THEMATIC PLAN OF LESSONS
IN OBSTETRICS AND GYNECOLOGY
FOR 6th YEAR STUDENTS
OF FACILITY FOR INTERNATIONAL STUDENTS

Plan was approved at a meeting of the Department of Obstetrics and Gynecology with PD and PC

Topic 1. Planning of pregnancy. Management of physiological pregnancy

1. Ethics and deontology in obstetrics and gynecology.
2. Planning of pregnancy. Preconception counseling and care. Risk groups for maternal and perinatal pathology.
3. Diagnosis of early and late pregnancy.
4. Examination of the pregnant woman (objective, external and internal obstetric examination, additional examination methods). Determining the gestational age and date of labor, estimated fetal weight.
5. Management of physiological pregnancy. Medical prevention of complications during pregnancy, labor and the postpartum period.
6. Indications for hospitalization of pregnant women. Selecting the technological level of perinatal care.

Topic 2. Physiological changes during pregnancy

1. Physiological changes in the cardiovascular system during pregnancy. Physiological changes in the hemostasis system.
2. Physiological changes in the endocrine system during pregnancy. Placental hormones and their functions.
3. Metabolism of a pregnant women.
4. Physiological changes in the urinary system during pregnancy.
5. Physiological changes in the respiratory system during pregnancy.
6. The state of the immune system in pregnant women.
7. Physiological changes in the reproductive system. Formation and functioning of the maternal-placental-fetal system.

Topic 3. Methods for assessing the fetal wellbeing. Prenatal diagnosis

1. The fetus as an object of labor. Obstetric terminology: attitude, position, presentation.
2. Signs of fetal maturity. Diameters of fetal scull.
3. Perinatal mortality rate, causes, risk factors, and risk groups. Perinatal risk factors, perinatal risk groups.
4. Medical and genetic counseling. Indications. First and second trimester screening (ultrasound, biochemical screening), non-invasive prenatal testing (NIPT). Timing, indicators, and evaluation of results.
5. Invasive prenatal diagnostic methods: chorionic villus sampling, amniocentesis, cordocentesis, fetoscopy. Indications, contraindications, and complications for the mother and fetus.
6. Principles of palliative perinatal care.

7. Methods for assessing the fetal wellbeing: ante- and intrapartum cardiotocography, ultrasound, Doppler blood flow study, biophysical profile, determination of the gas composition in fetal blood.

Topic 4. Physiological labor

1. Physiological labor. Classification of labor for gestational age. Duration of labor.
2. The causes for labor's onset. Parturition, preliminary period.
3. Stages of labor. Clinical course and management of the first stage of labor. Labor analgesia. Indications. Methods. Medications.
4. Clinical course and management of the second stage of labor. Mechanism of labor.
5. Clinical course and management of the third stage of labor.
6. Early postpartum period. Mechanisms of the postpartum hemostasis. Physiological and pathological blood loss.
7. Assessment of the newborn at the delivery room. Care for the newborn.

Topic 5. The course and management of pregnancy, labor and the postpartum period in diseases of the cardiovascular and endocrine systems

1. Pregnancy and chronic hypertension. Contraindications for pregnancy. Course and complications. Management of pregnancy and labor. Rehabilitation.
2. Antihypertensive therapy during pregnancy.
3. Heart diseases in pregnancy. Contraindications for pregnancy. Complications. Management of pregnancy and labor. Rehabilitation.
4. Clinical course of pregnancy in diabetes mellitus. Contraindications for pregnancy. Complications. Management of pregnancy and labor. Pathology of fetus and newborn. Rehabilitation.
5. Gestational diabetes. Diagnosis. Complications. Management of pregnancy and labor.
6. Thyroid gland disfunction during pregnancy. Complications. Management of pregnancy and labor. Pathology of the fetus and newborn.
7. Pituitary gland, adrenal glands disfunction during pregnancy. Complications. Management of pregnancy and labor. Pathology of the fetus and newborn.

Topic 6. The course and management of pregnancy, labor and the postpartum period in diseases of the blood, kidneys, acute surgical diseases

1. Clinical course of pregnancy with anemia. Contraindications for pregnancy. Complications. Treatment. Management of pregnancy and labor.
2. Clinical course of pregnancy with hereditary thrombophilia, thrombocytopenia (thrombocytopathy). Contraindications for pregnancy. Complications. Management of pregnancy and labor.
3. Clinical course of pregnancy in kidney diseases: glomerulonephritis, urolithiasis, acute cystitis. Contraindications for pregnancy. Complications. Management of pregnancy and labor. Rehabilitation.
4. Asymptomatic bacteriuria, gestational pyelonephritis: etiology, clinical course, diagnosis, treatment, prophylaxis, rehabilitation.

