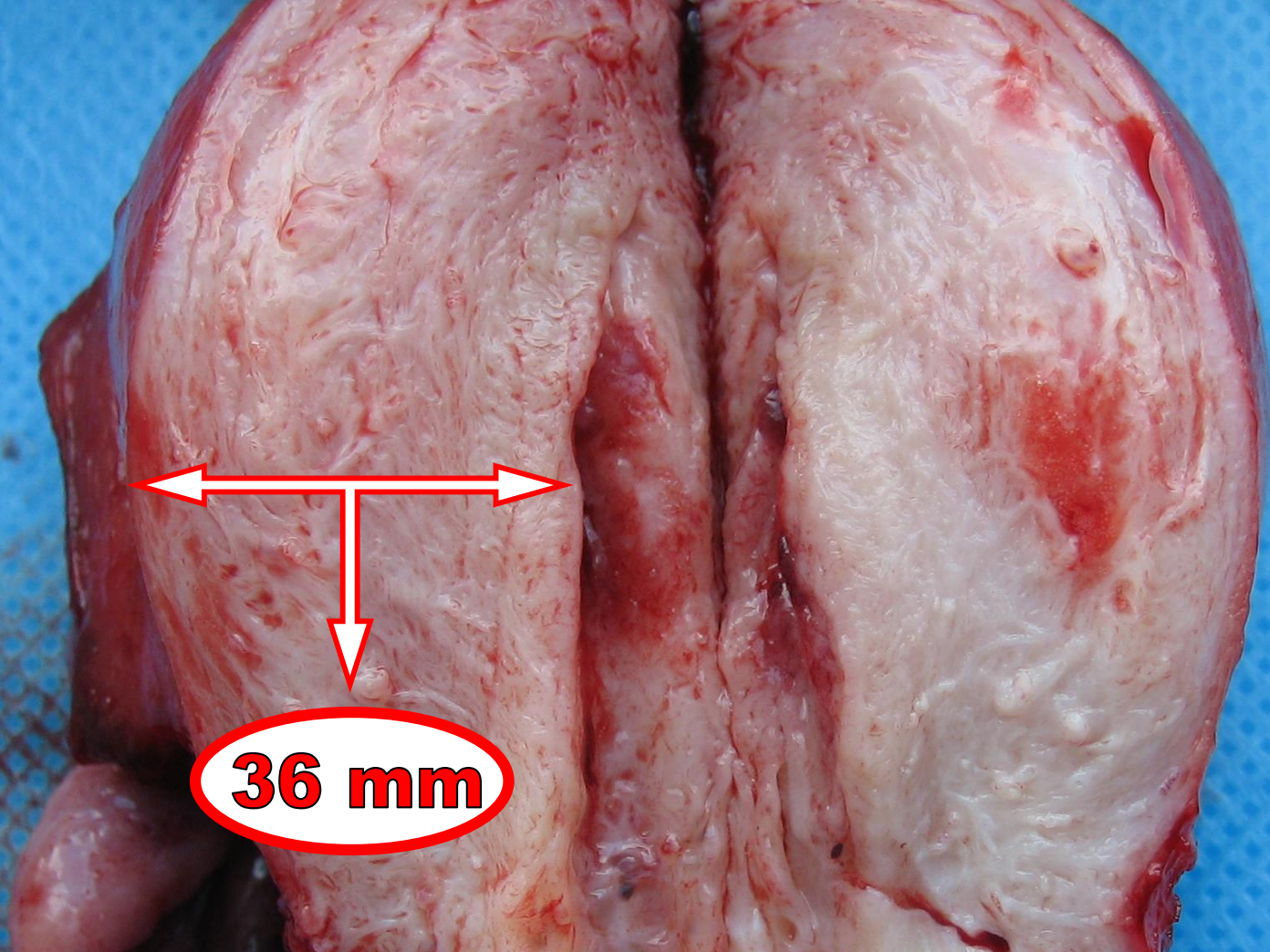


Types of adenomyosis (nodular, focal, diffuse)



INTERNAL UTERINE ENDOMETRIOSIS - adenomyosis (focal and diffuse or nodular)

- Abortion complications and childbirth, frequent intrauterine manipulations.
- Increase in uterine size , uneven in focal endometriosis, uterine wall thickening due to hyperplasia of muscle tissue and cellular structure on the cut.
- Pre-and postmenstrual spotting, menorrhagia.
- Pain, especially for 3-4 days before menstruation, progressive algomenorrea.
- Infertility combination with uterine cancer , endometrial hyperplasia , chronic inflammatory processes in the uterine appendages, external genital endometriosis.
- Differential diagnosis of endometrial cancer , uterine cancer with submucosal location node.



