

**Materials for the practical part of the exam
for students of the 4th year
specialty "Medicine"**

Acute appendicitis

1. **The Rovsing sing.** By a left hand a sigmoid bowel is pressed. By a right hand by balloting palpation a descending bowel is pressed. Appearance of pain in a right iliac area is considered as a sign characteristic of appendicitis.

2. **The Obrzocov sing.** With the position of patient on the back by index and middle fingers the right iliac area of most painful place is pressed and the patient is asked to heave up the straightened right leg. At appendicitis pain increases acutely.

3. **The Sitkovsky sing.** A patient, who lies on left, feels the pain which arises or increases in a right iliac area. The mechanism of intensification of pain is explained by displacement of blind gut to the left, by drawing of mesentery of the inflamed appendix.

4. **The Bartomier - Mihelson sing.** Is the increase of pain intensity during the palpation in right iliac area of patient in position on the left side. At such pose an omentum and loops of small intestine is displaced to the left, and an appendix becomes accessible for palpation.

5. **The Cheremsky - Kushnirenko sing.** The cough increases pain at the site of the peritoneum inflammation source. That caused by a sudden increasing of intraabdominal pressure and tension of the abdominal wall.

6. **The Ivanov sing.** The deformation of abdominal wall (the umbilicus moves to the place of appendix existence) as a result of abdominal wall muscles tension and constriction.

7. **The Yaure - Rosanon sing.** At pressure in Pty trigonum there is a painfulness (retrocaecal appendix position).

8. **Pty trigonum: medially** - m. latissimus dorsi, laterally - m. oblig. abd. externus, below - the crest of the ilium.

9. **The Gabay sing.** After gradual pressing by finger in Pty trigonum the hand is taken away. Strengthening of pain is considered as a positive symptom in retrocaecal appendix position.

10. **The Gubergritz sing.** Painfulness and skin hyperaesthesia in Scarpal trigonum (nervus genitofemoralis is involved with inflammation in retrocaecal appendix position).

11. **The Coup 1 sing.** A patient lies on his left side. The examiner men y extends the patient's right lag and moves it back and laterally. A patient feels the pain in a right iliac area.

12. **The Coup 2 sing.** A patient lies on his back. The examiner men y extends the patient's right lag and rotate it laterally. A patient feels the pain in a right iliac area.

13. **The Mihelson sing** (acute appendicitis in pregnant women). A patient lies on her right side and feels a pain in the right iliac region.

14. **The Krymov sing.** The examiner men palpate by finger (using external inguinal ring) the patient's posterior inguinal canal wall. A patient feels pain.

15. **The Dumbadze's sing.** The examiner men by finger performs balloting movements in umbilical ring to the right iliac area. A patient feels pain.

16. **The Zhendrinsky sing** (differential diagnosis of acute appendicitis and acute adnexitis). Woman lies on her back. The examiner men presses by finger the abdominal woll in Cummel point (2 cm lower and righter from umbilicus) and ascks to sit. In acute appendicitis feels increasing of pain, in acute adnexitis - decreasing of pain.

17. **The Arsen sing.** A patient lies on his left side. The examiner men fixates by hand the abdominal wall in a right iliac area in upper position fore some seconds. After that he removes the hand. The abdominal wall moves in lower position, and a patient feels.

Acute cholecystitis

1. **The Botkin sing.** Irradiation of pain in the heart area over the n. phrenicus course in the anterior mediastinum on the front wall of the pericardium.

2. **The Bereznyahovsky - Eleker sing.** Irradiation of pain in the supraclavicular area over the course of n. phrenicus, reaching the scapula area and shoulder 1/3 external upper surface.

3. **The Karavanov - Spector (Co-Tui - Meyer - Schlesinger) sing** (a sign of acute cholecystitis and local peritonitis). The deformation of abdominal wall (the umbilicus moves to the place of gallbladder existence) as a result of abdominal wall muscles tension and constriction.

