

MISCARRIAGE

***Guidelines for the discipline "Medical Genetics"
for the training of interns, 5th year students,
and cadet doctors of postgraduate education cycles***

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
Харківський національний медичний університет

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НЕВИНОШУВАННЯ ВАГІТНОСТІ

***Методичні вказівки
з дисципліни "Медична генетика"
для підготовки лікарів-інтернів,
студентів 5-го курсу та лікарів-курсантів
циклів післядипломної освіти***

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Невиношування вагітності : метод. вказ. з дисципліни "Медична генетика" для підготовки лікарів-інтернів, студентів 5-го курсу та лікарів-курсантів циклів післядипломної освіти / упоряд. О. Я. Гречаніна, Ю. Б. Гречаніна, С. В. Білецька та ін. – Харків : ХНМУ, 2019. – 16 с.

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I. Passport

1.1 Miscarriage

1.2 Code ICD-10:

O02.1 Miscarriage.

O03 Spontaneous abortion.

O03.4 Incomplete abortion without complications.

O03.5 Complete or unspecified abortion, which is complicated by infection of the genital tract and pelvic organs.

O03.9 Complete or unspecified abortion without complications.

O20 Bleeding in early pregnancy.

O20.0 Threatening abortion.

O20.8 Other bleeding in early pregnancy.

O20.9 Unspecified bleeding in early pregnancy

N96 Habitual miscarriage.

1.3 For whom the protocol is intended (potential users)

Doctors-interns, 5th year students, doctor cadets of postgraduate education cycles, doctors and nurses of the KhISMGC-CR(O)D

1.4 Purpose of the protocol:

Identification and rehabilitation of families with miscarriage.

1.5 Date of compilation: January 2017

1.6 Date of revision:

1.7 Order of the KhISMGC-CR(O)D on the development of local protocols

1.8. The composition of the working group on the development of the local protocol "Miscarriage"

FULL NAME	position
Grechanina Yelena Yakovlevna	General Director of the KhISMGC-CR(O)D, Corr. NAMSU, MD, professor
Grechanina Yulia Borisovna	Head of the Department of Medical Genetics, KNMU, MD, professor
Mayboroda Tatyana Anatolyevna	Head Department of Ultrasound Diagnostics
Pilipenko Tatyana Borisovna	ultrasound doctor

1.9 Medical and technological documentation at the industry level, on the basis of which a local protocol has been developed:

– Order of the Ministry of Health of Ukraine No. 751 dated September 28, 2012 "On the creation and implementation of medical and technological documents for standardizing medical care in the system of the Ministry of Health of Ukraine";

– Order of the Ministry of Health of Ukraine No. 641/84 of 12/31/2003 "On the improvement of medical and genetic care in Ukraine";

List of abbreviations:

KhISMGC-CR(O)D	Kharkov Interregional Specialized Medical Genetic Center – Center for Rare (Orphan) Diseases
LHCP	Local Health Care Protocol
RMGC	Regional Medical Genetics Center
IMGO	Interdistrict Medical Genetic Office/consultation
AH	arterial hypertension
AFS	antiphospholipid syndrome
APTT	Activated partial thromboplastin time
GP	General practitioner
CPI	Cervical insufficiency
CPS	Coccyx-parietal size
MVA	Manual vacuum aspiration
ICD	International Classification of Diseases
INA	International normalized attitude
GBA	General blood analysis
PO	Pelvic organs
LE	level of evidence
Ultrasound	ultrasound procedure
HCG	Human Chorionic Gonadotropin
TORCH	(Toxoplasmosis) toxoplasmosis, (rubella) rubella, (cytomegalovirus) cytomegalovirus infection, (herpes) herpes
MRI	Magnetic resonance imaging
CT	Computed Tomography scan

1.10 Brief epidemiological information by service area.

Miscarriage – spontaneous abortion in the period from conception to 37 weeks, counting from the first day of the last menstruation. Abortion in the period from conception to 22 weeks is called spontaneous abortion (miscarriage). Termination of pregnancy from 28 weeks to 37 weeks is called preterm birth. The frequency of spontaneous miscarriages is from 15–20 % of all desired pregnancies. It is believed that a large number of very early and subclinical leaking miscarriages are not included in the statistics. Many researchers believe that spontaneous miscarriage of the first trimester is a tool of natural selection; thus, in the study of abortion, 60–80 % of embryos with chromosomal abnormalities are found.

