

PSMU
Department of obstetric and gynecology №2

**Lectures for the second (master's) level of higher
education**

№3

Pathological duration of pregnancy, labor and postpartum terms.

Plan of the Lektion

1. Hypertension of pregnancy.
Preeclampsia. Eclampsia
2. Distress of the fetus
during pregnancy and labor
3. Obstetric hemorrhage

Pathological duration of pregnancy

- Rh-incompadility
- Early gestosis
- Hypertension of pregnancy. Preeclampsia
- Placental insufficiency. Delay of growth of the fetus.
- Distress of the fetus
- Multiple pregnancy.
- Bleeding in I and II half of pregnancy
- Ectopic pregnancy Placenta praevia
- Premature separation of normally implanted placenta
- Prematurity. Post-term pregnancy.
- Poly- and olygo-hydroamnion
- Extragenital diseases during pregnancy
- Perinatal infection.

Pathological duration of labor

- Distress of the fetus and neonatal asphyxia
- Abnormalities of labor pains, uncoordinated uterine activity
- Rupture of uterus
- Amniotic fluid embolism
- Bleeding in labor and early postpartum term
- Transverse and oblique lying of the fetus
- Big fetus
- Contracted pelvis
- Breech presentation
- Deflection attitude of fetus
- Premature labor.

Pathological duration of postpartum terms

- Postpartum septic disease
- Bleeding in postpartum term
- Trauma in labor

Part 1

Hypertension of pregnancy. Preeclampsia. Eclampsia.

Hypertensive disorders are the most common medical complications of pregnancy,

- affecting 5% to 10% of all pregnancies.
- These disorders are responsible for approximately 16% of maternal mortality in developed countries.

Definitions

Hypertension is defined as

- a systolic blood pressure (SBP) of 140 mm Hg or greater or
- a diastolic blood pressure (DBP) of 90 mm Hg or greater.

Pressure should be taken

- *after a 10-minute or longer rest period.*
- *in the left lateral recumbent position with the patient's arm at the level of the heart.*

Abnormal **proteinuria** in pregnancy is defined as the excretion

- of 0,3 g or more of protein in 24 hours
- or 0,3 g/L in middle portion of urine.

◦ **Edema** is a common finding in the gravid patient, occurring in approximately 50% of women. Lower extremity edema is the most typical form. Pathologic edema is seen in nondependent regions such as the face, hands, or lungs.

For early diagnosis of preeclampsia:

- Monitoring of blood pressure and proteinuria during pregnancy

	Blood pressure	Proteinureie
Till 20 weeks	1 time in 3 weeks	
20 – 28 weeks	1 time in 2 weeks	
After 28 weeks	Every week	
Consultation of ophthalmologist , ECG, biochemical analysis of blood, coagulogramma, USG of fetus, CTG by indications		

Classification of hypertensive disorders

- ***Chronic hypertension***

Hypertension diagnosed prior to pregnancy, prior to 20 weeks gestation, or after 12 weeks postpartum

- ***Gestational hypertension***

Hypertension developing after 20 weeks gestation without proteinuria or other signs of preeclampsia

Transitional GH - BP normalized till 12 weeks postpartum

Chronic GH - high BP have place after 12 weeks postpartum

- ***Preeclampsia or eclampsia***

Hypertension typically developing after 20 weeks gestation with proteinuria;

eclampsia is attack of convulsion in women with preeclampsia

Classification of preeclampsia

	SBP	DBP	Proteinuria	
Mild	>140 mm Hg	>90 mm Hg	< 0,3 g in a 24-hour urine collection or < 0,3 g/L on two random sample urine dipsticks at least 6 hours apart	
	on two occasions at least 6 hours apart,			
Middle	150-159	100-109	0,3 – 5 g in a 24-hour urine collection	
Severe	≥ 160	≥ 110	≥ 5 g in a 24-hour urine collection	Oliguria <500 ml in 24 hours Thrombocytopenia <100,000/mm ³ Elevated liver function test Persistent epigastric or right upper quadrant pain General and pulmonary edema Persistent, severe cerebral or visual disturbances
Preeclampsia superimposed			The development of preeclampsia or eclampsia in a woman with preexisting or chronic hypertension	

Mild Preeclampsia

- **Till 37 week gestation – Home Management**
- **Investigation:**
 - baseline laboratory evaluation, including a 24-hour urine collection for protein, hematocrit, platelet count, coagular blood analyses, serum creatinine value, electrolytes, ALT and AST level.
 - ultrasonography should be performed to evaluate amniotic fluid volume and estimated fetal weight and to confirm gestational age
- Medicine do not prescribe
- Waiting and natural delivery
- **Indications for hospitalization:**
 - Term of gestation after 37 weeks
 - Appearance 1 or more signs of preeclampsia
 - Disorders of fetus

Middle Preeclampsia

Treatment only in hospital

- Hospitalization in room of intensive therapy and measurement of BP, diuresis, Ps every hour
- Investigation in moment of hospitalization
 - GBA, hematocrit, platelet count, coagular blood analyses, serum creatinine, electrolytes, ALT and AST level, GUA, 24-hour urine collection for protein, ECG, consultation of therapeutic, neurologist, ophthalmologist
- Maternal management:
 - measurement of BP every 6 hours in first 24-hour, after then – 2 in day
 - Daily weight
 - Urine analyses and 24-hour protein daily
 - Lab tests (liver function tests, hematocrit, platelet count, createnyn, urine acid, proteinogram) twice per week
- *Fetal* management:
 - Daily fetal movement
 - Auscultation every 8 hours
 - Non-stress test twice per week or biophysical profile once per week

