

**PLAN OF LESSONS IN OBSTETRICS AND GYNECOLOGY
FOR 4th YEAR STUDENTS OF
FACILITY FOR INTERNATIONAL STUDENTS**

7 semester

Topic 1. Structure and organization of a maternity hospital. Maternal pelvis. Obstetrical perineum. Intrauterine development of fetus, placenta and fetal membrane. Fetus at uterus. Fetal skull. Diagnosis of pregnancy. Physiological changes during pregnancy. Ethics and deontology in obstetrics

1. Structure and organization of work in maternity hospital. Emergency department of maternity hospital. Delivery unit. The structure, operation block. The second (observational) obstetrical department, principle of work, the indications for hospitalization. The department of pathology of pregnancy. Indications for hospitalization.
2. Asepsis and antisepsis in obstetrics: the sanitary-epidemiological regime in the postnatal ward.
3. Anatomy of internal genitalia. Obstetrical perineum. Muscles of perineum in women.
4. Maternity pelvis from obstetrical standpoint. Planes and diameters of true pelvis. Pelvic axis and inclination. External diameters of pelvis. Sacral rhombus.
5. Cyclic changes in the ovaries and uterus. Ovulation. Fertilization.
6. Development of embryonic organs. The placenta (the structure, function). Amniotic fluid (the exchange, composition).
7. Fetal development (critical periods).
8. The fetus-in-utero. Obstetric terminology: attitude, lie, position, type of position, presentation, insertion. Signs of maturity, full-term fetus. The fetal skull, large and small segments.
9. Diagnosis of early and late pregnancy. Methods of obstetrical examination (an objective, external and internal examination, additional methods of examination). Determination of gestational age and predicted date of delivery, estimated fetal weight.
10. Physiological changes during pregnancy. Hemodynamic changes, the system of hemostasis. Endocrine function (placental hormones, thyroid function). Immune system, biologically active substances of feto-placental system. Water metabolism. Metabolism in pregnancy.
11. Ethics and deontology in obstetrics

Topic 2. The clinical course and management in the I stage of labor. Anesthesia during labor. The clinical course and management of the II stage of labor. Biomechanism of normal labor. The clinical course and management of the III stage of labor. Normal puerperium.

1. The definition of labor. Classification of labors by gestational age, duration. The causes for the onset of labor. Evaluation of the biological availability of pregnant women for labor. Parturition, preliminary period. Clinical course, diagnosis. Obstetrical tactics.
2. The first stage of labor (cervical dilatation). The clinical course and management.
3. Labor analgesia. Indications. Methods. Medications and their effects on the fetus and newborn.
4. The second stage of labor. Clinical course and management. Biomechanism of labor at the occipito-anterior and the occipito-posterior presentation. Obstetrical manuals.

5. The first toilet of newborn. Newborn Apgar score. Molding of the head, caput succedaneum, cephalohaematoma.
6. The third stage of labor. Clinical course and management. Physiological, border and pathological blood loss.
7. Post-partum period, duration. Early post-partum period. Diagnostics of the injuries of the birth canal. Mechanisms of postpartum hemostasis, prevention of bleeding.
8. Clinical course and management of normal puerperium. Hygiene, prevention of mastitis.

Topic 3. Hypertensive disorders in pregnancy. Preeclampsia. Eclampsia

1. Definition. Classification of hypertensive disorders in pregnancy
2. Chronic arterial hypertension; pregnancy induced hypertension; preeclampsia, eclampsia; clinics, diagnostics, course of pregnancy, labour, postpartum period, principles of treatment, indications for termination of pregnancy.
3. Emergency help in preeclampsia/eclampsia, complications, prophylactics, medical rehabilitaton. Causes of maternal and perinatal mortality
4. Examination of pregnant with hypertensive disorders (complains and anamnesis, physical examination). Plan for laboratory-instrumental examination. Diagnosis. Plan of treatment, labour, postpartum period, indications for operational delivery.

Topic 4. Breech presentation. Extension presentation. Multiply pregnancy

1. Breech presentation. Etiology. Classification. Diagnosis.
2. Course and management of pregnancy in breech presentation
3. The clinical course of labor with breech presentation. Biomechanism of birth.
4. Management of labor in the breech presentation. Assistance in labor (Tsovyanov manual, classical hand assistance).
5. Complications for mother and fetus in breech presentation. Assistance when they appear (Mauriceau Maneuver).
6. Malpresentation of fetus. Course and management of pregnancy External-internal classic (combined) rotation of the fetus. Indications, conditions, complications.
7. Total breech extraction (extraction of fetus therefor the pelvis). Indications. Conditions
8. Extension presentation of fetus. Anterior head (brow), frontal, facial presentation. Biomechanism of birth. Obstetric tactics (management).
9. Multiple pregnancy. Etiology. Classification. Diagnosis. Course and management of multiple pregnancy. Complications for mother and fetus. Course and management of labor in multiple pregnancies. Complications for mother and fetus. Prevention of perinatal losses.