5. Clinical course and management of pregnancy, labor and postpartum period in acute surgical pathology. Complications for mother and child, its prophylaxis.

Topic 7. Complications caused by maladaptation to pregnancy. Hypertensive disorders in pregnancy

1. Hyperemesis gravidarum. Clinical presentation, pregnancy management tactics, treatment, indications for early termination of pregnancy, prevention, and medical rehabilitation.
2. Definition and classification of hypertensive disorders in pregnancy.
3. Pathogenesis of preeclampsia.
4. Diagnostic criteria for gestational hypertension, preeclampsia, and severity assessment.
5. Eclampsia. HELLP syndrome. Treatment principles for patients with preeclampsia, medications used. Delivery of patients with preeclampsia.
6. Risk groups and prognosis of preeclampsia. Medical prevention of preeclampsia.
7. Cholestasis in pregnancy: etiopathogenesis, clinical presentation, diagnosis, and treatment.

Topic 8. Obstetric bleeding

1. Causes of obstetric bleeding during pregnancy, delivery, postpartum period. Characteristics of obstetric hemorrhage. Estimation of blood loss volume.
2. Placenta previa: causes, classification, clinical features, diagnosis, differential diagnosis. Complications. Management.
3. Abruptio placentae: causes, classification, clinical features, diagnosis, differential diagnosis. Complications. Management.
4. Uteroplacental apoplexy (Couvelaire uterus): pathogenesis, clinical manifestations, diagnosis, obstetrical tactics, complications for mother and fetus.
5. Causes of bleeding in the third stage of labor. Placental accreta, increta, percreta. Etiology, pathogenesis, classification, clinical signs, diagnosis, differential diagnosis. Indications and technique of manual placental removal operation.
6. Early and late postpartum hemorrhage. Etiology, risk factors, diagnosis.
7. Algorithm for providing medical care: conservative and surgical methods of treatment and prevention.

Topic 9. Hemorrhagic shock. Disseminated intravascular coagulation syndrome. Amniotic fluid embolism

1. Hemorrhagic shock in obstetrics: pathogenesis, classification.
2. Clinical features, principles of diagnosis and treatment for hemorrhagic shock in obstetrics.
3. Disseminated intravascular coagulation syndrome in obstetrics: risk factors, pathogenesis, clinical features, principles of diagnosis and treatment.
4. Prevention of obstetrical bleedings. Groups at risk of obstetric hemorrhage.
5. Amniotic fluid embolism. Etiology, predisposing factors, pathogenesis, clinical signs, diagnosis, differential diagnosis. Obstetrical tactics.

Topic 10. Miscarriage. Preterm labor

1. Miscarriage. Etiology, pathogenesis. Classification.
2. Spontaneous abortion: stages, diagnosis, treatment, rehabilitation.
3. Cervical insufficiency: causes, diagnosis, methods of correction, management of pregnancy and labor.
4. Hormonal therapy of miscarriage: principles, indications, medications, monitoring of treatment efficacy.
5. Preterm labor: causes, classification by gestational age. Conservative management of preterm labor: tocolysis, magnesium therapy, prevention of RDS in fetus and newborn.
6. Management of premature rupture of the amniotic membranes (PROM).
7. Signs of immaturity of the newborn. Nursing of premature infants.

Topic 11. Contracted pelvis. Big fetus. Shoulder dystocia. Injuries of the birth canal

1. Anatomy of maternal pelvis. Pelvimetry. Planes and diameters of true pelvis and fetal scull.
2. Contracted pelvis: etiology, classification, diagnostics, course and management of pregnancy.
3. Diagnostic criteria for big fetus.
4. Cephalopelvic disproportion: causes, diagnostics, management. Complications for mother and fetus. The mechanism of labor for different types of contracted pelvis.
5. Shoulder dystocia: causes, diagnosis, obstetrical tactics. Complications for mother and fetus.
6. Injuries of the external genitalia and perineum, vagina, cervix, uterine rupture: causes, clinical manifestations, differential diagnosis, management.
7. Obstetric hematomas: causes, clinical features, diagnosis, treatment. Medical prevention of maternal injuries in labor.