Middle Preeclampsia

continue

management

• Till 37 week gestation

- Bed-rest
- Nutrition: high-protein diet without limitation of salt
- Hypotensive medicine when DBP > 100 mm Hg
 - *Methyldopa 0,25-0,5 g 3-4 time in day*
 - *Nifedipine 10 mg 2-3 time in day*
- Prevention of fetal RDS (28-34 week gestation)
 - *Dexametazon (β -metazone) - 6 mg every 12 hour 4 time*

- If the treatment is don't effective and appearance 1 or more sing severe preeclampsia or sing of fetal destres

preparation to labor (prostaglandyns)

delivery

If in labor appearance 1 or more sing severe preeclampsia

MgSO₄ for eclamptic seizure prophylaxis

After 37 weeks

Cesarean section

Severe preeclampsia

- Hospitalization in room of intensive therapy with monitoring of BP, diuresis, Ps
- Investigation in moment of hospitalization **Cito!**
 - GBA, hematocrit, platelet count, coagular blood analyses, serum creatinine value, electrolytes, ALT and AST level, GUA, 24-hour urine collection for protein, ECG, consultation of therapeutic, neurologist, ophthalmologist
- Catheterization of peripheral veins for infusion (see later)
 - Recover blood volume
 - MgSO_4 for eclamptic seizure prophylaxis
 - Hypotensive medicine for prevention cephalic blood stroke
- **Delivery in 24-hour after diagnosis of severe form of preeclampsia**
- Maternal management (by obstetrics and anesthesiologist):
 - measurement of BP every hour
 - Auscultation every 8 hour
 - Urine analyses every 4 hour
 - Catheterization of urine bladder and control diuresis every hour
 - Lab tests (liver function tests, hematocrit, platelet count, createnyn, urine acid, proteinogram) every day
 - Continuous fetal monitoring for the first 48 hours, then daily biphasic profile. Ultrasound assessment; include amniotic fluid measurement with umbilical artery Dopplers

Directs of treatment of preeclampsia

1. Recover blood volume

- NaCl 0.09%, sol Ringer, and refortan (stabizol) 2:1
 - Volume – 2,5-3,0 L/d (35 ml/kg)
 - Speed – no more 85 ml/h
-
- ✓ Not to be used albumin sol. and glucose sol. (hypoglycemia in fetus)
 - ✓ Fresh frozen plasma (for prevention of coagulopathy bleeding)

2. Hypotensive medicine

Drug	Starting Dosage	Maximum Dosage	Comments
<i>Acute treatment of severe hypertension (till 150/90 – 160/100)</i>			
Hydralazine	5 mg i.v. every 10 min till DBP=90-100	30 mg	
Labetalol	10-20-40-80 mg- i.v. every 10-15 min	220 mg	Avoid in women with asthma or congestive heart failure
Nifedipine	5-10 mg p.o. every 30min	50 mg	
<i>Long-term treatment of hypertension</i>			
Methyldopa	250 mg *3-4 i/d	4 (2)g/d	Rarely indicated
Labetalol	100 mg *2-3 i/d	2,400 mg/d	First choice
Atenolol	50 mg *1 i/d	100 mg/d	Associated with IUGR
Nifedipine	10-20 mg *3-4 i/d	100 mg/d	To be used in women with diabetes
Nifedipine-long	20-40 mg *2 i/d		

Hypertensive therapy and infusion to be use with magnesium-therapy

3. MgSO_4

for eclamptic seizure prophylaxis

✗ Start-Dosage –

- ✗ 4 mg (16 ml 25% sol. MgSO_4) + 34 ml NaCl 0,09% i.v very slowly during 15 min (eclampsia – 5 min)

• Support-Dosage –

- 7.5 mg (30 ml 25% sol. MgSO_4) + 220 ml NaCl 0,09% i.v with speed 1-3 g/h (10-30drop/h) with infusion therapy at the same time.

✗ Sing of toxicity of MgSO_4 : ↓ frequency of respiration, hypoactivity of knee reflex, AV – block

- *stopping MgSO_4 + 10 ml 10% Ca-gluconatis i/v*

• Monitoring during magnesium-therapy:

- measurement of BP every 20 min
- frequency of respiration (no less 14 /min)
- Pulse and cardio monitoring, ECG
- Evaluation of knee reflex every 2 hour
- control diureses every hour
- (no less 50 ml/h)

MgSO_4 infusion
should continue for
24 hours postpartum

Sing of stopping of magnesium-therapy:

Stopping of convulsion
Lack of sing of hyperactivity CNS
Normalization DBP and diureses

Severe preeclampsia. management

continue

Prevention of fetal RDS (28-34 week gest.)
Dexametazon (β -metazone)- 6 mg every
12 hour 4 time



- **Delivery in 24-hour:**
- *if coli uteri is prepared for labor* - *amhiotomia and delivery per vias naturalis* with effective anastesia (epidural)
- *if coli uteri is not prepared for labor*
- Prostaglandins prevention is not effective
- Progress of hypertension
- threat of convulsion
- Distress of fetus
- Distressing of women and (or) fetus in II period of labor
- *In III period of labor* (risk of bleeding)
- **Intrapartum management**
 - close blood pressure control , and intravenous MgSO_4

*cesarean
section*

vacuum extraction or forceps

prevention by okcytocini

(not be used metylergometrin!!!!!!)

