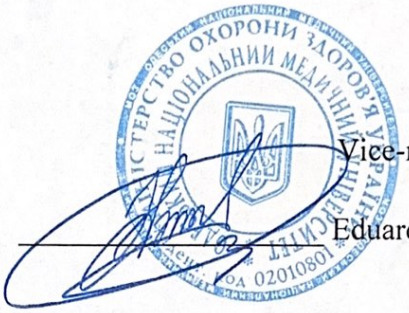
MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

International Faculty

Department of obstetrics and gynecology



CONFIRMED by
Vice-rector for scientific and pedagogical work
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September 1, 2023

METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL CLASS

International Faculty, Course V

Discipline “Obstetrics and Gynecology”

Practical lesson №19. Topic: Miscarriage. Preterm labor.

Approved:

Meeting of the Department of Obstetrics and Gynecology of Odesa National Medical University

Protocol No. 1 dated August 28, 2023.

Head of the Department_____ (Ihor GLADCHUK)

Developer:
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PRACTICAL CLASS №19: **MISCARRIAGE. PRETERM LABOR.**

LEARNING OBJECTIVE is to gain basic knowledge about definition of preterm labor and delivery, current concepts in the pathophysiology of preterm labor, risk factors for preterm labor: obstetrics history infection, demographics, psychosocial factors, long term prediction of preterm labor: fetal fibronectins, cervical length, inflammatory markers risk scoring systems, management of preterm labor: tocolysis use of corticosteroids, antibiotics, prevention of preterm labor: progesterone, cervical cerclage, obstetrics issues in preterm labor: mode of delivery, care of premature neonate, methods of obstetrical abdominal examination: inspection, palpation, auscultation in order to provide successful obstetric outcome.

BASIC CONCEPTS: Causes of spontaneous abortion at different gestational ages. Classification, symptoms, diagnosis, treatment and prevention of spontaneous abortion. Cervical insufficiency: diagnosis, management. Prevention of miscarriage. Preterm labor: causes, prediction, diagnosis, management. Management of PPROM. Prevention of preterm delivery.

EQUIPMENT

- Obstetric models and obstetric instruments (pelvimeter, obstetric stethoscope, centimeter tape).
- Professional algorithms, structural-logical schemes, tables, videos.
- Results of laboratory and instrumental researches, situational tasks, patients, medical histories.
- Multimedia equipment (computer, projector, screen), TV.

EDUCATIONAL TIME – 4 h

1. ORGANIZATIONAL STAGE

- Greetings,
- checking attendees,
- defining of educational goals,
- providing of positive motivation.

Preterm birth is the single most important factor effecting perinatal outcomes in terms of morbidity and mortality. Preterm labor is defined by WHO as the onset of regular uterine contractions, between viability and 37 weeks' gestation, associated with cervical effacement and dilatation. Current guidelines from many progressive countries describe a "threshold of viability' between 22 and 26 weeks; thus, preterm birth occurs between 22-26 weeks and 37 weeks' gestation. Up to 30-40% of cases of preterm birth are iatrogenic due to deliberate induction of labor or pre labor caesarean section for conditions causing maternal or fetal compromise. The remainder of the cases of preterm birth follow spontaneous preterm labor, with or

without preterm prelabor membrane rapture, and the initiating factors are the subject of much scientific interest and debate.

2. CONTROL OF BASIC KNOWLEDGE (written work, written testing, online testing, face-to-face interview, etc.)

2.1. Requirements for the theoretical readiness of students to perform practical classes.

Knowledge requirements:

– Ability to collect data on patient complaints, medical history, life history;
– Ability to evaluate information about the diagnosis using a standard procedure, based on the results of laboratory and instrumental studies. To determine the list of required clinical, laboratory and instrumental studies and evaluate their results;
– Ability to select the leading clinical symptom or syndrome;
– Ability to make a preliminary and a differential diagnosis and make the clinical diagnosis of the disease;
– Ability to determine the principles of treatment of diseases, the necessary mode of work and rest, the nature of nutrition;
– Ability to diagnose emergencies;
– Ability to determine tactics and provide emergency medical care;
– Ability to provide consultations on family planning, determine the tactics of physiological pregnancy, physiological labor and the postpartum period;
– Ability to assess mother's condition; to carry out diagnostic and tactical measures in each period of labor; to exam woman in labor; assess the condition of the fetus during childbirth; to conduct the postpartum period;
– Ability to assess the patient, and the necessary examination before using a contraceptive; demonstrate family planning counseling skills;
– Ability to formulate and bring to the mother, relatives and specialists recommendations for the most effective mode of delivery; to provide the necessary information about changes in a female body in the postpartum period;
– Ability to keep medical records.

List of didactic units:

- Causes of spontaneous abortion at different gestational ages.
- Classification, symptoms, diagnosis, treatment and prevention of spontaneous abortion.
- Cervical insufficiency: diagnosis, management.
- Prevention of miscarriage.
- Preterm labor: causes, prediction, diagnosis, management.

– Management of PPROM.
– Prevention of preterm delivery.
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2.2. Questions (test tasks, tasks, clinical situations) to test basic knowledge on the topic of the class.

1. Patient '30 admitted to the gynecology department with complaints of recurrent pulling abdominal pain, blood spotting from the genital tract. In the history of two spontaneous abortions. Vaginal study: cervix up to 3 cm, cyanotic, the outer jaws pass fingertip, uterus is soft increased to 6.7 weeks of pregnancy, applications are not palpable, vaults deep. Last menstruation 2 months ago. What should appoint a more accurate diagnosis?

