

LIST OF ABBREVIATIONS

- 17-KS – 17-ketosteroids
17-OP – 17-oxyprogesterone
17-OKS – 17-oxyketosteroids
17-OHP – 17-hydroxyprogesterone
A4 – androstenedione
ACTH – adrenocorticotropic hormone
ADS – adrenogenital syndrome
AH – arterial hypertension
AUB – abnormal uterine bleeding
BMI – body mass index
BV – bacterial vaginosis
CA-125 – carbohydrate antigen 125
Ca – calcium
CDAC – congenital dysfunction of the adrenal cortex
CFU – colony-forming units
CGT – chorionic gonadotropin
CMI – cytomegalovirus infection
COC – combined oral contraceptives
COG – cyclooxygenase
CS – climacteric syndrome
DHEA – dihydroepiandrosterone
DHEA-S – dihydroepiandrosterone sulfate
DHT – dihydrotestosterone
DM – diabetes mellitus
DOT – directly observed therapy
E1 – estriol
E2 – estradiol
EEG – electroencephalography
FFA – free fatty acids
FSH – follicle-stimulating hormone
GC – glucocorticoids
GH – genital herpes
GI – hyperinsulinemia
GnRH – gonadotropin-releasing hormone
HA – hyperandrogenism
HE-4 – human epididymis protein 4

HDLP – high density lipoproteins
HLA-complex – human leukocyte antigens (human tissue compatibility gene system)
HPV – human papillomavirus
HSV – herpes simplex virus
IFN – interferon
IgG – immunoglobulins class G
IgM – immunoglobulins class M
IGF – insulin-like growth factor
ILP – insufficiency of the luteal phase
IR – insulin resistance
IUC – intrauterine contraceptive
K – potassium
KPI – karyopyknotic index
LH – luteinizing hormone
MC – mineralocorticoids
MRI – magnetic resonance imaging
MS – metabolic syndrome
NAID – non-steroidal anti-inflammatory drugs
PCOS – polycystic ovary syndrome
PCR – polymerase chain reaction
PVI – papillomavirus infection
REG – rheoencephalography
ROS – resistant ovary syndrome
SDC – separate diagnostic curettage of the uterus
SSBG – sex steroid binding globulin
SSG – sex steroid binding globulin
STH – somatotropic hormone
STI – sexually transmitted infections
T – testosterone
T3 – triiodothyronine
T4 – thyroxine
TG – triglycerides
TNF- α – tumor necrosis factor α
TSH – thyroid-stimulating hormone
UAE – uterine artery embolization
UF – uterine fibroids
UGC – urogenital chlamydia
US – ultrasound
VFM – violation of fat metabolism
VVC – vulvovaginal candidiasis

FOREWORD

Gynecology (from Latin “gyne” – woman, “logos” – science) is the science of the physiology and pathology of the female reproductive system, the state and activity of the female genital organs in normal and pathological conditions, biological functions inherent in women, excluding childbirth. Historically, gynecology is one of the oldest medical sciences. The first known historical literary sources are the Egyptian papyri (“gynecological papyrus”) from Kahun, dated to the 3rd century BC. The well-known works of the founder of medicine Hippocrates (460–377 BC) are: “On the nature of women”, “On female diseases”, “On infertility”. Many scientists contributed to the development of gynecological science: Filumenos (1st century BC), Aulus Cornelius Celsus (1st century AD), Soranus of Ephesus (1st century AD), Avicenna (980–1037), Paracelsus (1493–1541), Fallopius (1532–1562), Ambroise Paré (1517–1590). The first major Russian scientist obstetrician and gynecologist was Professor N.M. Maksimovich-Ambodik (1744–1812), “Medicine doctor of Midwifery”. Modern gynecology relies on advances in the study of anatomy, histology, physiology, biochemistry of the body and the reproductive system in particular. To the collection of anamnesis and examination of patients, modern biochemical, microbiological and histological studies were added, as well as non-invasive imaging methods: X-ray, ultrasound, computed and magnetic resonance imaging.

The study of gynecology at a medical university is aimed at the formation of relevant professional competencies – the ability and readiness to form a systematic approach to the analysis of medical information, based on the comprehensive principles of evidence-based medicine, finding solutions using theoretical knowledge and practical skills in order to improve professional activity.