Eclampsia

**convulsive seizure (attacks)
in women with pre-eclampsia.**

- Eclampsia continues to be a major cause of maternal and perinatal morbidity and mortality worldwide.
 - The maternal mortality rate is approximately 3-4%.
 - The perinatal mortality rate is higher, 30-40%.
- Eclampsia can occur antepartum (50%), intrapartum (25%), or postpartum (25%).
- Patients with eclampsia can exhibit a wide spectrum of signs and symptoms, from mild isolated hypertension to multiorgan failure.

- Before the attack eclampsia woman has severe headache , high hypertension (diastolic blood pressure of > 120 mm Hg), nausea, vomiting, impaired vision, pain in the right upper abdomen and/or in epigastral area.

Attack of convulsions continue on the average from 1 to 3 minutes and consists of several phases, which replace one another:

- 1. Phase before attack**- there are small twitching of muscles of the face, closed eyelids, the corners of the mouth down. The patient is still breathing.
This period lasts 20-30 seconds.
- 2. Phase of tonical cramps** - the tetanic contraction of muscles of the body. Body is stretched and strained, face pale, his jaw tightly compressed, opinion - clearly fixed, motionless. This period is the most dangerous for the fetus and the mother because BP increased. The patient during this period was not breathing.
The duration of the period of 10-20 seconds.
- 3. Phase of klonical convulsions** - the woman who lay motionless, in the fight starts convulsing, which continually go one by one and spread over the body from the top down. The patient is not breathing, face blue and purple. Gradually, the convulsions cease. The patient breathes in, accompanied by a rattle, from the mouth of the allocated foam.
This phase lasts for 20-30 seconds.
- 4. Phase of the resolution (final)** is the patient begins to slow and deep breathing, her mouth is allocated foam, painted blood (due to bite language), the face gradually pink. Begins to be determined by the pulse. Can be raised body temperature (up to 38,5-41°C). The patient gradually comes to mind, complains of headache, general weakness, a retrograde amnesia. Coma after the first attack of convulsions may move to a new convulsive seizure.

If the seizure lasts for more than 30 minutes, this state should be considered as eclamptic status;

Emergency assistance in the development of the attack eclampsia

- treatment in the case of the development of seizures begin on the spot; but at the same time hospitalized pregnant in the Department of anesthesiology and intensive therapy;

Position and , evacuating the contents of the oral cavity

- the patient is placed on a flat surface in the position on the left side, and quickly released the respiratory tract, open your mouth and push the lower jaw forward, evacuating the contents of the oral cavity.

Breathing

- If there are spontaneous breathing - inhalation oxygen through the duct
- If there are long apnea - immediately begin ventilation 100% oxygen in the positive pressure mode at the end of exhalation through the mask.
- If convulsions are repeated or the patient remains in a coma - injected muscle relaxants, and transfer the patient to the artificial lung ventilation (ALV) in the moderate hyperventilation

Emergency assistance in the development of the attack eclampsia

2

Catheterization peripheral veins for introduction of anticonvulsion medicine

- **magnesium sulfate** –

Start-Dosage – 4 mg (16 ml 25% sol. MgSO_4) + 34 ml NaCl 0,09% i.ven.
during 5 min

after then **Support-Dosage** – 1-2 g (4-8 ml 25% sol. MgSO_4) per hour
under long-term control of arterial pressure and heart rate.

If the attacks continue - **additional bolus** - intravenously injected another 2 g of magnesium sulfate (8 ml of 25% solution) for 3-5 minutes.

Instead of additional bolus of magnesium sulfate can be used *i.ven. during 3 min*

diazepam intravenous (10 mg) or
thiopental natrium (450 to 500 mg)

Emergency assistance in the development of the attack eclampsia

3

- catheterization of bladder.
- if the diastolic blood pressure remains at a high level (>110 mm Hg) spend an additional antihypertensive therapy;
- all the manipulations (veins and bladder catheterization, obstetric manipulation) is performed under a general anesthesia by thiopental natrium or other drugs.

Ketamine is not used!

- after the elimination of seizures:
 - correction of metabolic disorders,
 - correction of the volume and electrolytic balance
 - correction of acid status and protein metabolism

DELIVERY with the attack eclampsia

4

- deliver produce immediately after the elimination of convulsions with simultaneous constant introduction of MgSO_4 and hypertensive therapy;
- if the attack of convulsions continues urgent delivery is carried out after the holding of artificial lung ventilation;
- if obstetrics situation does not allow to make urgent delivery of the fetus through the birth canal path, do the caesarean section;
- after the end of the surgical intervention ALV continue to stabilization of the condition of the patient;
- after delivery, treatment should be continued up to the normalization of the patient. Магнезимальную continue therapy not less than 48 hours.