Topic 12. Abnormal uterine action. Induced labor

1. Physiology of uterine contractions.
2. Causes of abnormal uterine action. Classification.
3. Pathological preliminary period: clinical signs, differential diagnosis, treatment, obstetrical tactics.
4. Uterine inertia: clinical signs, diagnosis, clinical course of labor, treatment, obstetrical tactics.
5. Generalized tonic contraction: clinical signs, diagnosis, clinical course of labor, treatment, obstetrical tactics.
6. Incoordinate uterine action: causes, severity, clinical manifestations, diagnosis, differential diagnosis, clinical course of labor, methods of treatment.
7. Induced labor. Indications. Methods of pre-induction and induction of labor activity.

Topic 13. Malposition, malpresentation, multiple pregnancy

1. Breech presentation. Etiology. Classification. Diagnosis. Course and management of pregnancy in breech presentation.

2. The clinical course of labor in breech presentation. Biomechanism of birth. Complications for mother and fetus in breech presentation.

3. Management of vaginal breech delivery. Management of complicated breech delivery.

4. Brow presentation, face presentation, brow presentation. Causes. Clinical manifestations. Diagnosis. Complications. Management.

5. Transverse lie, unstable lie. Causes. Clinical manifestations. Diagnosis. Complications. Management.

6. External cephalic version: indications, contraindications, complications, Technic of operation.

7. Multiple pregnancy. Causes. Classification. Diagnosis of multiple pregnancy, the course and management of pregnancy and labor.

Topic 14. Infections in pregnancy

1. Urogenital infections in pregnant women: nonspecific vaginitis, bacterial vaginosis, vulvovaginal candidiasis, sexually transmitted infections. Etiology, pathogenesis, clinical picture, diagnosis, treatment. Course and management of pregnancy and childbirth. Medical prevention.

2. TORCH infection. Etiology, pathogenesis, clinical picture, diagnosis, treatment. Course and management of pregnancy and childbirth. Medical prevention.

3. Hepatitis in pregnant women. Etiology, pathogenesis, clinical picture, diagnosis, treatment. Course and management of pregnancy and childbirth. Medical prevention.

4. HIV infection in pregnant women. Etiology, pathogenesis, clinical picture, diagnosis, treatment. Course and management of pregnancy and childbirth. Medical prevention.

5. Course and management of pregnancy, childbirth, postpartum period in diseases of the upper respiratory tract (rhinitis, sinusitis, tonsillitis, pharyngitis, laryngitis), acute bronchitis, bronchial asthma, pneumonia, coronavirus infection.

6. Course and management of pregnancy, childbirth, postpartum period with influenza, the impact of infection on the fetus and newborn child.

7. Intrauterine infection. Definition. Ways of penetration of microorganisms to the fetus. Clinical picture and diagnosis of intrauterine infection. Obstetric tactics.

8. Principles of rational antibiotic therapy in patients with infectious and inflammatory diseases during pregnancy, childbirth and in the postpartum period.

Topic 15. Intrauterine development of the fetus and embryonic membranes. Threatened conditions of the fetus

1. Fertilization. Development of embryonic membranes. Structure and functions of the placenta. Composition, formation and functions of amniotic fluid.

2. Intrauterine development of the fetus, critical periods.

3. Placental insufficiency: etiology, pathogenesis, classification.

4. Chronic fetal hypoxia and FGR: classification, clinical features, diagnostic methods. Management of pregnancy and labor for patients with FGR. Prophylaxis.

5. Antenatal fetal death. Etiopathogenesis. Clinical picture. Diagnosis. Tactics of pregnancy and childbirth.

6. Pathogenetic mechanisms of the immunological conflict between mother and fetus. Reasons of mother's sensibilization.

7. 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. Prevention of hemolytic disease.

Topic 16. Operative obstetrics

1. Anatomy and topography of the female genital organs and pelvic floor.
2. Cesarean section (CS). Indications during pregnancy and labor.
3. Advantages of elected caesarean section. Preoperative care. Anesthesia for CS: methods, medications, complications.
4. Technic of abdominal CS in lower uterine segment.
5. Intra- and postoperative complications of CS. Postoperative care. Prevention of complications of CS. Pregnancy after CS.
6. Obstetrical forceps and vacuum extraction: indications, conditions and contraindications. Methods of anesthesia. Technique. Complications for the mother and fetus.
7. Destructive operations: types of operations, indications, conditions. Methods of analgesia, complications.
8. Episio- and perineotomy. Indications and technique of operations. Postoperative management.
9. Rational antibiotic prophylaxis and antibiotic therapy for typical surgical procedures and operations in obstetrics.