The teaching aid sets out classical concepts, supplemented by modern approaches and recommendations in accordance with the Clinical Protocol “Medical observation and medical care for women in obstetrics and gynecology”: decree of the Ministry of Health of the Republic of Belarus dated 19.02.2018 №17.

The presented textbook is written in accordance with the current program and curriculum for training students of the Faculty of foreign students (specialty “General Medicine”).

**METHODS OF RESEARCH
IN GYNECOLOGY****1.1. CLINICAL DIAGNOSTIC METHODS**

At the first stage of the patient's examination, a correctly collected anamnesis reveals the characteristic symptoms of the disease. Anamnesis data are the basis for prescribing additional special research methods and making a preliminary diagnosis. Only on the basis of summarizing the results of clinical, laboratory and instrumental research methods, a clinician can correctly make a diagnosis and develop an adequate treatment tactics.

The scheme for collecting anamnesis of gynecological patients:

- main complaints;
- additional complaints;
- past illnesses;
- menstrual and reproductive functions, contraception;
- gynecological diseases and operations on the genitals;
- family history;
- lifestyle, nutrition, bad habits, working and living conditions;
- history of present illness.

On examination, the body type is determined:

- female;
- male (tall, broad shoulders, long torso, narrow pelvis);
- eunuchoid (tall, narrow shoulders, narrow pelvis, long legs, short torso).

Significant body type deviations give an idea of the characteristics of puberty. So, with hyperandrogenism in puberty, a male or viril type of physique is formed, and with insufficient hormonal function of the ovaries, the physique acquires eunuchoid features. Phenotypic features: dysplasias and dysmorphias (micro- and retrognathia, arched palate, wide flat nose, low auricles, short stature, short neck with skin folds, barrel chest, etc.), characteristic of various clinical forms of developmental disorders sex glands.

Hair growth and condition of the skin: excessive hair growth, skin condition (increased greasiness, acne, folliculitis, increased porosity), stretch stripes, their color, number and location.

The condition of the mammary glands: size, hypoplasia, hypertrophy, symmetry, changes in the skin. In a woman, in a standing and lying position, sequential palpation of the outer and inner quadrants of the gland is performed. It is necessary to note the absence or presence of the discharge from the nipples, its color, consistency and nature. Brown discharge from the nipples or an admixture of the blood indicates a possible malignant process or papillary growths in the ducts of the mammary gland; liquid transparent or greenish discharge is characteristic of cystic changes in the gland. Nodules in the mammary glands, determined by palpation, serve as an indication for ultrasound of the mammary glands and mammography.

Determination of body length and weight is necessary to calculate **the body mass index (BMI)** – the ratio of body weight to the square of the body length: $BMI = \text{body weight (kg)} / \text{body length}^2 \text{ (m)}$.

Normally, the BMI of a woman of a reproductive age is 20–26 kg/m². The BMI of more than 40 (corresponds to grade IV obesity) indicates a high probability of metabolic disorders. With overweight, it is necessary to find out when obesity began: since childhood, puberty, after the onset of sexual activity, after abortion or childbirth.

Palpation of the abdomen is performed with the patient supine. During the exploration the size of individual organs is determined, excluding ascites, flatulence, and masses. Palpation begins with determining the position, consistency and shape of the edge of the liver. The size of the liver is determined by percussion. Then, clockwise, palpate the rest of the abdominal organs. After that, abdominal auscultation is performed. Intestinal peristalsis is noted. By palpation, the condition of the abdominal wall is determined (tone, muscle protection, diastasis of the rectus abdominis muscles), painful areas, the presence of tumors in the abdominal cavity, infiltrates. The examination of the abdomen can provide with very valuable information. So, if a woman with a large pelvic mass is found to have a mass in the epigastric or umbilical region, ovarian cancer with metastases in the greater omentum should be excluded.

Gynecological examination is carried out on a gynecological chair. The woman's legs lie on the supports, her buttocks on the edge of the chair. In this position, you can examine the vulva and easily insert the speculum into the vagina.