Maternal and Fetal Complications in Severe Preeclampsia

Maternal

- Abruptio placentae
- Disseminated coagulopathy
- Pulmonary edema/aspiration
- Acute renal failure
- Eclampsia
- Liver failure or hemorrhage
- Stroke
- Death
- Long-term cardiovascular morbidity
- **HELLP syndrome** 

Fetal

- Preterm delivery
- Fetal growth restriction
- Hypoxia
- Perinatal death
- Long-term cardiovascular morbidity associated with low birth weight (fetal origin of adult disease)

H – haemolyse,
EL –elevated liver enzymes,
LP – low platelet count)

Part 2

Distress of the fetus during pregnancy and labor

Causes of fetal distress (or hypoxia)

Fetal hypoxia can occur for many reasons.

Maternal risk factors include:

- Diabetes
- Pregnancy-induced or chronic hypertension
- Rh sensitization from a previous pregnancy
- Post-term or multiple-gestation pregnancy
- Maternal infection
- Sickle cell anemia
- Chronic substance abuse
- Asthma
- Seizure disorders
- Pre-term birth

In addition to maternal causes, there are also a large number of intrapartum causes of fetal hypoxia.

For example, uterine contractions diminish utero-placental blood flow, leading to temporary decreases in fetal oxygenation.

Intrapartum events that further compromise fetal oxygenation include:

- Abnormal presentation of the fetus (i.e. breech)
- Premature onset of labor
- Rupture of membrane more than 24 hours prior to delivery
- Prolonged labor
- Administration of narcotics and anesthetics
- Prolapsed umbilical cord
- Placental abruption
- Placenta previa
- Maternal hypoventilation
- Maternal hypoxia

Fetal distress during pregnancy

1

Auscultation of heart activity (from 20 weeks of pregnancy) - define frequency of fetal heart rate per minute:

- physiological norm - 110-170 beats/min
- heart rate of more than 170 and less than 110 beats/min testifies to fetal distress.

Activity of the uterus

- increase of antioxidant protection;
- optimization of metabolic and metabolic processes.

Fetal biophysical profile

7-10 points - satisfactory condition of the fetus;

5-6 points - dubious test (repeat 2-3 days)

4 scores and lower - pathological assessment (to solve the question of the urgent delivery)

Fetal distress during pregnancy

2

Doppler-control the speed of blood flow in the arteries of the umbilical cord (displays the state of the microcirculation in the fetal part of the placenta, vascular resistance which plays a major role in placental hemodynamics).

Diagnostic criteria:

- **Normal blood flow** - high diastolic blood component in relation to the contours, the ratio of the amplitude of systole and diastole, is not more than 3.
- **The pathological blood flow:**
 1. Slow blood flow - decrease in diastolic component, the ratio of the amplitude of systole and diastole, is more than 3.
 2. The terminal bloodstream (indicates a high probability of antenatal fetal death)
 - Zero - the blood flow in the phase of diastole is terminated (diastolic blood component absent)
 - Negative (reverse, reverse) - the flow of blood in the phase of diastole acquires the reverse direction (on доплерограмі diastolic blood component below isolines).

Fetal distress during pregnancy

3

- Diagnostics

- 1) Auscultation fetal cardiac activity during each visit to a doctor-obstetrician-gynecologist or obstetrician.
- (2) When determining the frequency of cardiac contractions more than 170 BPM and less than 110 beats/min, which testifies to fetal distress, there is a need to assess biophysical modified, or extended BPF.
- 3) The pathological BPF is indications to Doppler blood flow in the arteries of the umbilical cord. Under normal blood flow in the arteries of the umbilical cord to be re-BPP 24 hours later.
- 4) The pathological blood flow in the arteries of the umbilical cord - hospitalization in a maternity hospital of level III care.

The management tactics :

Hospitalization of pregnant woman to the hospital or the Department of pathology of pregnant shown, if, according to research BPF and/or Doppler-control blood flow takes place:

- pathological assessment of the BPF (6 points and below);
- repeated (the day after) the dubious assessment of the BPF (7-8 points);
- slow diastolic blood flow in the arteries of the umbilical cord;
- critical changes in blood flow in the arteries of the umbilical cord (zero and reverse).

Treatment. –

- Up to 30 weeks of pregnancy, treatment of opportunistic diseases in women, which have led to occurrence of fetal distress.
- After 30 weeks of pregnancy, the most effective and justified method of treatment of fetal distress is a timely operative delivery

Indication for emergency delivery by caesarean section after 30 weeks of pregnancy are:

- - critical changes in blood flow in the arteries of the umbilical cord (zero and reverse);
- - acute fetal distress (pathological bradycardia and heart rate decelerations) regardless of the type of blood circulation (normal or slow) in the arteries of the umbilical cord during pregnancy;
- - the pathological BPF (score 4 and below) in the absence of biological maturity of the cervix.

FETAL DISTRESS DURING LABOR

Abnormal heart rate (more than 170 u./min or below 110 u./min.).