36 mm

The thickness and size of uterine adenomyosis caused by:

- HYPERTROPHY LEYOMYOSYTS
- HYPERPLASIA OF MYOMETRIUM

Adenomyosis - hysterosalpingography



- Increasing the area of the uterine cavity, the deformation and Jagged edge contour of the uterus.
- Informative method - 85%

Adenomyosis - Diagnosis

- HYSTEROSCOPY - 6-7 day cycle: changing topography of the uterine cavity, the presence of jagged cliff drawing, scarring, crypts, the identification of "points" or "gaps" that resemble cells from which blood flows.
- Diagnostic value - 30-92%.



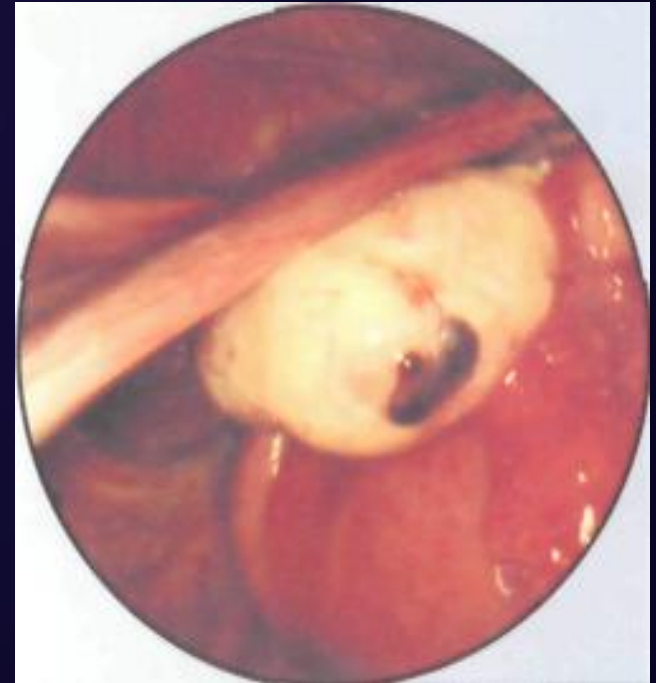
Endometriosis and endometrioid ovarian cysts

- 1st place of external endometriosis, endometriosis frequent combination with other organs and tissues, often one-sided defeat
- Dimensions ranging from 0.6 to 10 cm, thick capsule (from 0.2 to 1.5 cm) with numerous dense adhesions on the outer surface and form a chocolate hemorrhagic content



Endometriosis and endometrioid ovarian cysts

- The outer surface of endometrial cysts rough, whitish, covered with spikes and hemorrhagic overlays (and on the inner surface of cysts)
- Small endometrial cysts (single and multiple) and endometrioid heterotopias without cysts detected on the section of the ovaries in the cortical layer, with the tunica and the surface epithelium and have no connection



Endometrioid ovarian cysts



Endometrioid ovarian cyst



Endometriosis and endometrioid ovarian cysts - clinical picture

- Clinic: pain of varying intensity (constant aching pain, aggravated periodically, radiating to the rectum, lower back), especially before or during menstruation
- Sharp pain - when micropunching cyst wall and hit the contents into the abdominal cavity (differentiated from acute appendicitis, ectopic pregnancy, torsion legs of ovarian tumors, acute pelvioperitonitis)
- progressive algomenorrhea
- often - pre-and postmenstrual bleeding from the genital tract
- Constipation and dysuric phenomena (development of adhesions in the pelvis)
- Differentiate with ovarian tumors.