+A. Pelvic ultrasound
B. Measurement of basal temperature
C. Determine the contents of HCG in urine
D. Identify the 17 level in the urine ketosteroids
E. All of the above

2. Patient '22 admitted to the gynecology department with complaints of recurrent pulling pain in the abdomen and in the lumbar region, baldly bleeding from the genital tract. Vaginal study: cervix length 2.5 cm, cyanotic, the outer jaws passes fingertip, uterus is soft, increased to 6-7 weeks. pregnancy, applications are not defined, vaults deep. Last menstruation 2 months ago. What is the most likely diagnosis?

A. menstrual disorders
+ B. Threatened abortion
C. Abortion run
D. Incomplete abortion
E. Ectopic Pregnancy

3. Primigravida in the period 11-12 weeks of gestation complains of intense cramping abdominal pain and significant bleeding from the genital tract. Abdomen soft, painless. Vaginal cancer research body increased to 11-12 weeks of pregnancy, periodically tones. Cervical canal passing to 2 cm. Profuse bleeding. What is the most likely diagnosis?

A. Threatened abortion
+ B. Spontaneous abortion
C. Incomplete abortion
D. Full abortion
E. Cervical pregnancy

4. Primigravida admitted to the gynecology department with complaints of recurrent abdominal pain and bleeding from the genital tract. Vaginal study: cervix length of

2.5 cm, cyanotic, the uterus passes fingertip, uterus is soft consistency, increased to 6.7 weeks of pregnancy, applications are not defined, the vault free. Tactics doctor?
+A. To prescribe hormone therapy
B. Assign antibiotic therapy
C. Assign uterotonic therapy
D. To appoint sedative therapy
E. Dilation and Curettage

5. Examining the patient in the women's clinic, the doctor discovered that the uterus is increased to 5-6 weeks of pregnancy, asymmetric in the left corner of the uterus palpable protrusion. Uterus soft consistency, but decreased during the study become hard and then again become soft. What is the most likely diagnosis?
+A. The uterine pregnancy
B. Threatened abortion
C. Abortion run
D. Uterine fibroids
E. Ectopic Pregnancy

6. Women, 28 years old admitted to the gynecology department complaining of abdominal pain left and minor bleeding during the last 2 days. 2 In the history of childbirth. Last menstruation 6 weeks ago. Menstrual disorders still have not watched. Protected from pregnancy using intrauterine device. BP during hospitalization 110/70 mmHg, hemoglobin 124 g / l. What is most informative method of investigation?
A. Radiography “Sella turcica”
B. Determination of HGH in urine
C. Functional diagnostic tests
+ D. Transvaginal pelvic ultrasound
E. Dilation and curettage

7. Primigravida at term of gestation 5-6 weeks. There was spontaneous abortion at home. Vaginal study: external genitalia are developed, female type, with no signs of inflammation, free vagina, cervix formed, the cervical canal passes fingertip, uterus firm, painless palpation slightly increased in size. Applications are not palpable uterine, vaginal vault free. What is the most likely diagnosis?
A. Threatened abortion
B. Abortion run
C. incomplete abortion
+D. Complete abortion
E. Cervical pregnancy

8. Patient, 24 years old delivered to hospital by ambulance with complaints of cramping abdominal pain, heavy with clots bleeding from the genital tract, weakness. BP 100/60 mm Hg. Art., pulse 90 beats / min. Last normal menstruation

2 months ago. During examination of the cervix in the speculum defined remnants of embryonic tissue. Bimanual examination: uterus size is increased to 6 weeks of pregnancy, painless, cervical canal passes finger. What is the most likely diagnosis?

A. Abortion run
+B. Incomplete abortion
C. Complete abortion
D. cervical abortion
E. dysfunctional uterine bleeding

9. Pregnant '22 was registered with the LCD on 11-12 weeks of pregnancy. In recent days hauling felt pain in the lower abdomen, but the doctor is not addressed. An hour ago, there were cramping abdominal pain and bleeding. Vaginal study: vagina filled with blood clots, uterine cervix exposed to 2 cm, the uterus increased to 11-12 weeks of pregnancy, dense. Bold blood, abundant. What are the doctor's tactics?

A. Observations
B. hormone therapy (progesterone)
C. tocolysis
D. Blood transfusion
+ E. Curettage

10. Secondi Para at gestation term 18 weeks, was admitted to the hospital with complaints of recurrent pulling pain in the abdomen and in the lumbar region, dark bloody discharge from the genital tract, nausea, weakness. Vaginal study: uterus increased to 12 weeks of pregnancy. With ultrasound, fetal cardiac activity is not visualized, the displacement of the skull bones, spine bending angulate fetus. What is the most likely diagnosis?

A. Threatened abortion
B. Abortion run
C. incomplete abortion
D. Full abortion
+ E. missed abortion

3. FORMATION OF PROFESSIONAL SKILLS (mastering skills, conducting curation, determining the treatment regimen, conducting a laboratory study, etc.).

3.1. Content of tasks (tasks, clinical situations, etc.).

Tests:

11. A pregnant 26-year-old woman was admitted to a hospital for abdominal pain and bleeding from the genital tract. Bimanual examination revealed that uterus was the size of 9 weeks of pregnancy, the cervical canal let a finger through. Fetal tissues could be palpated in the orifice. There was moderate vaginal bleeding. What is the tactics of choice?

+A. Instrumental extraction of fetal tissue
B. Surveillance
C. Administration of hormones
D. Hemostatic and antianemia therapy
E. Therapy for the maintenance of pregnancy

12. A 36-year-old female presented to a gynecological hospital with a significant bleeding from the genital tract and a 1-month delay of menstruation. Bimanual examination revealed soft barrel-shaped cervix. Uterus was of normal size, somewhat softened. Appendages were unremarkable on both sides. Speculum examination revealed that the cervix was cyanotic, enlarged, with the the external orifice disclosed up to 0,5 cm. Urine HCG test was positive. What is the most likely diagnosis?