- Calculation of fetal heart rate spend for a full minute
- every 15 minutes during the active phase
- and every 5 minutes during the II stage;

Diagnostic criteria by CTG:

- At normal condition of the fetus the CTG is characterized by:
 - BFCB in the range of 110 to 170./min.,
 - variability (width recording) - 10-25./min
 - the frequency of the oscillations of 3-6 cycle./min. (wavy type),
 - the presence of acceleration heart rate and lack of deceleration.
- *When distress present on the CTG is usually one or a few pathological symptoms:*
 - **tachycardia,**
 - **a monotonous rhythm (width recording 5 /min and less) ,**
 - **early, variable and especially late decelerations**

Definition of meconium-stained amniotic fluid at rupture of membranes:

- Presence of thick meconium in the amniotic fluid in conjunction with the pathological changes in fetal heart rate is an indication for immediate delivery
- Note: The presence of minor impurities meconium-stained amniotic fluid does not indicate fetal distress, but indicates the need for close monitoring of the status of the fetus

FETAL DISTRESS DURING LABOR

Tactic of delivery

1. Change the position of the woman, if she lies on her back;
2. Stop the introduction of oxytocin, if he was previously appointed;
3. If fetal heart rate abnormalities persist, it is necessary to conduct internal vaginal examination to determine obstetric situation and determine possible causes of fetal distress.
5. If defined fetal distress you need an urgent delivery:
 - in the first period of labor-cesarean section;
 - in the second period:
 - cephalic presentation - vacuum extraction or forceps delivery;
 - breech presentation - extraction of the fetal by breech or legs.

Part 3

OBSTETRIC HEMORRHAGE

Obstetric hemorrhage represent one of the most frequent and dangerous complications of pregnancy, delivery and postnatal periods. It belongs to one of the first places in the structure of maternal mortality.

Classification of obstetric hemorrhage

in the first half of pregnancy	- spontaneous abortion - trophoblastic disease - ectopic pregnancy
in the second half of the pregnancy, I and II periods of delivery:	- placenta previa - abruptio placentae - uterine rupture
in the III period of delivery	- pathology the placental - defect, infringement of the placenta - rupture of the soft tissues
in the post-partum period:	- hypotonic post-partum hemorrhage - delay parts of secundines - rupture of the soft tissue - amniotic fluid embolism - coagulopathic bleeding

ECTOPIC PREGNANCY

- pregnancy in which the fertilized egg is implanteted and develops outside the uterus.

Occurs in 12 to 14 cases per 1000 pregnancies.

Classification by the place of nidation:

- tubal pregnancies(is rare);
- abdominal pregnancies (only 2%)
- ovarian pregnancies (0.15%),
- cervical pregnancies (0.15%)

Signs and Symptoms.

- ***when the pregnancy progresses:***
- positive signs of pregnancy,
- the absence of a menstruation,
- uterus less than should be,
- fetal egg absent in the uterus and it's localized in the other organs

Signs and Symptoms.

- ***when the organ of fetal egg's localization is pupture (broking ectopic pregnancies) :***
- abdominal or pelvic pain, radiating to the shoulder
- vaginal bleeding
- syncope, and shock ($\downarrow$ BP, $\uparrow$ Ps) as a result of hemoperitoneum
- signs of peritoneal irritation
- Painfully vaginal examination and cervical motion
- the uterus slightly increased, soft, flexible („floating”),
- in the field of uteral adnex is determined the stiffness or palpable tumor-like formation dough-like consistency;
- the posterior vaginal fornix is prolapsed, sharply painful during palpation.
- The pain is irradiated in the rectum.

Surgical treatment remains the most common method of treatment of ectopic pregnancy. The patient with impaired ectopic pregnancy should be operated immediately after diagnosis. It can be performed using the laparoscopic or laparotomical technique

Radical surgery: Tubeectomy - is indicated in the case of heavy bleeding, significant pathological changes in the fallopian tubes, rupture of the uterine tube, diameter of conception of more than 3.0 cm.

Conservative surgery: fimbrial evacuation, salpingotomia

Medical Management. Methotrexate
The folic acid antagonist, methotrexate, inhibits de novo synthesis of purines and pyrimidines, interfering with DNA synthesis and cell multiplication. Rapidly proliferating trophoblasts are very dependent on folic acid and thus differentially vulnerable to the cytotoxic effect of methotrexate, and this differential sensitivity forms the basis of the therapy.

SPONTANEOUS ABORTION

Classification, Symptoms and Treatment:

-is a spontaneous termination of pregnancy in the period from conception to 22 weeks 15-20 %

threatened abortion	progressive abortion	incomplete	complete
increase of uterus contraction the fetal egg maintains contact with the uteral walls	Fetal egg completely detach from the uteral walls and moving down in the cervical canal.	Part of fetal egg are saved in uterus after expulsion	Fetal egg completely expelled from the uterus
•pain in the lower abdomen, • slight blood vaginal discharge •the cervix is not shortened, external orifice is closed or slightly open, uterus size corresponds to the term of pregnancy, the tone of the uterine increased	•contraction-like pain in the lower abdomen •expressed the bleeding. •uterus size is less than the expected term of pregnancy, • fetal egg is located in an opening canal of the cervix, the lower pole it can act in vagina.	The cervical canal opening on finger, uterus soft, the it size is less than the term of pregnancy, there is excessive bleeding.	uterus is reduced and heavy bleeding does not occur.
(prescribe after 8 weeks) bed rest, sedatives, spasmolytical drugs, gestagens (progection)	• urgently hospitalized pregnant; • instrumental removal of residual products of conception (vacuum-aspiration or curettage under intravenous anesthesia) •10 IU of oxytocin i/v • continuing the bleeding - 800 mcg of misoprostol per rectum		

PLACENTA PREVIA

placenta praevia centralis

placenta praevia lateralis

placenta praevia marginalis

- is the location of the placenta at the lower segment of the uterus, as it partially or completely covers an area of internal os, and is below that the presenting part of the fetus.