Endometriosis and endometrioid ovarian cysts - diagnosis

- history
- gynecological examination
- U.S.I
- the study of tumor markers (CA-125)
- MRI
- laparoscopy
- histological examination of the removed tissue during surgery

Endometriosis of sacro-uterine ligaments

- Combined with endometrioid cysts, endometriosis and endometriosis of retrocervical utero-peritoneal rectal cavity.
- Pain in the abdomen and lower back, worse before and during menstruation, sometimes expander nature, pain during intercourse.
- At laparoscopy the ventral sacro-uterine ligaments – formations in the form of small "bluish eyes" or - in the form of large nodules with infiltration of ligaments.
- Body of the uterus - in retroflexion or retroversion, behind the cervix - knotty seal.

Endometriosis of the vagina and perineum

- Often - secondary damage during germination of retrocervical hearth, at least - as a result of endometrial implantation of particles into the damaged area during childbirth.
- Complaints: pain in the vagina, from mild to very severe and painful. Pains are cyclical in nature, aggravated by sexual contact, before and during menstruation.
- Severe pain - with involvement of the perineum and the external sphincter of the rectum.
- Defecation accompanied by severe pain during periods of exacerbation.

Endometriosis of the perineum

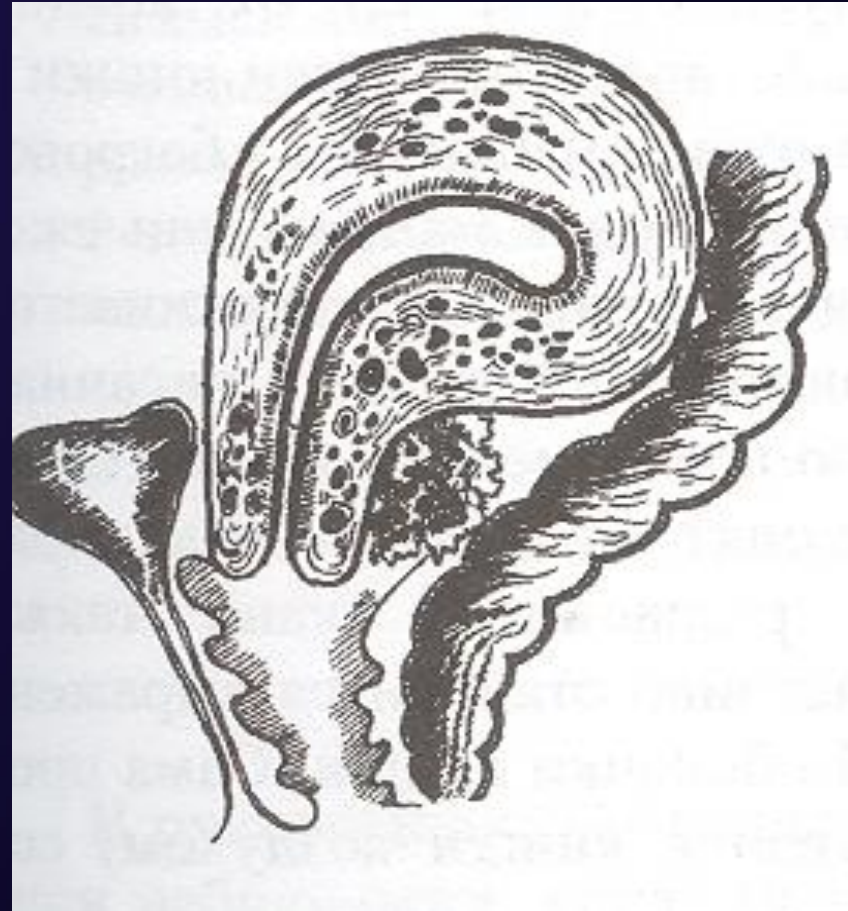


Endometriosis of the vagina and perineum diagnostics

- Complaints related to the menstrual cycle
- These pelvic exam within the wall of the vagina or rectouterine recess palpable tight, painful knots, scarring or thickening
- In the vagina may be brown or dark blue foci that before and during menstruation increases and may bleed
- Additional methods of research - sigmoidoscopy, ultrasound, laparoscopy

Retrocervical endometriosis-

- Localization of the pathological process in the projection of the rear surface of the cervix and the isthmus at the sacro-uterine ligaments.
- Infiltrative growth towards the rectum, the posterior vaginal fornix and vaginal-rectal deepening