Topic 17. Physiology and pathology of the puerperium

1. Duration of the postpartum period. Clinical course of the physiological puerperium. Management of normal puerperium. Mechanism of lactation. Principles of breastfeeding.
2. Etiopathogenesis of septic diseases in the puerperium. Predisposing factors for the development of infectious complications: nipple cracks, lactostasis, uterine subinvolution, lochio- and hematometra. Stages of the spreading of the purulent-septic process.
3. Clinical forms of the local inflammatory diseases (wound infection, endometritis, lactational mastitis).
4. Clinical course and management of parametritis, metrothrombophlebitis, pelvioperitonitis, thrombophlebitis.
5. Clinical forms of generalized inflammatory diseases. Causes and clinical variants of peritonitis after cesarean section.
6. Sepsis: etiology, pathogenesis, clinical, laboratory, instrumental criteria, diagnosis, prevention. Signs of multiple organ failure (SOFA, qSOFA scale). Principles of sepsis treatment: antibacterial therapy, criteria for treatment efficacy.
7. Septic shock: etiology, pathogenesis, phases of development, clinical picture, diagnosis, treatment, prevention. Principles of treatment of postpartum infectious and inflammatory diseases. Antibacterial drugs used to treat postpartum infectious and inflammatory diseases.

Topic 18. Pediatric gynecology.

1. Causes of abnormalities in the development of the female genital organs. Pathogenesis.
2. Abnormalities in the development of the uterus and vagina. Classification. Clinical picture. Diagnosis. Indications for surgical treatment.
3. Abnormal uterine bleeding in puberty. Etiopathogenesis. Clinical picture. Diagnosis. Treatment.
4. Disorders of sexual development: premature puberty and delayed puberty. Clinical picture. Diagnosis. Treatment.
5. Inflammatory diseases of the genital organs in childhood and adolescence. Etiology. Clinical picture. Diagnosis. Treatment.

Topic 19. Dysbiotic and inflammatory diseases of the genital organs of non-specific etiology

1. Female reproductive tract microbiota in health and pathology.
2. Physiological mechanisms of protection against pathogenic microflora and inflammatory diseases of the genital organs.
3. Bacterial vaginosis: etiology, pathogenesis, clinical picture, diagnosis, treatment, prevention.
4. Inflammatory diseases of the female genital organs of non-specific etiology (vulvitis, bartholinitis, vaginitis, endocervicitis: etiology, pathogenesis, clinical picture, diagnosis, treatment.
5. PID (endometritis, salpingitis, salpingo-oophoritis, hydrosalpinx, pyosalpinx, parametritis; pelvioperitonitis, pelvic abscess): etiology, pathogenesis, clinical picture, diagnosis, treatment.

Topic 20. Inflammatory diseases of the genital organs of specific etiology

1. Genital herpes: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
2. Vulvovaginal candidiasis: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
3. Trichomoniasis: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
4. Ureaplasmosis, urogenital mycoplasmosis: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
5. Urogenital chlamydial infection: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
6. Gonorrhea: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.
7. Syphilis: clinical picture, diagnosis, principles of treatment, medical prevention, prognosis for reproductive health.

Topic 21. Menstrual cycle and its disorders

1. Menstrual cycle. Definition. Characteristics of a normal menstrual cycle.
2. Levels of regulation of the reproductive system. Effects of gonadotropic hormones, estrogens, progesterone, androgens.
3. Classification of menstrual disorders. Etiology and pathogenesis.

4. Amenorrhea, oligomenorrhea. Definition. Classification. Diagnosis. Treatment.

5. Abnormal uterine bleeding. Definition. Classification. Clinical picture. Diagnosis. Treatment.

6. Dysmenorrhea. Definition. Classification. Diagnosis. Treatment.

Topic 22. Neuroendocrine syndromes in gynecology

1. Premenstrual syndrome. Definition. Etiopathogenesis. Clinical picture. Diagnosis. Treatment.

2. Polycystic ovary syndrome. Definition. Etiopathogenesis. Diagnosis. Clinical picture. Treatment.

3. Congenital adrenal hyperplasia. Definition. Etiopathogenesis. Clinical picture. Diagnosis. Treatment.

4. Hyperprolactinemia. Definition. Etiopathogenesis. Clinical picture Diagnosis. Treatment.

5. Menopausal (climacteric) syndrome. Postovariectomic syndrome. Premature ovarian insufficiency. Clinical picture. Diagnosis. Treatment.