+A. Cervical pregnancy
B. Uterus gestation
C. Abortion in progress
D. Threatened miscarriage
E. Ectopic pregnancy

13. A pregnant woman is 28 years old. Anamnesis: accelerated labor complicated by the II stages degree cervical rupture. The following two pregnancies resulted in spontaneous abortions at the terms of 12 and 14 weeks. On mirror examination: the uterine cervix is scarred from previous ruptures at 9 and 3 hours, the cervical canal is gaping. On vaginal examination: the cervix is 2 cm long, the external orifice is open 1 cm wide, the internal orifice is half-open; the uterus is enlarged to the 12th week of pregnancy, soft, mobile, painless, the appendages are without changes. What diagnosis would you make?

+A. Isthmic-cervical insufficiency, habitual non carrying of pregnancy
B. Threatened spontaneous abortion
C. Incipient abortion, habitual non carrying of pregnancy
D. Cervical hysteromyoma, habitual non carrying of pregnancy
E. Cervical pregnancy, 12 weeks

14. A 10 weeks of pregnant woman was admitted to a hospital for recurrent pain in the lower abdomen, bloody discharges from the genital tracts. The problems developed after a case of URTI. The woman was registered for antenatal care. Speculum examination revealed cyanosis of vaginal mucosa, clean cervix, open cervical canal discharging blood and blood clots; the lower pole of the gestational sac was visible. What tactics should be chosen?

+A. Curettage of the uterus
B. Pregnancy maintenance therapy
C. Expectant management, surveillance
D. Hysterectomy

E. Antiviral therapy

15. A pregnant woman is 28 years old. Anamnesis: accelerated labor complicated by the II stages of degree cervical rupture. The following two pregnancies resulted in spontaneous abortions at the terms of 12 and 14 weeks. On mirror examination: the uterine cervix is scarred from previous ruptures at 9 and 3 hours, the cervical canal is gaping. On vaginal examination: the cervix is 2 cm long, the external orifice is open 1 cm wide, the internal orifice is half-open; the uterus is enlarged to the 12th week of pregnancy, soft, mobile, painless, the appendages are without changes. What diagnosis can be made?

A. Cervical hysteromyoma, habitual non carrying of pregnancy
B. Incipient abortion, habitual non carrying of pregnancy
+ C. Isthmic-cervical insufficiency, habitual non carrying of pregnancy
D. Threatened spontaneous abortion
E. Cervical pregnancy 12 weeks

16. A woman with the pregnancy term of 8 weeks complains of elevated temperature up to 37.6°C, skin rash that can be characterized as macular exanthema, enlargement of posterior cervical and occipital lymph nodes, small amount of bloody discharge from the genital tracts. She was examined by the infectious diseases specialist and diagnosed with rubella. What tactics should the obstetrician-gynecologist choose?

+ A. Abortion
B. Treatment of incipient abortion
C Prescription of hemostatic therapy
D. Prescription of antibacterial therapy
E. Prescription of antiviral therapy

17. A 25-year-old woman was brought into the gynecological department with profuse bloody discharge from her genital tracts. She is 12 weeks pregnant; the pregnancy is planned. Within the last 3 days she was experiencing pains in her lower abdomen that eventually started resembling cramps, she developed bleeding. Her skin is pale, pulse -88/min., blood pressure -100/60 mm Hg, body temperature - 36.8°C. Vaginal examination: the uterus size corresponds with 11 weeks of pregnancy, the cervical canal allows inserting 1 linger and contains fragments of the fertilized ovum, the discharge is bloody and profuse. What is the most likely diagnosis?

+ A. 12-week pregnancy, spontaneous abortion in progress
B. 12-week pregnancy, threatened spontaneous abortion
C. Full-term pregnancy, term labor
D. Disturbed menstrual cycle, hyper polymenorrhagia
E. Disturbed menstrual cycle, amenorrhea

18. A 17-year-old G2P0 woman with no prenatal care at 29 weeks' gestation presents with painful contractions and pressure. Her cervix is 2 cm dilated, 60% effaced, and breech at –2 station. There is no evidence of ruptured membranes. Her contractions are every 3 minutes. FHT are 150 with accelerations. Maternal vital signs are temperature 36.8 degrees, pulse 96, BP 110/72. What should you do?

A. prepare for a cesarean delivery
B. observe to look for cervical change
C. give IV sedation
D. begin to colitis agents +
E. start antibiotics

19. A 31-year-old woman (gravida 6, para 0-2-3-1) comes to you at 10 weeks' gestation with the history of having had progressively earlier deliveries, all without painful contractions. Her first child was born at 34 weeks and survived, the next delivered at 26 weeks, the next two at 22 weeks, and the last one at 20 weeks. No congenital abnormalities were found. On examination, her uterus is 10-12-weeksize, FHTs are present with Doppler, and the cervix is soft, three-quarters effaced, and 2-cm dilated. With this information, your first diagnosis is intrauterine gestation and which of the following?

A. incompetent cervical os +
B. genetic disease
C. fibroid uterus
D. premature labor
E. progesterone lacks

3.2. Educational materials, recommendations (instructions) for performing tasks

Abdominal pain in pregnancy: pregnancy related (<24wks). The diagnosis of acute abdominal pain in pregnancy can be challenging. It is often difficult to differentiate between gynecological, non-gynecological, and pregnancy-related causes of abdominal pain. Some of the routine surgical investigations and procedures carry a risk to the fetus but this needs to be balanced against the risk of delayed diagnosis and treatment which would be harmful to both mother and child.

Miscarriage. Can be associated with lower abdominal dull ache to severe continuous or colicky pain. Vaginal bleeding is present in most cases. Positive urine pregnancy test, pelvic examination, and USS are helpful in diagnosis.