Topic5. Miscarriage. Post-term pregnancy. Abnormal uterine action

1. Definition: miscarriage, recurrent miscarriage, missed pregnancy, preterm labor. The causes of miscarriage.
2. Spontaneous abortion: stages, diagnosis, treatment, rehabilitation. Hormonal therapy of miscarriage: principles, indications, medications, monitoring of treatment efficacy.
3. Cervical incompetence: causes, clinical features, methods of correction, management of pregnancy and labor.
4. Preterm labor: causes, classification by gestational age and the clinical course. Conservative management of preterm labor: tocolysis, magnesium therapy, prevention of RDS in fetus and newborn. Management of premature rupture of the amniotic membranes. Active management of preterm labor. Principles and methods of preterm delivery.
5. Signs of immaturity of the newborn. Nursing of premature infants.
6. Port-term pregnancy. Etyology, diagnostics, complications during pregnancy and delivery. Methods of pre-induction and induction of labor.
7. Physiology of uterine contractions. Causes of abnormal uterine action. Classification.

8. Pathological preliminary period: clinical signs, differential diagnosis, treatment, obstetrical tactics.
9. Uterine inertia: clinical signs, diagnosis, clinical course of labor, treatment, obstetrical tactics.
10. Generalized tonic contraction: clinical signs, diagnosis, clinical course of labor, treatment, obstetrical tactics.
11. Incoordinate uterine action: causes, severity, clinical manifestations, diagnosis, differential diagnosis, clinical course of labor, methods of treatment.
12. The effect of abnormal uterine action on the fetus and newborn. Indications for Cesarean section in abnormal uterine action.
13. Prevention of abnormal uterine action.

Topic6. Contracted pelvis. Obstetrical injuries.

1. The concept of an anatomically contracted pelvis. Etiology.
2. Classification of contracted pelvis by shape and degree of contraction.
3. Diagnosis of contracted pelvis.
4. The course and management of pregnancy in women with contracted pelvis.
5. Particularities of biomechanism in:
 - transverse pelvic contraction
 - justo minor pelvis
 - flat pelvis (simple and rachitic)
6. The clinical course and management of labor in anatomically contracted pelvis. The indications for Cesarean section.
7. Cephalopelvic disproportion: definition, causes, diagnosis, obstetrical tactics. Complications for mother and fetus.
8. Big fetus syndrome: causes, course and management of pregnancy and labor.
9. Lacerations of the birth canal. Perineal lacerations. Etiology, classification, clinical signs, diagnosis, treatment. Long-term complications. Prevention.
10. Perineotomy. Indications and technique.
11. Lacerations of the vagina. Causes, clinical signs, diagnosis, treatment, prevention.
12. Lacerations of the cervix. Etiology, classification, clinical signs, diagnosis, treatment, prevention.
13. Hematomas of the external genitalia and vagina. Clinical signs, diagnosis, treatment, prevention.
14. Uterine rupture. Etiology and pathogenesis, classification, diagnosis, obstetrical tactics. treatment, prevention.
15. Obstetrical fistulas. Etiology, pathogenesis, classification, clinical signs, diagnosis, treatment, prevention, rehabilitation. Management in subsequent childbirth.
16. Damage to pelvic joints. Etiology, pathogenesis, clinical signs, diagnosis, treatment, prevention.

8 semester

Topic1. Pregnancy and extragenital diseases.

1. Pregnancy and heart diseases.
 - Physiological changes in the cardiovascular system during pregnancy. Contraindications for pregnancy in heart diseases.
 - The clinical course of pregnancy and labor in heart diseases.
 - Management of pregnancy and labor in women with heart diseases, indications for Cesarean section, specificity of postpartum period.
 - Operated heart: management of pregnancy, labor and postpartum period.