Retrocervical endometriosis-clinic

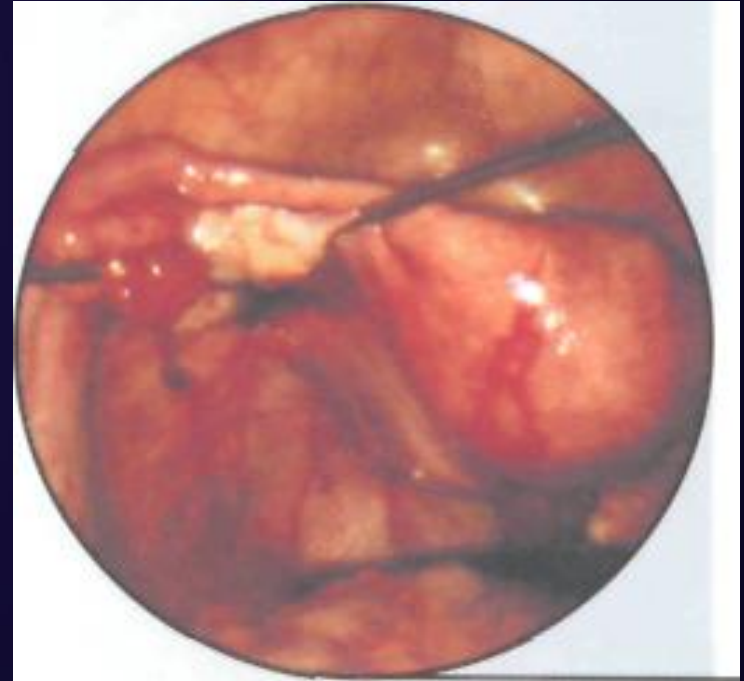
- Aching pain deep in the pelvis, abdomen, lumbosacral region.
- Before and during menstruation pain intensifies, give to the rectum and the vagina, pelvic sidewall, leg.
- Constipation, sometimes - mucus and blood from the rectum during menstruation.
- Upon germination retrocervical endometriosis in the posterior vaginal fornix - cyanotic appearance "eyes", bleeding during sexual intercourse

Retrocervical endometriosis diagnosis

- History
- Gynecological examination - palpation of dense education in the rectovaginal tissue behind the cervix
- U.S. - revealing inhomogeneous formation under the cervix, the smoothness of the isthmus and fuzzy contour of the rectum.
- Sigmoidoscopy, colonoscopy, excretory urography, magnetic resonance imaging

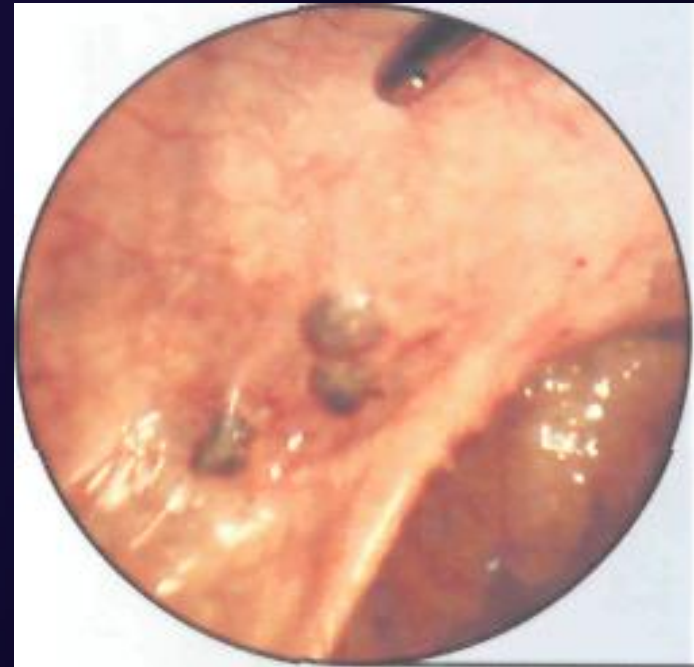
SMALL ENDOMETRIOSIS

- Endometrioid heterotopias to 1 cm
- Have no clinical manifestations
- Ovulatory menstrual cycle and tubal patency.
- Endometrioid heterotopias detected during laparoscopy - the superficial layers of tissue without significant adhesions.