Clinical picture - vaginal bleeding is not accompanied by pain and increase the uterus tone

- high localization of presently part;
- ultrasonic research

The treatment of women with placenta praevia

Blood loss is less than 250 ml, symptoms of hemorrhagic shock and fetal distress are not available, the pregnancy is less than 37 weeks:

Waiting tactic:- tocolytic therapy by indications;
-acceleration of fetal lung maturity of up to 34 weeks of pregnancy (dexamethasone 6 mg every 12 h.for 2 days);
- monitor of the woman and the fetus condition ;

Blood loss is less than 250 ml, pregnancy more than 37 week, partial placenta praevia, the hand presentation of the fetus, active contractions of the uterus, the opening of the cervix

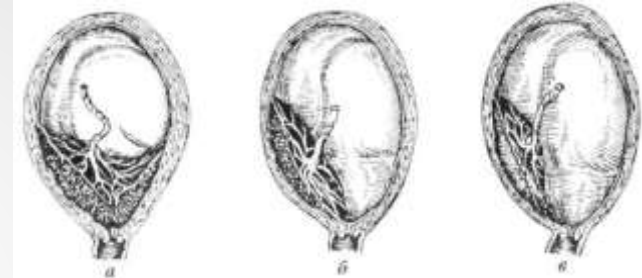
Amniotomia and delivery through natural birth canal

Blood loss is high (more than 250 ml)

Emergency caesarean section.

Placenta praevia centralis without bleeding

Hospitalization until the time of delivery, **planning caesarean section** in the 37 - 38 weeks



ABRUPTIO PLACENTAE

this detachment normally situated placenta before birth fetus, that is, during the pregnancy, in the I or II stage of labour.

Classification by the detachment area:

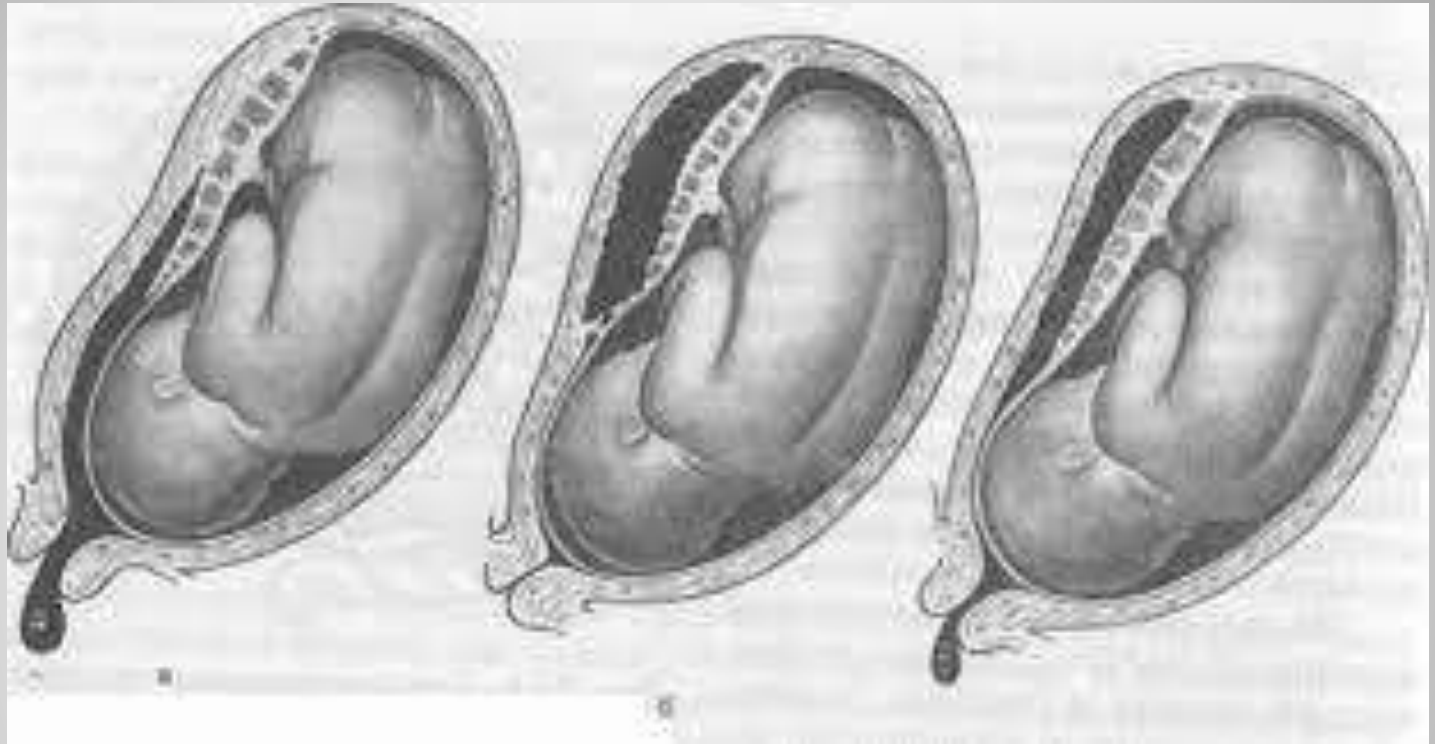
- *complete*
- *partial* → *central or lateral*

Classification by the severity of the clinical picture: light, average and heavy degree.