Ectopic pregnancy. Usually, unilateral lower abdominal pain at <12wks gestation. Associated with brownish vaginal bleeding. Shoulder tip pain is suggestive of

hemoperitoneum (bleeding ectopic). Serum HCG, USS, and laparoscopy are diagnostic.

Constipation. Physiological changes in pregnancy result in the slowing of gut peristalsis. Signs and symptoms Varied but colicky lower abdominal pain (L>R) is the most common. Management. Diet. Osmotic laxatives. Glycerin suppositories.

Round ligament pain. This pain is attributed to stretching of the round ligaments. Incidence 20–30% of pregnancies. Signs and symptoms. Commonly presents in 1st and 2nd trimester. Pain is often bilateral and located on the outer aspect of the uterus. Radiating to the groin. Aggravated by movement (especially getting up from a chair or turning over in bed). Treatment. Reassurance. Simple analgesia. Support belts may help.

Urinary tract infection. UTIs are more common in pregnancy and are an important association of preterm labor. Signs and symptoms. Suprapubic/lower abdominal pain**.** Dysuria, nocturia, and frequency. Investigations. Urine dipstick: nitrites strongly suggest a UTI blood, leucocytes, and protein raises index of suspicion. Midstream sample urine (MSU). Management. Antibiotics. Analgesia. Fluid intake.

Fibroids—red degeneration. Uterine fibroids occur in 20% of women of reproductive age. They may increase in size during pregnancy, compromising blood supply to central areas and causing pain. This is known as red degeneration. Incidence. 15% of pregnant women who have fibroids. Signs and Symptoms. Usually occurs between the 12th and 22nd week of pregnancy. Constant pain localized to one area of the uterus coinciding with the site of the fibroid (may be severe pain). May have a low-grade pyrexia. Investigations. USS (identifies fibroids but cannot confirm red degeneration). FBC (may show leukocytosis). Treatment. Analgesia (pain should resolve in 4–7 days; however, it may be severe and prolonged, so advice from pain specialists should be sought). Placental abruption differs in that the fibroid uterus is soft except at the site of the fibroid and the FH is normal. Myomectomy must not be performed in pregnancy as it will bleed ++ (the only exception being for a tarted pedunculated fibroid).

Abdominal pain in pregnancy: pregnancy related (>24wks). Labor Signs and symptoms. Usually presents with regular painful contractions. Preterm labor may present with a history of vague abdominal pain which the woman may not associate with uterine activity. Consider a VE in pregnant women with abdominal pain. Braxton Hicks contractions These are spontaneous benign contractions of the uterus, commonly occurring in the 3rd trimester. Signs and symptoms. Painless and infrequent tightening’s of the uterus. VE reveals uneffaced and closed cervix.

Investigations. Exclusion of precipitants of preterm labor. Fibronectin assay if uncertain whether preterm labor. Treatment. Reassurance. Symphysis pubis dysfunction. Signs and symptoms. Pubic pain relating to upper thighs and perineum. Aggravated by movement. Difficulty walking resulting in a waddling gait. Treatment. Analgesia and physiotherapy.

Reflux esophagitis. Relaxation of the esophageal sphincter occurs in pregnancy and the pressure of the gravid uterus on the distal end of the esophagus results in an increased incidence of reflux esophagitis. Gastric ulceration is less com- mon due to decreased gastric acid secretion. Incidence 60–70% of pregnant women. Risk factors. Polyhydramnios. Multiple pregnancy. Signs and symptoms. Epigastric/retrosternal burning pain exacerbated by lying flat. Management**.** Exclude pre-eclampsia. Antacids, H_2receptor antagonists. Dietary and lifestyle advice (avoidance of supine position).

Uterine rupture. This usually occurs during labor but has been reported antenatally. Risk factors. Previous CS or other uterine surgery. Congenital abnormalities of the uterus. Induction or use of oxytocin in labor. Failure to recognize obstructed labor. Signs and symptoms. Tenderness over sites of previous uterine scars. Fetal parts may be easily palpable. Fetus, not palpable on VE. Vaginal bleeding may be evident. Signs of maternal shock may be present. CTG may show fetal distress and change in apparent uterine activity (contractions may seem to disappear on the tachograph). Investigations. FBC. Cross-match blood. Management. Maternal resuscitation. Urgent laparotomy to deliver fetus and repair uterus.

Other causes of abdominal pain in pregnancy. Placental abruption. Pre-eclampsia/HELLP. Abdominal pain in pregnancy: bowel related. Appendicitis. This is the most common surgical emergency in pregnant patients. Its incidence is 1:1500–2000 pregnancies with equal frequency in each trimester. Pregnant women have the same risk of appendicitis as non-pregnant women**.** Signs and symptoms. Classically periumbilical pain shifting to right lower quadrant. Pain moves towards the right upper quadrant during the 2nd and 3rd trimesters due to displacement of the appendix by a gravid uterus. Nausea and vomiting. Anorexia. Guarding and rebound tenderness present in 70% of patients. Rovsing’s sign and fever are often absent in the pregnant patient. Investigations. White cell count (WCC) and C-reactive protein (CRP) are often. USS: to exclude other causes of pain; CT/MRI may be considered. Management. Diagnostic laparoscopy/laparotomy and appendicectomy. Fetal loss is 3–5% with an unruptured appendix, to 20% if ruptured. Intestinal obstruction. It is the third most common non-obstetric reason for

laparotomy during pregnancy. It complicates 1:1500–3000 pregnancies. Incidence, increases as the pregnancy progresses.

Adhesions are the commonest cause. Signs and symptoms. Acute abdominal pain. Vomiting. Constipation. Pyrexia. Diagnosis. Erect abdominal X-ray (AXR) showing gas-filled bowel with little gas in large intestine. USS (abdominal and pelvic). Treatment. Conservative treatment ('drip and suck'). Surgery for any acute obstructive cause or when not responding to conservative management.