Examination of the external genital organs: condition and size of the labia minora and majora; the state of the mucous membranes (juiciness, color, state of cervical mucus); the size of the clitoris; the development

of the hairline; condition of the perineum; the presence of pathological processes (inflammation, tumors, ulceration, condylomas, fistulas, scars). Hypoplasia of the labia minora and labia majora, pallor and dryness of the vaginal mucosa indicate hypoestrogenism. The juiciness and cyanoticity of the vulvar mucosa, abundant transparent secretion are signs of hyperestrogenism. Hypoplasia of the labia minora, an increase in the head of the clitoris, an increase in the distance between the base of the clitoris and the external opening of the urethra (more than 2 cm) in combination with hypertrichosis indicate a congenital

adrenogenital syndrome. Also pay attention to the gaping of the genital fissure; inviting the woman to push, determine if there is prolapse or prolapse of the walls of the vagina and uterus.



Figure 1.1. Cusco type folding mirror

Examination of the vagina and cervix in mirrors is performed for women who are sexually active. Timely recognition of cervical cancer, erosions, polyps and other diseases related to precancerous conditions is possible only with the help of mirrors (Figure 1.1).

Particular attention is paid to the fornix of the vagina, as there are often masses and genital warts.

When examined in mirrors, smears are taken for flora, cytological examination, biopsy of volumetric formations of the cervix and vagina is possible (Figure 1.2).

Bimanual examination is performed after removing the mirrors. The index and middle fingers of one gloved hand (usually the right) are inserted into the vagina. The other hand (usually the left) is placed on the anterior abdominal wall. With the right hand, palpate the walls of the vagina, its fornices and the cervix, note any volumetric formations and anatomical changes. Then, carefully introducing the fingers into the posterior fornix of the vagina, the uterus is shifted forward and upward and palpated with the second hand through the anterior abdominal wall. Note the position, size, shape, consistency and mobility of the uterus, pay attention to the volumetric formations (Figure 1.3).

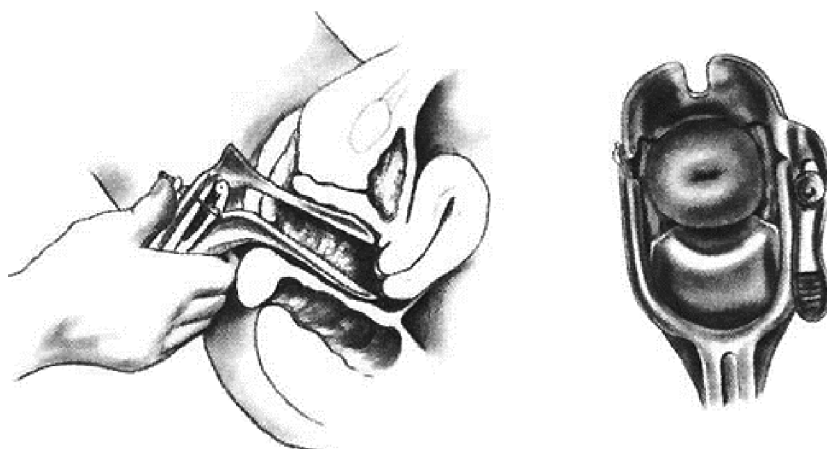


Figure 1.2. Examination of the cervix in the mirrors



Figure 1.3. Bimanual exploration

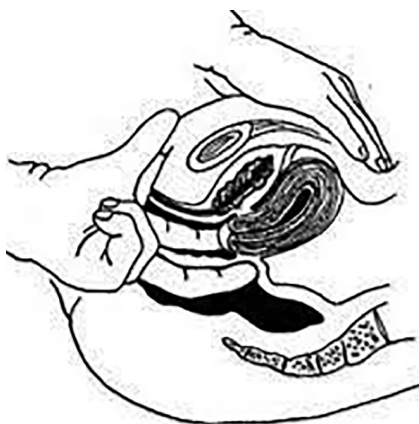


Figure 1.4. Rectovaginal examination

Rectovaginal examination is mandatory in postmenopausal women, as well as in all cases when it is necessary to clarify the condition of the uterine appendages. Some authors suggest that it should be carried out for all women over 40 years to exclude concomitant diseases of the rectum. During rectal examination, the tone of the sphincters of the anus and the condition of the muscles of the pelvic floor are determined, excluding volumetric formations: internal hemorrhoids, tumor (Figure 1.4 – rectovaginal examination).

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