6. Drugs for menopausal hormone therapy. Indications and contraindications for menopausal hormone therapy.

Topic 23. Non-inflammatory diseases of the female genital organs

1. Etiology, modern methods of diagnosis, treatment and prevention of non-inflammatory diseases of the vulva.

2. Benign diseases of the cervix. Classification. Methods of diagnosis and treatment.

3. Premalignant diseases of the cervix. Classification. Methods of diagnosis and treatment. Principles of medical examination.

4. Etiopathogenesis and classification of endometrial hyperplasia. Clinical picture and diagnosis.

5. Conservative and surgical methods of treatment of endometrial hyperplasia. Medical prevention.

Topic 24. Endometriosis. Benign breast diseases in women.

1. Endometriosis. Definition. Theories of origin. Pathogenesis. Classification.

2. Clinical picture and diagnosis of various forms of endometriosis: adenomyosis; ovarian endometriosis; endometriosis of the cervix and vagina; retrocervical endometriosis; extragenital endometriosis.

3. Modern methods of endometriosis treatment: conservative method; surgical method, indications for surgery, scope of surgical intervention; mixed.

4. Benign breast diseases in women. Definition. Etiopathogenesis. BI-RADS classification. Clinical manifestations. Diagnosis. Ultrasound examination of the mammary glands. Treatment.

Topic 25. Benign tumors of the uterus and appendages

1. Etiology and international classification of ovarian tumors.

2. Methods of diagnosing ovarian tumors. Ultrasound diagnostic signs for various types of ovarian tumors, classification O-RADS.

3. Basic principles of treatment and follow-up of patients with ovarian tumors.
4. Uterine fibroids. Etiopathogenesis and classification. Clinical picture and diagnostic methods.
5. Treatment, indications for surgical treatment. Myomectomy technique, subtotal and total hysterectomy.
6. Principles of medical check-up of patients with uterine fibroids.
7. Uterine fibroids and pregnancy.

Topic 26. Emergency medical care in gynecology

1. Ectopic pregnancy. Etiopathogenesis, classification, clinical picture, diagnosis, treatment, prevention. Rehabilitation.
2. Apoplexy of the ovaries, rupture of the ovarian cyst: etiology, pathogenesis, clinical picture, diagnosis, treatment. Rehabilitation.
3. Torsion of ovarian tumors. Etiology, pathogenesis, clinical manifestations, diagnosis, treatment, prophylaxis.
4. Complicated uterine fibroid: necrosis of the fibroid node, torsion of the pedicle of the subserous myoma node: Etiology, pathogenesis, clinical picture, diagnosis, treatment. Rehabilitation.
5. Perforation of the uterine wall during intrauterine manipulations: etiology, pathogenesis, clinical picture, diagnosis, treatment. Rehabilitation.
6. Pelvic abscess: etiology, pathogenesis, clinical picture, diagnosis, treatment. Rehabilitation.

Topic 27. Operative gynecology. Preoperative preparation, typical gynecological operations and postoperative management of gynecological patients

1. Topographic anatomy of the female genital organs. Uterine support. Ligaments of the uterus.
2. Preparation for planned and emergency gynecological operations. Surgical approaches in gynecology.
3. Typical gynecological operations on the uterus, uterine appendages.
4. Endoscopic methods of treatment in gynecology.
5. Typical manipulations in gynecology: D&C, biopsy of the endometrium, biopsy of the cervix, culdocentesis.
6. Postoperative complications and their prevention. Management of the postoperative period.
7. Rational antibiotic prophylaxis and antibiotic therapy for typical surgical manipulations and operations in gynecology.

Topic 28. Pelvic organs prolapse

1. Structure and functions of the pelvic floor.
2. Pelvic organs prolapse. Etiology. Pathogenesis.
3. Risk factors for pelvic organs prolapse. Classification.
4. Clinical picture and diagnosis of pelvic organs prolapse.
5. Types of urinary incontinence.
6. Principles of pelvic organs prolapse treatment. Typical gynecological surgeries for pelvic organs prolapse. Medical prevention of pelvic organs prolapse.