ABDOMINAL PAIN IN PREGNANCY: BOWEL RELATED. Causes of intestinal obstruction. Adhesions. Volvulus. Intussusception. Hernia. Neoplasm. Abdominal pain in pregnancy: other causes. Acute cholecystitis. This is the second most common surgical condition in pregnancy (progesterone diminishes smooth muscle tone and predisposes to cholestasis leading to gallstone formation). The incidence of gallstones is 7% in nulliparous and 19% in multiparous women. The incidence of acute cholecystitis is 1–8:10 000 pregnancies. Signs and symptoms. Colicky epigastric/right upper quadrant pain. Nausea and vomiting. Murphy's sign may be positive in acute cholecystitis. Jaundice (indicating obstruction of the common bile duct). Signs of systemic infection (fever and tachycardia). Investigations. FBC, LFTs, CRP (WCC and alkaline phosphatase are i in pregnancy). Bilirubin (identify patients with concomitant biliary tree obstruction). USS biliary tract (may demonstrate calculi or a dilated biliary tree). Management. Conservative approach is the most common management. Analgesics and antiemetics. Hydration. Antibiotics. Cholecystectomy preferably by laparoscopic approach may be indicated in patients with recurrent biliary colic, acute cholecystitis, and obstructive cholelithiasis (usually after delivery). Adnexal torsion This occurs when an enlarged ovary twists on its pedicle. Torsion of the ovary and other adnexal structures is more common in pregnant than non-pregnant women. Signs and symptoms. Sudden-onset unilateral colicky lower abdominal pain. Nausea and vomiting. There may be systemic symptoms such as fever. Investigations. WCC and CRP: may be elevated. USS of pelvis may show an adnexal mass and Doppler studies may show impaired blood flow. Management. If suspected, urgent laparotomy should be performed to either remove or untwist the adnexa. This may either preserve the ovary or present a non- viable ovary from becoming gangrenous. Pancreatitis. This occurs more frequently in the 3rd trimester and immediate post-partum period. It can occur in early pregnancy associated with gallstones. Although rare, it is more common in pregnancy than in non-pregnant women of a similar age. Incidence 1:5000 pregnancies. Risk factors. Gallstone disease. High alcohol intake. Hyperlipidaemia. Signs and symptoms. Epigastric pain commonly radiating to the back. Pain exacerbated by lying flat and relieved by leaning forwards. Nausea and vomiting.

Investigations. Serum amylase and lipase levels. USS to establish presence of gallstones.Management.Conservativetreatment is the mainstay:IV fluids.Electrolyte replacement. Parenteral analgesics, e.g. morphine (pethidine is contraindicated). Bowel rest with or without nasogastric suction. Early surgical intervention is recommended for gallstone pancreatitis in all trimesters as >70% of patients will relapse before delivery.Laparoscopic/open cholecystectomy. Endoscopic reterograde cholangio-pancreatography (ERCP) has a limited role in pregnancy because of radiation exposure to the fetus. If pancreatitis is severe, liaise with high dependancy unit/intensive care unit (HDU/ITU). Non-abdominal causes of abdominal pain. Other conditions unrelated to abdominal structures may also present with abdominal pain:Lower lobe pneumonia. Diabetic ketoacidosis. Sickle cell crisis. Women with social problems and domestic abuse may repeatedly attend with undiagnosable pain and it is important to ask them about this directly but sympathetically. Preterm birth is defined as delivery between 24 and 37wks. Risk factors for preterm delivery. Previous preterm birth or late miscarriage. Multiple pregnancy.Cervical surgery.Uterine anomalies. Medical conditions, e.g. renaldisease. Pre-eclampsia and IUGR (spontaneous and iatrogenic). Preterm labour: overview Delivery <34wks is more useful as adverse outcomes are rare after then. 1/3 is medically indicated (e.g. PET), and 2/3 spontaneous. Accounts for 5–10% of births but 750% of perinatal deaths. It also causes long-term handicap—blindness, deafness, and cerebral palsy. The risk is higher the earlier the gestation. The incidence is i over the years. >50% of women with painful preterm contractions will not deliver preterm: fetal fibronectin/transvaginal USS may help in diagnosis. Acute preterm labour. Preterm labour associated with cervical weakness (avoid the term ‘incompetence’) classically presents with increased vaginal discharge, mild lower abdominal pain, and bulging membranes on examination. Preterm labour associated with factors such as infection, inflammation, or abruption presents with lower abdominal pain, painful uterine contractions, and vaginal loss. Spontaneous rupture of membranes (SROM) is a common presentation of/antecedent for preterm labour. In practice it is often less clear-cut than this, and infection and cervical weakness are related and often coexist. History. Ask about pain/contractions—onset, frequency, duration, severity. Vaginal loss: SROMorPVbleeding. Obstetric history (checkhandheldnotes).Examination.Maternalpulse,temperature,respiratoryrate.Uterinetenderness(suggestsinfection/abruption).Fetalpresentation.Speculum:look for blood, discharge, liquor. Takes swabs. Gentle VE. Investigations FBC, CRP (raised WCC and CRP suggest infection). Swabs, MSU. USS for fetal presentation (malpresentation common) and estimated fetal weight (EFW). Consider fetal fibronectin/transvaginal USS if available

Management of preterm labour. Establish whether threatened or 'real' preterm labour: transvaginal cervical length scan (>15mm unlikely to labour) fibronectin assay: if –ve, unlikely to labour. Admit if risk high. Inform neonatal unit. Arrange *in utero* transfer if no suitable beds available. Check fetal presentation with USS.Steroids (12mg betametasone IM—two doses 24h apart). Antenatal steroids reduce rates of respiratory distress, intraventricu- lar haemorrhage, and neonatal death. Consider tocolysis (drug treatment to prevent labour and delivery) not >24hrs. Allow time for steroid administration and/or *inutero* transfer. Currently used tocolytics include nifedipine, and atosiban IV. X Aim should be not just prolongation of gestation (a surrogate measure) but improvement in perinatal morbidity and mortality. Trials of tocolysis have not shown improvement in these substantive outcome measures, so some prefer to avoid them. Liaison with senior obstetricians and neonatologists is essential, especially at the margins of viability (23–26wks). A clear plan needs to be made about: mode of delivery monitoring in labour presence of pediatrician/appropriate intervention at delivery. Give IV antibiotics but only if labour confirmed. RCOG. (2004). Green-top guideline no.7. Antenatal corticosteroids to prevent respiratory distress syndrome. M www.rcog.org

Pregnancy complications.