SMALL ENDOMETRIOSIS

- Algomenorrhea with menarche, primary infertility.
- Reduced preovulatory estradiol levels and the level of the ovulatory LH
- Alternation of normal cycles with Cycles of luteal unexploded follicle cysts with formation or with premature development of follicle.



Diagnosis of endometriosis

- Laparoscopy – there are scar-shriveled black foci "powder burns" on the serous peritoneal surface. Marbling of uterine serous cover - a sign of adenomyosis. Endometrial cysts - retraction, pigmentation, adhesions with the peritoneum, often contain dark brown liquid ("liquid candy")

Diagnosis of endometriosis

- LAPAROSCOPY - the most accurate diagnosis and treatment methods. Diagnosis - after histoanalysis.

DISADVANTAGES - DIFFICULTY IN FINDING DEPTH heterotopias, infiltrative or when EXTENSIVE adhesive process.

Treatment of Endometriosis

- **OBJECTIVE:** reduction of endometriosis. Relief of clinical symptoms, get rid of complications and sequelae of endometriosis, adhesive disease, pain, post-hemorrhagic anemia and neuropsychiatric disorders.
- **METHODS:** surgery, medication, combine

Treatment of Endometriosis

CONSIDER:

- AGE
- Location and degree of extent endometriosis
- RELEVANCE TO REPRODUCTIVE FUNCTION
- Premorbid background
- Clinical manifestations,
- Duration of disease
- Genital and extra-genital pathology.
- Chronic disease
- NEED systematic treatment.
- GENERAL PRINCIPLE OF TREATMENT: NEED in BOOST IMPACT when increase the severity of disease and the age of patients.

Modern approach to treatment patients with endometriosis

- The combination of surgical techniques aimed at removal of endometriotic lesions and preventive treatment.
- The principle of reconstructive plastic surgery.
- 3 main access surgery: laparotomy, laparoscopy, vaginal access or a combination of vaginal with laparotomy or laparoscopy.

Surgical treatment

- Maximum excision (removal) of endometriosis within the unaltered tissue

Surgical treatment - evidence

- Endometrial cysts
- Internal endometriosis (adenomyosis), accompanied by meno-metrorrhagia and leading to anemia.
- Ineffectiveness of hormone treatment, intolerance hormones.
- Endometriosis of postoperative scars, umbilicus, perineum.
- Ongoing intestinal lumen or ureters stenosis, despite the elimination or reduction of pain under the influence of conservative treatment.

Surgical treatment - evidence

- The combination of endometriosis with genital malformations (endometriosis rudimentary horns).
- The combination of uterine fibroids to be surgical treatment, with some localizations of endometriosis (uterine isthmus, pozadishechnogo).
- The combination of endometriosis and infertility, to the exclusion of other factors of infertility. Performed reconstructive plastic surgery.

Surgical treatment

- Extragenital pathology, excluding the possibility of long-term hormone therapy (cholelithiasis, urolithiasis, hyperthyroidism, hypertension with crisis course).
- Thrombosis, thromboembolism, chronic thrombophlebitis, hypercoagulable syndrome.
- Liver disease (cirrhosis, acute and chronic hepatitis, Rotor syndrome, Dubin-Johnson, cholestatic jaundice).

Hormonemodulate therapy

- **OBJECTIVE:** To stop the progression of the disease
- Neither drug eliminates the morphological substrate of endometriosis, but only has an indirect impact on it, which explains the symptomatic and clinical effect.
- The basic principle - the suppression of estradiol secretion by the ovaries
- Endometriosis undergo decidualization, and then - atrophy

Hormone therapy for endometriosis

- The choice of drugs and methods of their application depends on the age, location and extent of endometriosis, tolerability of drugs, the presence of concomitant somatic and gynecological pathology
- Estrogen-progestin preparations, progestogens, antigestagens, and gonadotropin-releasing hormone.