The frequency of habitual miscarriage in the population is 2 % of the number of pregnancies.

In the structure of miscarriage, the frequency of habitual miscarriage is from 5 to 20 %.

It was established that the risk of losing pregnancy after the first miscarriage is 13–17 %, after two previous spontaneous interruptions, the risk of losing the desired pregnancy is 36–38 %. The influence of the age of the mother on the

risk of early spontaneous miscarriages has been established. So, in the age group of 20–29 years, the risk of spontaneous miscarriage is 10 %, while in 45 years and older – 50 %.

1.11 Material and technical equipment:

Medical scales, height meter, centimeter in accordance with the equipment sheet, ultrasonic device.

Medicines – not used.

Disinfectants – Blanidas 300, Clinidez, Aerodezin, Lysoformin spec, Blanidas software, AHD.

II. The common part

2.1 Medical services provided

The center is a unique functional association of the Kharkov Interregional Specialized Medical Genetics Center – the Center for Rare (Orphan) Diseases, the Ukrainian Institute of Clinical Genetics, the Department of Medical Genetics of Kharkov National Medical University, and the association of specialists and families with a hereditary pathology:

- Ukrainian Association of Ultrasound Diagnostic Physicians in Perinatology, Genetics and Gynecology;
- Association of geneticists and families with children with phenylketonuria;
- Kharkov charity foundation "Cystic fibrosis" (an association of parents of disabled children with cystic fibrosis);
- The Future Generations Fund;
- Association of families with children with chromosome characteristics.

The main tasks of the KhISMGC-CR(O)D:

- organization of the provision of care specialized in the areas of genetics;
- carrying out three-level prophylaxis of congenital and hereditary pathology;
- the introduction of modern means of prevention, diagnosis and treatment of congenital and hereditary pathologies;
- analysis of the causes of perinatal and infant mortality from diseases in accordance with the direction of specialization and the development of preventive measures (genetic monitoring);
- statistical reporting on generalized regional indicators for established patterns, a systematic analysis of activities;
- ensuring continuity in work with health facilities on the prevention, diagnosis and treatment of congenital and hereditary pathologies;
- development of issues of social rehabilitation of patients;
- Providing feedback with LHCP and RMGC on issues of timely detection, quality of follow-up and treatment of patients with congenital and hereditary pathology;
- definition of a strategy and development of a set of measures for the functioning and further development of a certain area of medical genetics based on modern achievements of medical science and practice;

- providing advisory assistance, scientific, practical and organizational and methodological support to medical and genetic services institutions of various levels;
- development of basic regulatory documentation in a certain area: modern quality standards for conducting clinical and laboratory genetic examinations, criteria for assessing pathology;
- quality control of clinical and laboratory genetic examinations in areas of activity;
- Submission of proposals to health authorities to improve the relevant activities of the medical genetic services;
- advanced training of employees of healthcare institutions at various levels in the areas of specialization of the center.

When conducting genetic counseling, the geneticist abides the rules of bioethics and deontology. According to the current legislation, information on the hereditary nature of the disease in the proband or in the family is confidential and is provided to the person who was consulted. Medical specialists ensure the right of the patient about the need to inform other family members about the detected pathology.

In the case when a child or a person with reduced mental development acts as a proband, the results of genetic studies in the form of a conclusion are issued to parents or persons replacing them, in accordance with applicable law.

Operating procedure:

1. Patients with suspected metabolic disturbances are referred to the KhISMGC-CR(O)D for consultation.
2. The examination is carried out after collecting complaints, an anamnesis of the disease and life, building a family tree and conducting a clinical genealogical analysis, describing the phenotype by a geneticist and conducting a syndromological analysis, drawing up a genetic map.
3. The duration of the initial family consultation is 1.5 hours.
4. Regulatory documentation is drawn up in accordance with the requirements of the orders of the Ministry of Health of Ukraine.