Clinical picture

- vaginal bleeding, uterine pain, a tetanic contraction of the uterus,
- fetal heart rate abnormalities
- Sign of internal bleeding: pale skin, tachycardia, a decline BP
- If amniotic fluid link, their have blood coloration





Tactic

1/ In the case of progressive detachment of the placenta during pregnancy or in the first period of labor, if you have symptoms of hemorrhagic shock, coagulopathia, fetal distress, irrespective of the duration of pregnancy - **urgent delivery by cesarean section**.

If the symptoms of Cuvelers uterine - **hysterectomy without adnex**.

If placental abruption at the end of the I or in the II periods of delivery:

urgent amniotomy;

at the head presentation of the fetus - obstetric forceps;

at the breech presentation of the fetus - extraction by the breech or legs;

in transverse position of the second fetus from twins - obstetric version and extraction by the leg;

manual separation and evacuation of placenta;

uterotonical drugs: 10 IU of oxytocin in/ven, in the absence of effects - 800 mcg of misoprostol (per rectum);

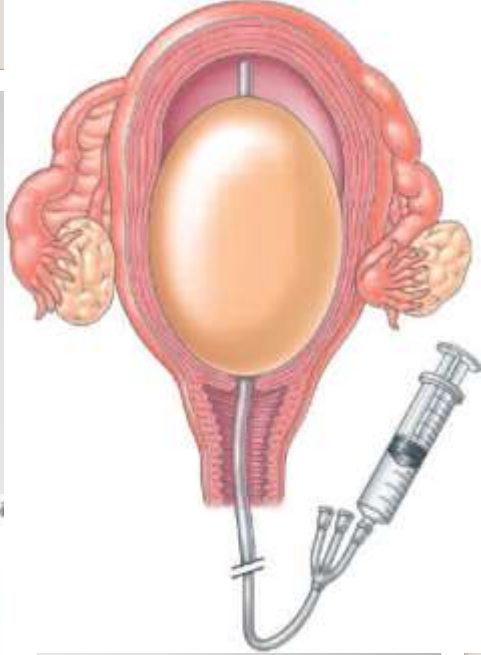
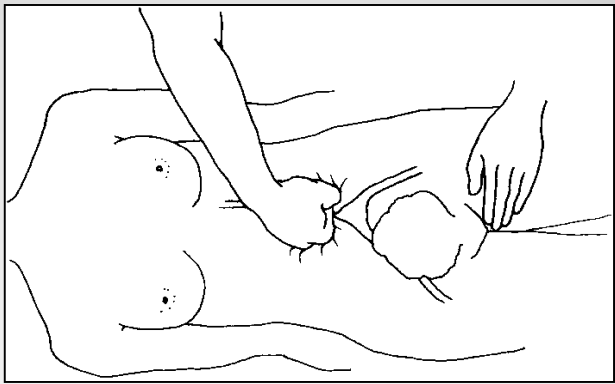
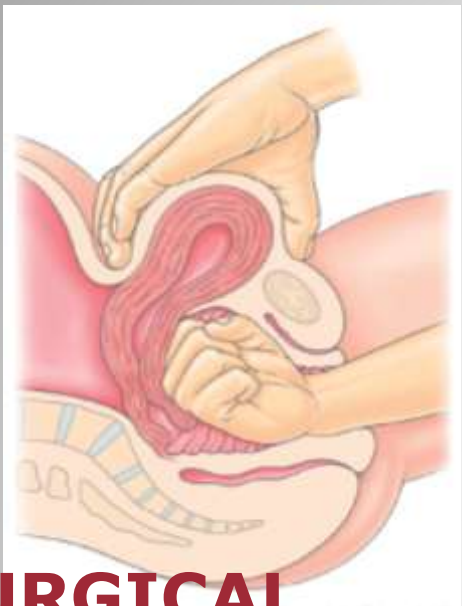
careful surveillance in the postpartum period;