Hormone therapy for endometriosis

- Combined oral contraceptives: Use a 7-day break - 3-6 months.
- Gonadotropin-releasing hormone: gozerelin (Zoladex) - subcutaneously with 3.6 mg 1 time in 28 days; Dekapeptyl depot - i / m to 3.75 mg 1 time in 28 days, triptorelin (diferilin) - i / m 3.75 mg 1 time per 28 days

Hormone therapy for endometriosis

- Antigonadotropins: danazol - orally 1 capsule (100 mg or 200 mg) 3-4 times a day (daily dose of 400-800 mg) - 3-6 months
- Progestogens - medroxyprogesterone acetate (MPA) - 30 mg orally per day or i / m 150 mg every 2 weeks 6-9 months; dufaston (dydrogesterone) - 10-20-30 mg orally per day - 6-9 months; dienogest

Treatment of adenomyosis

- With the length of the uterine cavity is not more than 8 cm
- Meno-and metrorrhagia, leading to secondary anemia
- The combination of adenomyosis with uterine myoma small size and / or the HPE

◆LNS-IUD "Mirena"



Treatment of adenomyosis

- Against the background of the LNG IUD Mirena ® after 3 months menstrual blood loss is reduced by 86%.
- In the reduction of menstrual blood loss (VMB) efficacy of the LNG IUD Mirena ® is comparable? With effectiveness in ablation / resection of the endometrium (AE).
- LNG-IUS has a suppressive effect on the endometrium, reduces the amount of M-echo.
- Mirena ® is as effective as hysterectomy. NB! ? The total cost when using LNG IUD is 3 times less than in the hysterectomy (Hurskainen et al. 2001).

Auxiliary (syndromic) therapy is aimed at reducing pain, blood loss

- Non-steroidal anti-inflammatory drugs (prostaglandin inhibitors).
- Immunotherapy (levomizol, timogen, tsikloferon).
- Desensitizing therapy (sodium thiosulfate).
- Antioxidant therapy (HBO, tocopherol acetate, pycnogenol).
- Systemic enzyme (vobenzim, flogenzim).
- Correction of psychosomatic and neurotic disorders (radon, yodbromnye bath).
- Treatment of opportunistic diseases.

Rehabilitation

- Restorative therapy (physiotherapy, multivitamins).
- After surgical treatment - 3-6 months hormonal and immunomodulatory drugs .
- Estrogen- progestogen reception after exposure factors contributing to exacerbation of the disease - abortion , the manipulation of the cervix , exacerbation of inflammatory diseases.
- Physical factors without significant thermal effect - iontophoresis , ultrasound, DDT - absorbable and anti-inflammatory therapy to prevent disease.
- To eliminate the neuropsychiatric manifestations , adhesions and scar- tissue and infiltrative changes to normalize the function of the digestive tract - resort factors - radon and bromine baths.
- Reception tranquilizers, analgesics , psychotherapy - eliminating damage to the peripheral nervous system and preventing neurosis states.

Forecast

- Endometriosis - relapsing disease.
- The relapse rate - 5-20% per year
- The cumulative risk for 5 years - 40%.

Prevention of endometriosis

- Diagnosis of the disease in the early stages of
- In the surgical treatment of endometriosis - remember implantation distributing endometrioid heterotopias and avoid contact and endometrial tissues affected by endometriosis, with the peritoneum and operating wound.

Hypermenstrual syndrome

menstrual disorders, characterized by
abundant / menorrhagia / long / polimenoreya /
frequent and / proymenoreya / menses.

Menopause

- set of pathological symptoms, developing as a result of estrogen deficiency due to the extinction of hormone ovarian function.
- Menopausal syndrome occurs usually in perimenopause, but can last for 10 to 20 years after menopause in some women. Occurs in 80% of women.

Menopause



- Recently, uterine bleeding, adjustable ovaries occurs in about '52, 4-5 years before called premenopausal; period of time in a year - the menopause.

III. Algomenorrhea - painful menstruation.

- painful menstruation, accompanied by general vegetative neurotic disorders.



Premenstrual Syndrome



set of pathological symptoms cyclically occurring before menstruation and disappear within a few days after it.

classification Smetnik VP (1987)

distinguish four forms of PMS

- Neurodevelopmental;
- Edematous;
- Cephalgic;
- Crisis.

Postcastration syndrome

set of pathological symptoms, developing as a result of estrogen deficiency after ovariectomy. At its core, the same menopausal syndrome, but arising after 1-2 years (depending on the woman's age) after surgical treatment.

Thank you for attention!