Geneticist KhISMGC-CR(O)D:

Grechanina Ye. Ya. – General Director of the KhISMGC-CR(O)D, Corr. NAMSU, MD, professor, geneticist of the highest category

Grechanina Yu. B. – Head Department of Medical Genetics, KNMU, MD, associate professor, geneticist of the highest category

Molodan L. V. – Director of KhISMGC-CR(O)D, candidate of medical sciences, associate professor, geneticist of the highest category

Zdybskaya E. P. – Head of the metabolic center, candidate of medical sciences, associate professor, geneticist of the highest category

Bugaeva E. V. – Head of the connective tissue center, candidate of medical sciences, associate professor, geneticist of the highest category

Gulenko I. I. – Head of the Department of Genetic Monitoring, geneticist of the highest category

Biletskaya S. V. – deputy Director of the KhISMGC-CR(O)D for the medical part, geneticist of the second category

Krasov A. V. – Deputy Director for organizational and methodological work, geneticist

Adamyanyan L. M. – geneticist

Vernigora Oh. Yu. – geneticist

Grinyuk A. V. – geneticist of the first category

Grinchenko Yu. N. – geneticist

Evstigneeva O. V. – geneticist

Eliseev V. M. – geneticist

Elkova A. A. – geneticist

Zabelina A. A. – geneticist

Hmil O. B. – geneticist

Yanovskaya G. A. – geneticist of the first category

- has a valid local protocol
- obtains patient information consent for conducting genetic counseling and examination
 - conducts qualified genetic counseling
 - provides effective consultation on the results of the examination, provides information to the patient about his health status with recommendations for non-drug and drug treatment, behavior tactics in case of a sudden worsening of the course of the disease orally and in the form of an opinion
 - maintains a list of patients with porphyria for dispensary observation; the list includes the following information: name, date of birth (in the format dd.mm.yy), address of registration and residence, contact phone number, diagnosis according to the latest wording, notes (additional information).

Nurse KhISMGC-CR(O)D:

- invites a family to an office for conducting genetic counseling
- treats the surface of the couch with a disinfectant
- prescribes referral for medical genetic counseling in accordance with the instructions of the geneticist
 - fills in a statistical coupon for each patient
 - calls for examination of patients from the dispensary group as directed by the doctor.

2.2 Diagnostics:

Geneticist:

- collects complaints, medical history;
- conducts a clinical genealogical analysis;
- assesses the phenotype;
- conducts syndromological analysis;
- directs to laboratory research, conducts an assessment (interpretation) of laboratory research;
- directs to instrumental methods of examination, evaluates (interprets) the data;
- conducts differential diagnostics;
- gives a diagnosis.

Nurse:

- writes out a referral for examination in accordance with the doctor's prescriptions;
- At 9.00 hours takes the test results daily
- informs the doctor about changes (if any) in the work of key points of medical care daily.

Place of research:

Type of study	Location	Note
Genetics appointment	Cab. No. 1, 5, 6, 7, 8, 10, 16, 19, 39, 46	
blood sampling	Cab. No. 13	
Reception of morning and daily urine	Cab. No. 21	
Ultrasound examination of internal organs, thyroid gland, pelvic organs	Cab. No. 14	
Urinolysis	Cab. No. 21	
Daily urine test (calcium, phosphorus, hydroxyproline, GAG, urea, uric acid)	Cab. No. 21	
Blood biochemical profile (exercise therapy, total cholesterol, triglycerides, glucose, AST, ALT, urea, uric acid, creatinine, iron, CPA, LDH, GGT, total protein, albumin, total bilirubin, calcium, phosphorus)	Cab. No. 47	
High Performance Rare Chromatography of Blood Amino Acids	Cab. No. 47	
Blood lactate	Cab. No. 47	
Investigation of polymorphic variants of folate-methionine cycle enzyme genes (MTHFR C677T, MTRR A66G, MTR A2756G), VDR BsmI gene	Cab. No. 20	
Ultrasound procedure	Cab. No. 43,44,45	
Thyroid hormones (T4, TSH)	Cab. No. 31	

Type of study	Location	Note
Homocysteine, blood vitamins (folic acid, B1, B2, B6, B12, 25-OH-D), trace elements (magnesium, zinc, selenium, copper), hormonal profile	Commercial laboratories	
CT, MRI	Diagnostics centers	

2.3 Treatment

The goal of treating a patient with miscarriage is to prevent a miscarriage or the birth of a deeply premature baby.

Geneticist:

- Explains to the patient the reasons for miscarriage;
- gives recommendations;

Diagnostic criteria:

Complaints and anamnesis:

- delayed menstruation
- the appearance of pain in the lower abdomen of varying intensity;
- spotting from the genital tract of varying intensity.

With threatening abortion:

- pain of varying intensity in the lower abdomen,
- moderate spotting from the genital tract.