2/ The restoration BCC, treatment of hemorrhagic shock and coagulopathia

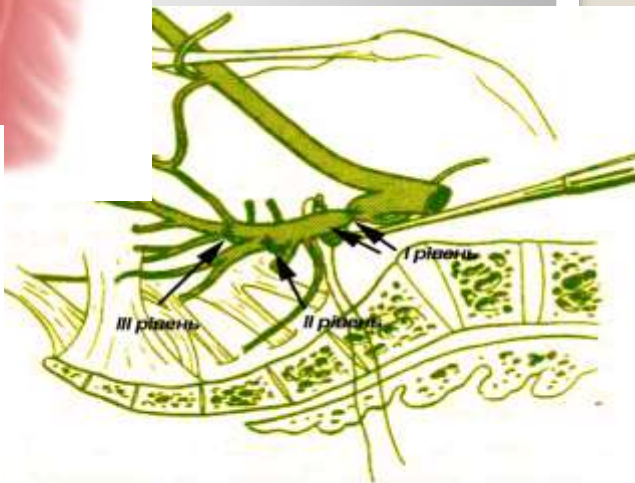
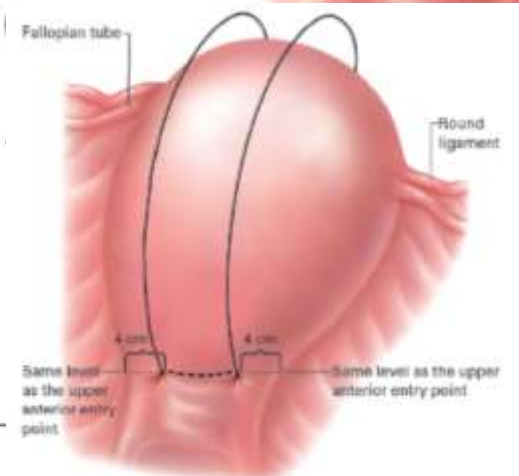
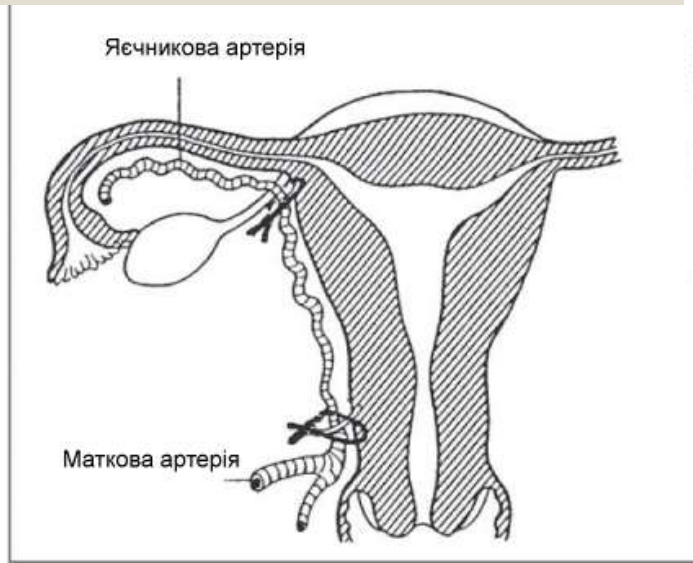
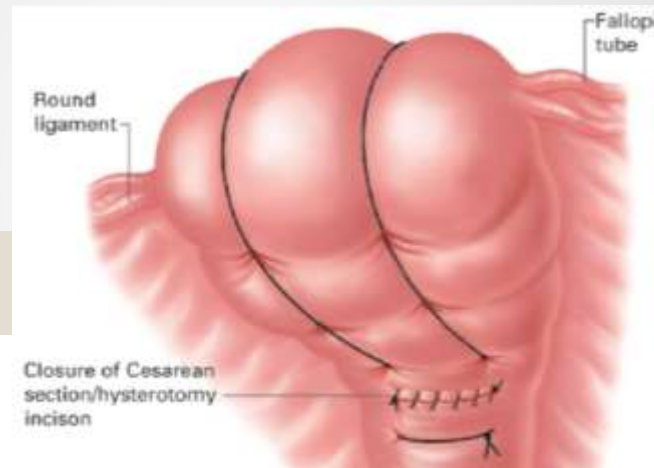
OBSTETRIC HEMORRHAGE IN THE III PERIOD OF DELIVERY AND IN THE POST-PARTUM PERIOD

T-1 Tone violation of the uterus motor function (<i>Hypotonic bleeding</i>)	1. an assessment of the general status of the mother and the blood loss volume; 2. urgent examination (HB, HC, coagulogram, group and Rh, the biochemical analysis of blood); 3. catheterization of the peripheral (or Central) veins Infusion of saline, ringer lactate (1L in 15 min.) 4. Catheterization of the bladder; 5. External massage of the uterus (20-30 c per 1 min.); 6. manual revision of the uterus; 7. Uterotonical medicines - - oxytocin 10-20 U with 400 ml of saline in/ven., or - misoprostol 800 mcg per rektum; in case of continuation of bleeding Additional methods of blood loss stopping: - two-handed compression of the uterus - compression of the abdominal aorta - balloon tamponada of the uterus Surgical methods: - ligation of uterine arteries - ligation of the internal iliac arteries - hysterectomy
T-2 Trauma injury ancestral ways	Examination and closure of the laceration
T-3 Tissue violation of delamination and separation of the placenta	1/ Manual detachment of placenta and extraction it 2/ Hysterectomies
T-4 Thrombin violation of blood coagulation system	Treatment of coagulopatia

Additional methods



SURGICAL METHODS:



язування внутрішньої клубової артерії. На схемі
авлені варіанти зон для виконання цієї процедури.

Перев'язування маткової та яєчникової артерії

***During bleeding the doctor
always has the «Golden hour» or at
least «Platinum 10 minutes», in order
to apply adequate measures for the
sake of life***

Moet

LIST OF RECOMMENDED LITERATURE

1. Physiological obstetrics [A.M. Gromova, E.A. Taranovskaya, N.M. Demchenko, V.B. Martynenko] – Poltava : Divoswit, 2013. – 130 p.
2. Williams Obstetrics, 26th Ed.-/ F.G. Cunningham, K.G. Leveno, J.S., Dashe et al. - 2022. McGrawHill/Medical – 1328