4. **The Ronshov sing.** The jaundice of skin around umbilicus.
5. **The Sale sing.** Easing breathing in the lower part of the right lung (auscultation).
6. **The Ionash sing.** Pressure on the mastoid processus in the place of trapezoidal muscle fixation (occipital nerve, a branch of the cervical plexus, location), increases pain in the gallbladder area.
7. **The Mussy-Georgievsky sing.** Pressure between the legs of the sternum-clavicular-mastoid muscle to the right, increases pain in the gallbladder area.
8. **The Karavanov sing.** Pressure on the chest wall lower the right scapula angle increases pain in the right upper abdominal wall quadrant.
9. **The Boas – Skvyrsky sing.** The pain after pressure righter VIII - X thoracic vertebraes on the back.
10. **The Mackenzy sing.** Hypersensitivity in the right hypochondria area.
11. **The Lyahovytsky sing.** Pressure on the xiphoid processus increases pain in the gallbladder area.
12. **The Zakharyn sing.** Pressure by finger-tips on the gallbladder area increases pain.
13. **The Ker sing.** Moderate finger pressure at the Ker point (the right side of the rectus abdominis muscle near the costal arch) during inspiration, or without it appears or increases pain.
14. **The Ortner sing.** Light perpendicular knocking on the right costal arch appears or increases pain in the in the gallbladder area.
- 15 **The Merphy sing.** A patient lies on his back. A doctor puts his left hand on the right costal arch so that the thumb press abdominal wall in the projection of the gallbladder; the patient is asked to take a deep breath, which is stopped because of pain (gallbladder and liver moves down with friction).
- 16 **The Obratsov sing.** A sharp pain when a doctor press by hand under the right costal arch (as palpation of the liver)
17. **The Courvoisier sing.** You palpate enlarged, not painful gallbladder in patient with jaundice (sing of distal bile duct obstruction, usually by tumor).

Acute pancreatitis

1. **The Kerte sing.** The anterior abdominal wall resistance at pancreatic localization proection.
2. **The Mayo-Robson sing.** The moderate pressure in the left costo- vertebral corner appears pain, including the projection of the pancreas.
3. **The Chuhriyenko sing.** The moderate shocks of abdominal wall from front to back over the umbilicus increases pain in the area of the pancreas.
4. **The Voskresensky sing.** The absence or decreasing of abdominal aorta pulsation over the umbilicus (caused by edema of the pancreas and parapancreatyc tissue).
5. **The Ninder sing.** The pressing by hand on the area of the left upper quadrant determined aortic pulse caused by edema of the pancreas and parapancreatyc tissue.
6. **The Chauffard zone.** The triangular area is formed by: median abdominal line, bisectrix of the angle between median line and horizontal umbilical line, and rib arc.
7. **The Osipova sing.** The patient lies on his back. Doctor brings both hands in the lumbar area and tries a patient - there is increased pain in the area of the pancreas.
8. **The Gerbrih sing.** The percussion of abdomen determines tympanits on the pancreas projection caused by paretic transverse colon.
9. **The Kjuneo sing.** The mass is determined by palpation in the projection of the pancreas.
10. **The Cullen sing.** The appearance of yellow- violet skin discoloration on the umbilical area.
11. **The Grey-Turner sing.** The appearance of yellow-violet skin discoloration on the side walls of the abdomen.
12. **The Mondor sing.** The cyanotic spots on the face and trunk.
13. **The Grunwald sing.** The peripheral vascular microcirculation disorders due to ecchymosis around the umbilicus and on the buttocks.

The organ perforation

1. **Triad of Mondor.** The "knife like pain", "total abdominal muscles resistens" and "ulcer history."
2. **The Dyelafua sing.** The "knife like pain" abdominal pain.
3. **The Krasnobayev-Kryuvelye sing.** The expressed muscle tension of the anterior abdominal wall, especially over the source of inflammation.