Treatment of bacterial vaginosis (BV). Some evidence suggests this may reduce the incidence of preterm prela- bour rupture of membranes (PPROM) and low birth weight in women with previous preterm birth. Clindamycin rather than metronidazole is used. Progesterone. In high risk women (e.g. previous history of late miscarriage/preterm birth), reduces recurrence. In low risk women with a short cervix, reduces preterm birth by about 50%. As a result, screening for preterm birth with cervical scanning may become universal. Effect absent/very limited in twin pregnancies. Cream or pessaries used. Cervical sutures (cerclage).X May be of benefit in selected cases. Can be inserted vaginally or, in extreme cases, abdominally. Not thought to be useful in multiple pregnancies. Elective (women with previous loss from cervical weakness). Ultrasound-indicated (in response to short cervix on transvaginal scan (TVS)). Rescue (in response to cervical dilatation). Cervical pessary These are used more often in Europe but evidence suggests they are effective. Reduction of pregnancy number. Selective reduction of triplet or higher-order multiple pregnancies (to 2) reduces the risk of preterm labour while slightly increasing therisk of early miscarriage. Methods for prediction of preterm labour. Transvaginal USS of cervix. In asymptomatic women with a singleton pregnancy: risk of delivering before 32wks is 4% if cervix is >15mm long at 23wks increasing exponentially to 78% if cervix is 5mm. In symptomatic women with a singleton pregnancy: cervix <15mm, risk of delivery within 7 days is 49% cervix

>15mm, risk of delivery within 7 days <1%. Fetal fibronectin (FFN). FFN is a protein not usually present in cervicovaginal secretions at 22–36wks. Those with a +ve FFN test are more likely to deliver (test for FFN with swab and commercially available kit). Predicts preterm birth within 7–10 days of testing. Pregnancy complications. Fetal tachycardia. Speculum: offensive vaginal discharge—yellow/brown. Avoid VE as this increases the risk of introducing infection. Preterm prelabour rupture of membranes: overview. This complicates 1/3 of preterm deliveries. About 1/3 is associated with overt infection (more common at earlier gestations). History. Ask about vaginal loss. Gush. Constant trickle or dampness.Chorioamnionitis may cause few symptoms but is associated with significant neonatal morbidity and mortality. Chorioamnionitis is also associated with significant risks to the mother. Investigations. FBC, CRP (raised WCCandCRPindicateinfection).Swabs (high vaginal swab (HVS), low vaginal swab (LVS)). MSU.USS for fetal presentation, EFW, and liquor volume. Preterm prelabour rupture of membranes:management. If evidence of chorioamnionitis: steroids (betametasone 12mg IM) deliver whatever the gestation broad spectrum antibiotic cover. If no evidence of chorioamnionitis, manage conservatively: admit inform special care baby unit (SCBU) and liaise with neonatologists steroids (12mg betametasone IM—two doses 24h apart) antibiotics (erythromycin). Use of antibiotics reduces major markers of neonatal morbidity but without long-term benefits. The ORACLE trial showed erythromycin to be beneficial. Co-amoxiclav is associated with an increased risk of necrotizing ente- rocolitis (NEC) and should be avoided. Prognosis. Depends on:Gestation at delivery. Gestation at PPROM: PPROM at <20wks—few survivors PPROM at >22wks—survival up to 50%. Reason for PPROM: prognosis better if PPROM secondary to invasive procedure (e.g. amniocentesis), rather than spontaneous. Risks to fetus from PPROM. Prematurity. Infection. Pulmonary hypoplasia. Limb contractures.

3.3. Requirements for the results of work.

- To take a medical history (general and specific, such as menstrual, obstetrics) and record
- information in a standardized proforma (antenatal record book)
- to perform general examination, assess the health status of the mother of delivery to
- determine signs and symptoms of preterm pre labor and delivery, assess their diagnostic
- value
- to calculate gestational age and due date of labor
- to perform abdominal inspection and asses abdominal enlargement

- to perform abdominal palpation and note the height of the fundus above the symphysis
- and girth of abdomen at the level of umbilicus, calculate estimated fetal weight
- to identify fetal lie, presentation, position, growth pattern, volume of liquor and also any
- abnormality, detect whether the presenting part is engaged or not
- to perform auscultation of fetal heart sounds
- to assess complaints of pregnant women, explain the origins of minor ailments in
- pregnancy, give advice how to reduce the problem
- to asses results of clinical general and obstetrical examinations, lab tests in preterm pre
- labor rupture of membranes
- to develop a plan of prenatal care in preterm labor and delivery
- to counsel the women about mode of delivery and expecting outcomes

3.4. Control materials for the final stage of the class: tasks, tests, etc.

Tests

1. A 32-year-old G2P1 presents to labor and delivery at 35 weeks of gestation, complaining of regular uterine contractions about every 5 min for the past several hours. She has also noticed the passage of a clear fluid per vagina. The external fetal monitor demonstrates a reactive fetal heart rate tracing, with regular uterine contractions occurring about every 3 to 4 min. On sterile speculum exam, the cervix is visually closed. A sample of pooled amniotic fluid seen in the vaginal vault is fern and nitramine-positive. The patient has a temperature of 38,2°C, PR - 102, WBC of 19,000. You perform a bedside sonogram, which indicates oligohydramnios and a fetus whose size is appropriate for gestational age and with a cephalic presentation. What is the next appropriate step in the management of this patient?