2. Hypertension in pregnancy.
 - The classification of hypertension. Contraindications for pregnancy.
 - Clinical course and management of pregnancy in hypertensive patients. Differential diagnosis of hypertensive disorders in pregnant.
 - Clinical course and management of labor and puerperium in women with arterial hypertension.
 - Therapy of hypertension in pregnancy.
3. Blood diseases during pregnancy.
 - The physiology of hemostatic system in normal pregnancy. Contraindications for pregnancy.
 - Anemia during pregnancy. Classification, diagnosis. Treatment in pregnancy and postpartum.
 - Thrombocytopenic purpura. Management of pregnancy and labor.
4. Kidney diseases and pregnancy.
 - Physiological changes in the urinary tract during pregnancy. Contraindications to pregnancy in urinary system diseases.
 - Pyelonephritis in pregnancy: etiology, clinical course, diagnosis, treatment.
 - Glomerulonephritis in pregnant: clinical signs, diagnosis, treatment.
 - Nephrolithiasis and pregnancy: clinical signs, diagnosis, indications for surgical treatment.
5. Diabetes in pregnancy.
 - Physiology of carbohydrate metabolism in pregnant.
 - Classification of diabetes in pregnant. Contraindications for pregnancy in diabetic women.
 - The course of diabetes, complications in pregnancy, labor and puerperium.
 - The condition of the fetus and the newborn in diabetic mothers, diabetic fetopathy.
 - The management of pregnancy in diabetic patients: planned hospitalization, principles of therapy.
 - Management of labor in patients with diabetes: time of delivery, indications for cesarean section.
6. Pregnancy and thyroid diseases.
 - The influence of thyroid hormones on fetal development.
 - The course of pregnancy in hyper- and hypothyroidism in women.
 - The prevention of iodine deficiency.
7. Acute surgical disease in pregnant women:
 - Acute appendicitis: clinical signs, differential diagnosis, obstetrical tactics.
 - Pancreatitis and pregnancy: clinical signs, differential diagnosis, treatment.
8. Pregnancy and labor in women with obesity.
9. Infectious diseases in pregnancy:
 - Viral hepatitis A, B, C, D. Diagnosis, differential diagnosis. Complications for mother and fetus. Management of pregnancy and labor.
 - HIV-infection. Protocol of testing. Mechanisms of mother-to-child transmission of HIV. Prophylaxis of perinatal transmission of HIV.
 - Tuberculosis. Clinical manifestation, diagnosis. Course of pregnancy, influence on fetus and newborn. Principles of treatment.

Topic 2. Obstetrical bleeding.

1. The causes of obstetric hemorrhage. Features of obstetric hemorrhage. Factors that increase the organism's sensitivity to the blood loss.
2. Methods of blood loss estimation. Physiological, border, pathological blood loss.

3. Placenta praevia. Etiology, pathogenesis, classification, clinical signs, diagnosis, differential diagnosis. Obstetrical tactics, indications for emergent delivery.
4. Placental abruption. Etiology, pathogenesis, classification, clinical signs, diagnosis, differential diagnosis. Obstetrical tactics, indications for emergent delivery. Uteroplacental apoplexy (Couvelaire uterus): pathogenesis, clinical manifestations, diagnosis, obstetrical tactics, complications for mother and fetus.
5. Placental accreta, increta, percreta. Etiology, pathogenesis, classification, clinical signs, diagnosis, differential diagnosis. Indications and technique of the operation of manual placental removal.
6. Uterine atony. Etiology, pathogenesis, clinical signs, diagnosis, differential diagnosis. Obstetrical tactics. Conservative and surgical methods of hemostasis.
7. Retained placental fragments. Etiology, clinical signs, diagnosis, differential diagnosis, tactics.
8. Prevention of obstetrical bleedings. Groups at risk of obstetric hemorrhage.

Topic3. Hemorrhagic shock. Amniotic fluid embolism. DIC-syndrome.

1. Amniotic fluid embolism. Etiology, predisposing factors, pathogenesis, clinical signs, diagnosis, differential diagnosis. Obstetrical tactics.
2. Hemorrhagic shock in obstetrics. Causes, predisposing factors
3. Pathogenesis, clinical signs. Classification.
4. Principles of treatment for hemorrhagic shock. Features of infusion-transfusion therapy.
5. Disseminated intravascular coagulation. Obstetrical causes and predisposing factors.
6. Pathogenesis, phases of DIC, clinical course of the DIC-syndrome
7. Clinical and laboratory diagnostics of the DIC-syndrome
8. Treatment of the DIC-syndrome.

Topic 4. Obstetrical surgery.