4. **The Eleker sing** *"the frenikus-symptom"*. The irradiation of pain in the right or left supraclavicular area (due to location of free abdominal gas).
5. **The Winter sing**. The abdominal wall does not participate in breathing because of the tension.
6. **The Chuhayev sing**. The direct abdominal muscles are tensed and expressed their relief.
7. **The Dzbanovsky-Chuhayev sing**. The sudden tension of anterior abdominal wall muscles due to transverse skin crinkles above the umbilicus.
8. **The Ratner – Vicker sing**. The severe muscle tension of the abdominal wall in the epigastric or (and) right hypochondriac area.
9. **The Bernstein sing**. The scrotum skin is corrugated, the testicles are pulled to the external inguinal canal rings, the penis is turned up and right.
10. **The Hjusten sing**. It is defined by auscultation: the heart tones spread up to the umbilicus and "silver bell" tone (the released gas pass from the perforated organ through the liquid).
11. **The Brunner sing**. The accumulation of content between the stomach and the diaphragm causing the friction noise.
12. **The Grekov sing**. The "vagal pulse" (bradycardia) + sharp abdominal pain.
- 13 **The Clarke sing**. Free gas between the liver and abdominal wall due to lack of hepatic blunting.
14. **The Spizharny sing**. Percussion detects a tympanitis on the liver projection because of free gas upper abdominal collection.
15. **De Quervain sing**. In the slanting areas of the abdomen, mostly over the right iliac fossa or on the side channels where the blood or abnormal fluid are accumulated, the blunting percussion sound is determined.
16. **The Podlah sing**. This is a sign of atypical peptic ulcer perforation. Free gas passes through the esophageal gate of the diaphragm to the mediastinum and the left supraclavicular area, where subcutaneous emphysema can be detected.
17. **The Vihiatso sing**. This is a sign of atypical peptic ulcer perforation Free gas passes through the lig. hepatoduodenale ore (and) lig. teres hepatis, and in the umbilical area subcutaneous emphysema can be detected.
18. **The Neimark test**. To 2-3 ml of fluid getting from the abdominal cavity, add 4-5 drops of 10% iodine solution. In the presence of duodenal fluid, content becomes dark blue.

Acute bowel obstruction

1. **The Tiliyaks – Vikker sing**. The cramp - like abdominal pain.
2. **The Shlange sing**. Sometimes you visually peristaltic movements of the intestine, which is intensified after abdominal palpation.
3. **The Hirschsprung sing**. The anal sphincter "hiatus" in bowel invagination.
4. **The Kruvelye sing**. The bleeding from the anus in bowel invagination..
5. **The Leedsy sing**. The auscultation determines "long, different sonority sounds, even short sounds".
6. **The Baileysing**. In neglected acute bowel obstruction with symptoms of peritonitis peristalsis is very weakened, but hart tones are listened in all parts of the abdominal cavity.
7. **The Spasokukotsky sing**. In small bowel obstruction auscultation you determine "the sound of falling drop".
8. **The Roush sing**. Palpation of elastic, moderately painful, "tumor-like" formation in the abdominal cavity causes the tenesmus.
9. **The Mondor sing**. In the later periods of acute bowel obstruction some anterior abdominal wall muscle resistance can be revealed.
10. **The Val sing**. The enlarged bowel loop is palpated, sometimes with asymmetry of abdomen.
11. **The Sklyarov sing**. "**Splashing**". The moderate shocks of abdominal wall + auscultation: they determine the splashing of liquid witch is accumulated in the alimentary canal lumen.
12. **The Grekov - "Obukhov Hospital" sing**. The rectal digital examination demonstrates empty rectum and "hiatus" of anal sphincter.
13. **The Shymon-Dance sing**. The right iliac region by palpation is feeled "free" in the invaginatuion of the cecum.
14. **The Mathieu sing**. The finger-tips percussion above the umbilicus due to "splashing".

15. **The Kivul sing.** The percussion over the dilated with gas and liquid bowel loop detects tympanitis with metallic shade.

16. **Test of Bebuk.** The presence of red blood cells in the washing waters after the enema.

17. **The Tsege-Manteufel sing.** Only 500 ml. of water can be passed in the rectum with cleaning enema.

Peptic ulcer bleeding

1. **The Mendel sing.** The finger – tips percussion demonstrates the ulcer presence location.

2. **The Bergman sing.** The reduction of epigastric area pain intensity after bleeding starts (stomach acid neutralization).

3. **The Taylor sing.** The linking blood results in the intensive peristalsis (irritation of bowels by blood).

The damage of parenchymal organs

1. **The Halans sing.** The phenomenon of abdominal fluid displacement. Using precaution in a victim you check a free intraabdominal liquid when turn patient from one side to another.

2. **The Joyce sing.** The percussion of injury area does not move blunting area when turn the patient on the other side (the intraabdominal clot formation).

3. **The Hedri sing.** A doctor presses on the lower part of the sternum. The left costal arch pain confirms the spleen injury, and right - the liver.