When abortion is in progress:

- prolonged pain in the lower abdomen with increased dynamics to intense, which is cramping in nature;
- copious spotting from the genital tract.

Incomplete/complete abortion:

- drawing pain in the lower abdomen, with an increase in the dynamics to intense, may have a cramping nature, periodically decrease;
- copious spotting from the genital tract.

With an undeveloped pregnancy:

- disappearance of subjective signs of pregnancy, sometimes spotting from the genital tract.

With the usual: interruption of three or more pregnancies in the period up to 22 weeks.

Message:

- there may be spontaneous miscarriages;
- menstrual dysfunction;
- absence of pregnancy for more than 1 year (infertility)

Incomplete/complete abortion:

- Expulsion of the ovum.

With the usual:

- three or more episodes of abortion.

With isthmic-cervical insufficiency:

- sudden rupture of the membranes, followed by painless contractions;
- cases of unauthorized painless opening of the cervix up to 4-6 cm in previous pregnancies;
- the presence of surgical interventions on the cervix, ruptures of the cervix of the second / third degree in previous births;
- instrumental dilation of the cervix during artificial termination of pregnancy.

Physical examination:

- Blood pressure, heart rate (with threatening abortion, hemodynamics are stable, during abortion on the move/full/incomplete abortion, a decrease in blood pressure and increased heart rate may be observed).

Overview on the mirrors:

- With threatened abortion and pregnancy, there may be scanty or moderate spotting.
- during abortion/full/incomplete abortion, the external pharynx is open, bloody discharge in large quantities, parts of the fetal egg in the cervical canal, amniotic fluid leakage (may be absent in early pregnancy).
- with the usual congenital/acquired anatomical defects of the ectocervix, prolapse of the fetal bladder from the external pharynx of the cervix.

Bimanual vaginal examination:

- with threatening abortion: there are no structural changes in the cervix, the uterus is easily excitable, its tone is increased, the size of the uterus corresponds to the gestational age;
- during abortion in progress: the degree of opening of the cervical canal is determined;
- with complete/incomplete abortion: the uterus is of a soft consistency, the size is less than the gestational age, the degree of cervical dilatation is different;
- during pregnancy, the size of the uterus is less than the gestation period, the cervical canal is closed;
- with the usual: it is possible to reduce the cervix less than 25 mm/dilatation of the cervical canal more than 1 cm in the absence of uterine contractions.

2.4 Dispensary observation

Clinical observation is carried out by all patients with miscarriage.

Geneticist:

- carries out regular medical supervision;
- appoints planned visits of the patient to the doctor
- monitoring the patient's implementation of the recommendations received is carried out with an interval of 2 to 4 weeks;
- monitors the implementation of recommendations, motivates and adjusts recommendations and appointments;

Nurse:

- in accordance with the prescriptions of the doctor invites patients to receive; invites three days before the recommended inspection;
- Prescribes a referral for examination in accordance with the doctor's prescriptions.

III. Scheme of drug treatment

Stage	Determination of concentration	AFS examination (Availability lupus erythematosus anticoagulant antiphospholipid and anticardiolipid antibodies)	Hemostasiogram	Karyotyping	Examination for sugar diabetes and pathology of thyroid glands	Progesterone level determination	Examination on TORCH infection
Development	HCG in the blood	–	–	–	–	–	–
Threatening abortion	+ Level	–	–	–	–	–	–
Abortion on the move	Compliant	–	–	–	–	–	–
Full / Incomplete	The term	–	+ definition INR APTT, fibrinos of a gene at death of an embryo more 4 weeks	–	–	–	–
Ordinary miscarriage, threatening miscarriage		The presence of two positive titers of lupus anticoagulant or anticardiolipin antibodies immunoglobulin G and/or M at the level medium or high titer (more than 40 g/l or m/l or higher 99 percentile) on within 12 weeks (With an interval of 4–6 weeks)	+ Definition of APTT, antithrombin 3, D-dimer, aggregation platelet count, INR, prothrombin time – sign hypercoagulation	+ Identifying carriage chromosomal abnormalities, including inherited thrombophilia and (factor V Leiden, factor II – prothrombin and protein S)	+	+ Level progesterone below 25 nmol/L – is a predictor of viability pregnancy. Level up to 25 nmol/l – indicates on viability pregnancy. Level above 60 nmol/l – indicates normal the course of pregnancy	+ In cases when there is suspicion of Availability infection or information about availability infections in were either holding her treatment

Tactics of treatment:

- antispasmodic therapy – no evidence of effective and safe use to prevent abortion (UD-B).
- sedative therapy – no evidence of effective and safe use to prevent abortion (UD-B).