1. Cesarean section. Indications during pregnancy and labor. Terms and contraindications. Advantages of elected caesarean section. Anesthesia for cesarean section: methods, medications, complications to the fetus.
2. Examination of pregnant women before the operation of Cesarean section. Preoperative care.
3. Methods of Cesarean section. Main stages of abdominal Cesarean section in lower uterine segment.
4. Intra- and postoperative complications of Cesarean section:
 - Aspiration syndrome (Mendelson's syndrome): predisposing causes, pathogenesis, clinical signs, diagnosis, first aid, prevention.
 - Inferior vena cava syndrome: predisposing causes, pathogenesis, medical tactics, prevention.
 - Amniotic fluid embolism: predisposing factors, pathogenesis, clinical signs, diagnosis, emergency care.
 - Thromboembolic complications, risk factors, clinical signs, diagnosis, prevention.
 - Bleeding after Cesarean section: causes, diagnosis, obstetrical tactics, prevention.
 - Peritonitis: the mechanisms of peritonitis after cesarean delivery, pathogenesis, clinical signs, diagnosis, intensive care, the indications for surgical treatment.
5. Postoperative care. Prevention of complications of cesarean section.
6. Obstetrical forceps: indications, conditions and contraindications for forceps. Methods of anesthesia. Technique of forceps. Early and long-term complications of forceps for the mother and fetus.
7. Vacuum extraction of fetus: techniques, conditions, indications and contraindications, complications.

8. Embryotomy: types of operations, indications, conditions. Methods of analgesia, complications.
9. Rational antibiotic prophylaxis and antibiotic therapy in typical surgical procedures and operations in obstetrics

Topic 5. Postpartum septic diseases. Specific infections in pregnancy.

1. Postpartum purulent-septic diseases. Etiological agents. Pathogenesis: pathways and phases of infection, immune response of the macroorganism, factors predisposing to postpartum purulent-septic diseases.
2. Classification of postpartum purulent-septic diseases.
3. Postpartum wound infection (puerperal ulcer): clinical signs, diagnosis, differential diagnosis, treatment. Endometritis, metroendometritis: clinical signs, diagnosis, differential diagnosis, treatment. Indications for hysterectomy.
4. Postpartum thrombophlebitis: clinical signs, diagnosis, differential diagnosis, treatment. Indications for surgical treatment. Pelvioperitonitis, peritonitis: clinical signs, diagnosis, differential diagnosis, treatment.
5. Sepsis in obstetrics: particularities, clinical types. Systemic inflammatory response syndrome: diagnostic criteria. Principles of treatment for obstetrical sepsis.
6. Septic shock: clinical signs, emergent care, intensive care.
7. Puerperal mastitis: clinical signs, diagnosis, differential diagnosis, treatment. Indications for surgical treatment. Prevention of postpartum septic diseases.
8. Herpesvirus infections (HSV, CMV). Etiology. Pathogenesis. Clinic. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment guidelines.
9. HIV infection. Etiology. Pathogenesis. Clinic. Classification. Minutes of a survey of pregnant women. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment guidelines. Prophylaxis
10. Genital chlamydial infections. Etiology. Pathogenesis. Clinic. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment.
11. Ureaplasmosis. Mycoplasmosis. Etiology. Pathogenesis. Clinic. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment.
12. Vulvovaginal candidiasis. Etiology. Pathogenesis. Clinic. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment. Prevention.
13. Gonorrhea. Etiology. Pathogenesis. Clinic. Diagnosis. Treatment.
14. Tuberculosis. Etiology. Pathogenesis. Clinic. Diagnosis. Course and management of pregnancy and labor. Effect on the fetus and newborn. Treatment guidelines. Prevention.
15. Intrauterine infection. Pathogenesis. Clinic. Diagnosis. The management of pregnancy and labor. Prevention.
16. Principles of rational antibiotic therapy in patients with infectious and inflammatory complications during pregnancy, childbirth and the postpartum period

Topic 6. Threatened status of the fetus. Prenatal diagnosis. Immunological incompatibility between mother and fetus

1. Perinatology. Perinatal period. Groups and risk factors of perinatal pathology.
2. Modern methods of fetal assessment: ultrasound, electro-phono-cardiography of fetus, ante- and intranatal fetal cardiotocography, Doppler study of blood flow.
3. Indications for prenatal diagnosis.
4. Methods of prenatal diagnosis: amniocentesis, kordocentesis, chorionic villi biopsy, biochemical and hormonal methods of investigation the mother's blood.
5. Medical and genetic counseling.
6. Screening, prevention of the fetal congenital diseases (CDF) and hereditary diseases.

7. Feto-placental insufficiency. Chronic fetal hypoxia: pathogenesis, clinical manifestations, diagnosis, treatment
8. Pathogenetic mechanisms of the immunological conflict between mother and fetus.
9. Reasons of mother's sensitization
10. Hemolytic disease of the fetus and newborn: causes, pathogenesis. Clinic forms of hemolytic disease of the newborn. Diagnosis. Treatment of hemolytic disease in the antenatal and neonatal period.
11. Prevention of hemolytic disease of the newborn.