4. **The Ker (2) sing.** The pain in the left shoulder and the left half of the neck (irritation of phrenic nerve by blood collection).

5. **The Rozanov sing.** (symptom of "Vanka - Vstanka", the correct translation is impossible). When patient gets up from bed to sit down, there is a sharp pain in the shoulder (right side in a liver rupture, left side in a splenic rupture).

Peritoneal adhesions disease

1. **The Carnot sing.** Increasing of epigastric pain with body straightening.

2. **The Leott sing.** Pain with the abdominal skin displacement taken in the fold.

3. **The Knoch sing.** Abdominal pain in the scar while patient is lying on the shaft.

4. **The Blinov sing.** Abdominal pain in the scar while patient is inclining forward.

5. **The Androsov sing.** The epigastric pain while deep hypogastric palpation.

6. **The Bondarenko sing.** The hypogastric pain while deep epigastric palpation.

7. **The Hunafin sing.** Increasing of pain while the abdomen wall is consciously inflated by patient.

The mesenteric ischemia

1. **The Shtemberh sing.** In sharp abdominal pain the abdominal wall palpation demonstrates absence of mussel resistance.

2. **The Mikkelsen test** (differential diagnostics of peptic ulcer and chronic mesenteric ischemia). A patient drinks a liter of milk. After 1 hour the stomach pain decreases in peptic ulcer or increases in chronic mesenteric ischemia.

3. **The Kydyan-Mondor sing.** The dilated and infiltrated bowel loop is – palpated.

4. **The Blinova sing.** 1-2 hours after full superior mesenteric artery embolic occlusion the systolic blood pressure increases by 20-30mm. hg.

Hernias

1. **The Cooper sing.** The inguinal hernia is defined over- and outside of the tubercle pubic, and the femoral hernia - below and medially from it.

2. **The "cough push" sing.** You ask patient to caught and detect by hand "answer" of hernia content. In strangulated hernia it's absent.

3. **The "tying shoelaces" sing.** The sing of gastro – esophageal reflux: when somebody is tying shoelaces he(he) is filling heartburn. It is demonstration of gastric contents regurgitation, usually in diaphragm hernias.

Acute peritonitis

1. **The Rozanov sing.** The patient lies on his back. You ask him to breathe deep. After that you ask the patient to extra breathe. The past step is impossible because of pain, because it is necessary to stretch the anterior abdominal wall muscle. This sing help you to differentiate the abdomen and pleural (pleurisy, pneumonia) inflammation.
2. **The Mendel sing.** The light superficial anterior abdominal wall precaution occurs the fluid collection or the source of inflammation.
3. **The Razdolsky sing.** The “hammers” anterior abdominal wall percussion occurs the source of inflammation..
4. **The Drahter sing** (pediatric surgery). You hold by one hand the foot of patient’s lags. You free hand percusses the patient’s heel. The child holds his arms on the area of inflammation.
5. **The Winter sing.** The abdominal wall does not participate in breathing because of the dramatic tension.
6. **The Blumberg sing.** You gradual press by fingers on the abdominal wall and patient feels a pain (**the Mortol sing**). After that you quickly, but not acutely, take you hand away. Strengthening of pain is considered as a positive symptom in that place. Obligatory there is a tension of front abdominal wall muscles. Absence of front abdominal wall muscles tension usually demonstrates the intraabdominal bleeding (**the Kulenkampf sing**).
7. **The Voskresensky (“the shirt”) sing.** You move you hand from epigastric area (from xiphoid process) down (to the right, left iliac regions or to the pubis). The inflamed peritoneum, free abdominal exudate collection manifest by increasing of pain.
8. **The Mortol sing.** You gradual press by fingers on the abdominal wall and patient feels a pain.
9. **The Madelung sing.** The difference in body axillar and rectal temperature is more than 2C°.
10. **"The Douglas cry"** The pain in the finger rectal examination or bimanual gynecologic examination.
11. **"The Hippocrates face"**. Patient face is pale, covered with cold sweat, lines are sharpened.

The subphrenical space abscess

12. **The Senator sing.** The m. trector spinae tension dues to vertebral immovability.
13. **The Duchenne sing.** The epigastric area is involving during inspiration and protruding during expiration.
14. **The Litten sing.** The involving of intercostal spaces during inspiration.