- hemostatic therapy – hemostatic. There is no evidence base for their effectiveness in threatening abortion, and the FDA category of pregnancy safety has not been defined.

- progesterone preparations (with threatening abortion) – with a delay menstruation up to 20 days (pregnancy up to 5 weeks) and stable hemodynamics.

Progestogen therapy provides better results than placebo or lack of therapy to treat the threat of abortion and lack evidence of increased incidence of gestational hypertension or postpartum bleeding as adverse effects for the mother, as well as increased the frequency of congenital malformations in newborns (UD-B).

- removal of the fetal egg during abortion, incomplete abortion, pregnancy does not develop by manual vacuum aspiration using an MBA syringe (see the clinical protocol “Medical abortion”). During pregnancy, the use of medical abortion is not recommended.

NB! The patient must be informed about the results of the examination, the prognosis of this pregnancy and possible complications associated with the use of drugs.

NB! Obtaining written consent for medical and surgical interventions is mandatory.

NB! In the presence of clinical signs of threatening abortion in pregnancy less than 8 weeks and adverse signs of pregnancy progression, treatment aimed at maintaining pregnancy is not recommended.

NB! If the patient insists on conducting therapy aimed at maintaining pregnancy, she should be appropriately informed about the high proportion of chromosomal abnormalities in this pregnancy, which are the most likely cause of her threat interruptions and low effectiveness of any therapy.

Non-drug treatment: no.

Drug treatment (depending on the severity of the disease):

- progesterone preparations (UD-B):

Progesterone preparations:

- progesterone solution (intramuscularly or vaginally)
- micronized (vaginal capsules)
- synthetic derivatives of progesterone (oral).

When establishing antiphospholipid syndrome (UD-B):

- acetylsalicylic acid 75 mg/day – the intake of acetylsalicylic acid is started as soon as the pregnancy test becomes positive and continues before delivery (UD-B, 2);

- heparin 5 000 IU – subcutaneously every 12 hours/low molecular weight heparin in the average prophylactic dose.

NB! The use of heparin begins as soon as with the help of ultrasound the cardiac activity of the embryo is recorded. Heparin is discontinued at 34 weeks of gestation (UD-B, 2). With heparin, platelets are monitored weekly for the first three weeks, then every 4 to 6 weeks.

If thrombosis has occurred in previous pregnancies, therapy may be extended to childbirth and the postpartum period (see CP "Thromboembolic complications in obstetrics", pr. 7 of August 27, 2015, treatment tactics at the stage of delivery).

Essential Medicines List:

- progesterone, injection solution 1 %, 2.5 %, 1 ml gel – 8 %, 90 mg
- micronized, capsules 100–200 mg,
- dydrogesterone tablets 10 mg,

The list of additional drugs:

- acetylsalicylic acid 50–75–100 mg, tablets;
- heparin 5 000 ED
- nadroparin calcium 2 850–9 500 anti-Xa

Instrumental research:

Ultrasound procedure:

With threatening abortion:

- fetal heart rate is determined;
- the presence of a local thickening of the myometrium in the form of a roller, protrudes into the uterine cavity (in the absence of clinical manifestations it does not have independent significance);
 - deformation of the contours of the fetal egg, its indentation due to hypertonicity uterus (in the absence of clinical manifestations does not have independent significance);
 - the presence of sections of the detachment of the chorion or placenta (hematoma);
 - self-reduction of one of several embryos.

When abortion is in progress:

- complete/almost complete detachment of the fetal egg.

Incomplete abortion:

- the uterine cavity is expanded > 15 mm, the cervix is open, the fetal egg/fetus is not visualized, tissues of a heterogeneous echostructure can be visualized.

With a complete abortion:

- uterine cavity < 15 mm, the cervical canal is closed, sometimes not completely, the fetal egg/fetus is not visualized, the remains of the fertilization product in the uterine cavity are not visualized.

During pregnancy, it does not develop:

Diagnostic criteria:

- KTR of the fetus 7 mm or more, the heartbeat does not exist;
- the average diameter of the fetal egg is 25 mm or more, the embryo does not exist;
- absence of an embryo with a heartbeat 2 weeks after ultrasound showed a fetal egg without a yolk sac;
- absence of an embryo with a heartbeat 11 days after the ultrasound showed a fetal egg with a yolk sac.