A. Administer betamethasone
B. Perform emergent cesarean section
C. Administer antibiotics +
D. Administer tocolytics
E. Place a cervical cerclage

2. A child was born at a gestational age of 34 weeks. The leading symptoms were respiratory distress symptoms, namely sonorous and prolonged expiration, involving additional muscles into respiratory process. The Silverman score at birth

was 0 points, in 3 hours it was 3 points with clinical findings. Which diagnostic study will allow to diagnose the form of pneumopathy?

A. X-ray of chest +
B. Clinical blood test
C. Determination of blood gas composition
D. Proteinogram
E. Immunoassay

3. A patient presents at 30 weeks' gestation in labor that cannot be stopped. Lung maturity is unlikely. Fetal lung surfactant production may be increased by a number of factors. Which of the following is proven clinically useful?

A. Glucocorticosteroids +
B. prolactin
C. thyroxine
D. estrogen
E. alpha-fetoprotein

4. A pregnant woman is 28 years old. Anamnesis: precipitous labor complicated by the II degree cervical rupture. The following 3 pregnancies resulted in spontaneous abortions at the terms of 12, 14 and 18 weeks. On examination: the uterine cervix is scarred from previous ruptures at 9 and 3 hours, the cervical canal is gaping. On vaginal examination: the cervix is 2 cm long, the external os is open 1 cm wide, the internal os is half-open; the uterus is enlarged to the 12th week of pregnancy, soft, mobile, painless, the appendages are without changes. What diagnosis would you make?

A. Cervical pregnancy, 12 weeks
B. Isthmic-cervical insufficiency, habitual non carrying of pregnancy +
C. Threatened spontaneous abortion
D. Incipient abortion, habitual non carrying of pregnancy
E. Cervical hysteromyoma, habitual non carrying of pregnancy

5. A pregnant, 34 weeks of gestation, is at the department of pathology. She has Rh- antibodies titer 1:32. From history, she had ectopic pregnancy with level of Rh-antibodies 1: 2 in 14 weeks. What should you do?

A. Blood transfusion
B. CTG
C. Early delivery +
D. Re-determination of antibodies in 1 day
E. Cordocentesis

6. A premature birth has been defined as a fetus born

A. before 37 weeks' gestation +
B. prior to the period of viability
C. weighing less than 1000 g

D. weighing more than 1000 g but less than 2500 g
E. none of the above

7. A primipara with twins at 38 weeks came into maternity hospital. On exam: first baby is in fooling breech presentation, the second - in oblique lie. Determine management of labor?

A. Vaginal delivery
B. Urgent caesarean section
C. Assign exercises for correction of baby's presentation
D. Planned caesarean section +
E. Perform external rotation

8. A woman came to the hospital in 4 hours from the start of regular contractions. The pregnancy is 3-rd, 38-39 weeks, labor is 2-nd. The size of the pelvis is normal. During external obstetric examination has found a small parts and head of fetus above pelvic inlet, there are clearly palpable two major parts of fetus, one of which is the head in the fundus of uterus. Heartbeat of fetus are clearly heard on the left below the navel, 136 beats / min and right above the navel 150 beats / min. Circumferences of the abdomen is 119 cm. The height of uterus fundus is 42 cm. The most likely component of the diagnosis?

A. Macrosomia +
B. Congenital malformations of the fetus
C. intrauterine growth retardation

Cases

№1. A 32-year-old G3P2 woman at 31 weeks' gestation arrives in the labor and delivery suite complaining of recurrent intermittent abdominal pain. She describes an increase in back pain yesterday and some mucous-like discharge today. She has noted no bleeding or leaking of fluid, but says she feels as if she is "starting her period." In reviewing her prenatal record, you note that her first pregnancy resulted in a 28-week vaginal delivery of a 1200 g female, who is currently 7 years old and doing well. Her second baby, a male, is a healthy 3 years old, although he was delivered at 33 weeks' gestation. On examination, she is afebrile, her BP is 120/80 mm Hg, pulse is 80 bpm and regular, and RR is 16 breaths/min. Her abdomen is gravid with a fundal height of 32 cm, and soft, although you note two contractions by palpation during your 10-minute examination with her. Sterile speculum examination is negative for nitrazine and ferning, and no blood is noted. Membranes are visualized through the cervix. On digital examination, her cervix is dilated 2-3 cm, effacement is 80%, and station of the fetal vertex is at -1. The electronic fetal monitor shows a reassuring fetal heart rate of 140 bpm with mild contractions every 3 to 4 minutes.

1. What is the most likely diagnosis?
2. Recognize risk factors that predispose to this pathology. What is your next management step?

№2. A 32-year-old G2P0 woman at 28 weeks' gestation comes into the obstetrical triage unit complaining of leakage of fluid per vagina approximately 4 hours previously. She denied uterine contractions or vaginal bleeding. Her prenatal course has been unremarkable. She had a miscarriage at 8 weeks' gestation previously. On examination, her BP is 100/78 mm Hg, HR 82 beats per minute, RR 18 breaths/min, and temperature 36,5°C. Her heart and lung examinations are normal. The abdomen is soft and nontender. The uterus is nontender with a fundal height of 27 cm. The fetal heart tones are in the 140 bpm range. A speculum examination reveals gross pooling of fluid in the vagina, and the cervix appears to be visually closed.

1. What is the most likely diagnosis?
2. What are your next steps? Confirm the diagnosis and develop a plan of management for this patient.