If the fetal sac is 25 mm or more, the embryo is absent and / or its heartbeat is not fixed and the CTE is 7 mm or higher, then the patient definitely does not develop a pregnancy with a 100 % probability.

Prognostic criteria for pregnancy with transvaginal ultrasound: – KTR of the fetus less than 7 mm, no heartbeat, – average diameter of the fetal sac 16–24 mm, no embryo, - absence of an embryo with a heartbeat after 7–13 days after the ultrasound scan showed a fetal sac without a yolk sac – absence of an embryo with a heartbeat 7 × 10 days after the ultrasound scan showed a fetal egg with a yolk sac – absence of an embryo 6 weeks after the start of the last menstrual period, – yolk sac more than 7 mm – small fruit bag in embryo size (the difference between the average diameter of the fruit bag and the CTE of the fetus is less than 5 mm).

With repeated ultrasounds, a frozen pregnancy is diagnosed if:

- there is no embryo and palpitations both at the first ultrasound and at repeated after 7 days;
- empty fetal egg with a size of 12 mm or more/fetal egg from the yolk bag, the same results after 14 days.

NB! The absence of a fetal heartbeat is not the only and not necessarily a sign of pregnancy: with a short gestation period, the fetal heartbeat is not yet observed.

With the usual, threatening miscarriage:

- detection of congenital/acquired anatomical structural disorders reproductive organs;
- shortening of the cervix to 25 mm or less according to the results of transvaginal cervicometry in the period of 17–24 weeks. The length of the cervix clearly correlates with the risk of preterm delivery and is a prognostic sign of preterm delivery. Transvaginal ultrasound measurement of the length of the cervix is a necessary standard in risk groups for miscarriage.

Risk groups for preterm birth include:

- women with a history of preterm birth in the absence of symptoms
- women with shortened cervix < 25 mm according to transvaginal

Ultrasound in medium terms with a singleton pregnancy in the absence of asymptomatic:

- women with the threat of preterm birth during a given pregnancy;
- women who have lost 2 or more pregnancies at any time;
- women with bleeding in early pregnancy with education retrochorial and retroplacental hematomas.

Algorithm of actions in emergency situations:

- study of complaints, medical history data;
- examination of the patient;
- assessment of hemodynamics and external bleeding.

Other types of treatment:

Overlay pessaries (however, to date there is no reliable data on their effectiveness).

Indications:

- identification of a short cervix.

NB! Early detection and treatment of bacterial vaginosis pregnancy reduces the risk of spontaneous abortion and premature childbirth (UD-A).

Indications for expert advice:

- consultation of a hematologist – if antiphospholipid syndrome is detected and deviations in the hemostasiogram;
- consultation of the therapist – in the presence of somatic pathology;
- consultation of an infectious disease specialist – with signs of TORCH infection.

Preventive actions:

- women with a history of preterm birth and/or shortening of the cervix should be identified as a high risk of miscarriage for the timely appointment of vaginal progesterone: in the presence of preterm birth in the anamnesis from early pregnancy, with shortening of the cervix – from the moment of installation. the use of progesterone to support the luteal phase after the use of ART. The method of administration of progesterone does not matter (you must follow the instructions for the drugs).

Monitoring the patient's condition: after the diagnosis is established and before the start of treatment, it is necessary to determine the viability of the embryo/fetus and further prognosis of pregnancy.

To do this, use the criteria for a favorable unfavorable prognosis of this pregnancy.

Indications for hospitalization indicating the type of hospitalization:

Indications for planned hospitalization:

- isthmic-cervical insufficiency - for surgical correction.

Indications for emergency hospitalization:

- abortion in use;
- incomplete miscarriage;
- abortion did not take place;
- pregnancy does not develop.

Dispensary observation.

Clinical observation is carried out to all patients with miscarriage.

Навчальне видання

НЕВИНОШУВАННЯ ВАГІТНОСТІ

**Методичні вказівки
з дисципліни "Медична генетика"
для підготовки лікарів-інтернів,
студентів 5-го курсу та лікарів-курсантів
циклів післядипломної освіти**

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Свідоцтво про внесення суб'єкта видавничої справи до Державного реєстру видавництв, виготівників і розповсюджувачів видавничої продукції серії ДК № 3242 від 18.07.2008 р.