4. SUMMING UP

Assessment of the ongoing learning activity at the practical class:

1. Assessment of the theoretical knowledge on the theme:
   - methods: individual survey on the theme, participation of the students in the discussion of problem situations; assessment of performance of tests on the theme;
   - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.
2. Assessment of practical skills on the theme:
   - methods: assessment of the solution of situational tasks (including calculation) on the theme;
   - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.

Assessment of the individual task:

1. Assessment of the quality of the performance of the individual task:
   - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.
2. Assessment of the presentation and defense of an individual task, participation in the assessment of the business plan of the competitors and its critical analysis:
   - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.

The score for one practical class is the arithmetic average of all components and can only have an integer value (5, 4, 3, 2), which is rounded statistically.

Criteria for ongoing assessment at the practical class:

5	The student is fluent in the material, takes an active part in the discussion and solution of situational clinical problems, confidently demonstrates

	practical skills during the examination of a pregnant and interpretation of clinical, laboratory and instrumental studies, expresses his opinion on the topic, demonstrates clinical thinking.
4	The student is well versed in the material, participates in the discussion and solution of situational clinical problems, demonstrates practical skills during the examination of a pregnant and interpretation of clinical, laboratory and instrumental studies with some errors, expresses his opinion on the topic, demonstrates clinical thinking.
3	The student isn't well versed in material, insecurely participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a pregnant and interpretation of clinical, laboratory and instrumental studies with significant errors.
2	The student isn't versed in material at all, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of a pregnant and the interpretation of clinical, laboratory and instrumental studies.

RECOMMENDED LITERATURE

Basic:

1. Gladchuk I.Z. Obstetrics: student`s book / Gladchuk I.Z., Ancheva I.A. . – Vinnitsia: Nova Knyha, 2021. – 288 p.
2. Obstetrics and Gynecology: in 2 volumes. Volume 1. Obstetrics: textbook / V.I. Gryshchenko, M.O. Shcherbina, B.M. Ventskivskyi et al. (2nd edition). – «Medicina», 2018. – 392 p.
3. Hiralal Konar DC Dutta's Textbook of Obstetrics (9th Ed.) / Hiralal Konar (Ed.). – Jp Medical Ltd, 2018. – 700 p.
4. F. Gary Cunningham Williams Obstetrics (26th Edition) / F. Gary Cunningham, Kenneth Leveno, Jodi Dashe, Barbara Hoffman, Catherine Spong, Brian Casey. – McGraw Hill / Medical, 2022. – 1328 p.
5. Jeremy Oats, Suzanne Abraham Llewellyn-Jones Fundamentals of Obstetrics and Gynaecology (10th Ed) / Jeremy Oats, Suzanne Abraham. – Elsevier, 2016. – 384 p.

Additional:

1. The PROMPT-CIPP Editorial Team. (2019). PROMPT-CIPP Course Participant's Handbook: Care of the Critically Ill Pregnant or Postpartum

Woman (Critical Car Prompt Practical Obstetric Multi-professional Training). – Cambridge University Press; 1st edition, 2019. – 136 p.
2. L. A. Magee The FIGO Textbook of Pregnancy Hypertension. An evidence-based guide to monitoring, prevention and management. / L. A. Magee, P. Dadelszen, W. Stones, M. Mathai (Eds). – The Global Library of Women's Medicine, 2016. – 456 p.
3. Edwin Chandraharan Handbook of CTG Interpretation: From Patterns to Physiology / Edwin Chandraharan. – Cambridge University Press; 1st edition, 2017. – 256 p.
4. Louise C. Kenny, Jenny E. Myers Obstetrics by Ten Teachers (20th ed) / Louise C. Kenny, Jenny E. Myers. – CRC Press, 2017. – 342 p.
5. J. Studd Current Progress in Obstetrics and Gynaecology. Vol 4. / J. Studd, Seang Lin Tan, F. Chervenak. – TreeLife Media (A Div of Kothari Medical), 2017. – 419 p.
6. J. Studd Current Progress in Obstetrics and Gynaecology. Vol 5. / J. Studd, Seang Lin Tan, F. Chervenak. – TreeLife Media (A Div of Kothari Medical), 2019. – 403 p.
7. J. Studd Current Progress in Obstetrics and Gynaecology. Vol 6. / J. Studd, Seang Lin Tan, F. Chervenak. – TreeLife Media (A Div of Kothari Medical), 2022. – 309 p.
8. Mark Landon Obstetrics: Normal and Problem Pregnancies, 8th Edition / Mark Landon, Henry Galan, Eric Jauniaux, Deborah Driscoll, Vincenzo Berghella, William Grobman, et al. – Elsevier, 2021. – 1280 pp.
9. Mark B. Landon Gabbe's Obstetrics Essentials: Normal & Problem Pregnancies, 1st Edition / Mark B. Landon, Deborah A. Driscoll, Eric R. M. Jauniaux, Henry L. Galan, William A. Grobman, Vincenzo Berghella. – Elsevier, 2019. – 496 pp.
10. Ian M. Symonds, Sabaratnam Arulkumaran Essential Obstetrics and Gynaecology, 6th Edition / Ian M. Symonds, Sabaratnam Arulkumaran. – Elsevier, 2020. – 480 pp.
11. Myra J. Wick Mayo Clinic Guide to a Healthy Pregnancy, 2nd Edition / Myra J. Wick. – Mayo Clinic Press, 2018. – 520 p.

INTERNET SOURCES:

- https://www.cochrane.org/
- https://www.ebcog.org/
- https://www.acog.org/
- https://www.uptodate.com
- https://online.lexi.com/
- https://www.ncbi.nlm.nih.gov/

- https://pubmed.ncbi.nlm.nih.gov/
- https://www.thelancet.com/
- https://www.rcog.org.uk/
- https://www.npwh.org/