Parents with a 6-month-old child came to the emergency room. His mother reported that the disease began suddenly ten hours ago. The abdominal attack-like pain is sudden in onset in a child who was previsiously comfortable, the child became restless, cried, kicked his legs, vomited twice. Attacks of pain alternated with painless intervals, the duration of which decreased. The child is breastfed. The day before, the mother gave the child mashed potatoes with homemade sour cream.

On examination, the child is adynamic, sleepy. The skin is pale. Body temperature is 36.6°C. Breathing rate - 26 per minute. Heart rate - 120 beats /min. Blood pressure - 90/50 mm Hg. Art. The child reacts to palpation of the abdomen with anxiety. The abdomen is symmetrical, moderately distended. In the right mesogastric area, an elasticroller-like mass is palpable. Symptoms of peritoneal irritation are negative. Peristalsis is decreased . Bloody discharge from the rectum in the form of mucus of a slightly dark red color - "currant jelly". The child underwent an ultrasound examination of the abdominal organs (Figure 1).





#### **OUESTIONS**

- 1. Make a nosological diagnosis.
- 2. Name the diseases for differential diagnosis.
- 3. Assign lab tests.
- 4. Indicate probable laboratory results.
- 5. Assign instrumental diagnostic methods.
- 6. Interpret the data of instrumental diagnostic method of patient presented on the figure.
- 7. List possible complications of this pathology.
- 8. Choose disease management.
- 9. Indicate the main principles of surgical treatment.

A newborn female was born from the 2nd full-term pregnancy, urgent delivery. Body weight at birth 3100 g. Pregnancy was uncomplicated. At the end of the first day of life, vomiting with bile impurities appeared, which was repeated after each feeding. The child did not pass meconium, had just discoloured mucous plugs.

On examination: the skin and visible mucous membranes are dry, sunken fontanelle. Breathing – symmetric, there is no abnormal breath sounds. The abdomen is soft and sunken. The results of X-ray examination of abdominal organs are presented on Figure 1. No other abnormalities are found.

Figure 1. Abdominal radiography of a child



# QUESTIONS

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Parents with a 3,5-week-old newborn came to the emergency room. The boy was born from the second pregnancy with a body weight 3300 g. Pregnancy and delivery was uncomplicated. The early period of adaptation was uncomplicated. The child is breastfed. After 2 weeks, "fountain" vomiting appeared. Vomiting masses are stagnant, their volume exceeds the volume of a single feeding, they contain curdled milk with a sour smell, without impurities of bile.

Upon admission, the condition is severe, the child is lethargic. The skin and visible mucous membranes are dry, the anterior fontanelle is soft and flat. Tissue turgor is reduced, subcutaneous adipose tissue is poorly developed. The abdomen is soft, inflated in the epigastrium. When feeding a child, increased peristalsis in the form of an "hourglass" is visible. The child's weight is 3100 g. Ultrasound examination of abdominal cavity was performed (Figure 1)



Figure 1. Ultrasound of the child's abdominal cavity.

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A full-term boy was born with a body weight 3400 g, the delivery was physiological without complications. He screamed immediately, after what signs of respiratory failure began to increase. During the child examination, bluish color of the skin is noted, the abdomen is swollen, and the chest is slightly enlarged. The apical impulse of the heart is determined on the right. Upon auscultation of the chest, weak breathing is noted on the right, breathing is not heard on the left, isolated peristaltic sounds are present. The abdomen is reduced in volume, soft and not painful when palpated. Symptoms of peritoneal irritation are negative. Peristalsis is decreased. Diuresis is preserved. There was no defecation.

An X-ray examination of thoracic and abdominal cavity is presented on Figure 1.

Figure 1. X-ray of the thoracic and abdominal cavity.



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A 10-year-old boy was brought to the emergency room by ambulance after a chest injury with complaints of shortness of breath, difficulty breathing, the presence of a wound in the chest area, sharp pain in it. On examination, the child is adynamic, the right half of the chest lags behind in the act of breathing. The skin is pale. Body temperature is  $36.6^{\circ}$ C. Breathing rate – 40 per min. Heart rate - 120 beats/min. Blood pressure - 90/50 mm Hg. Auscultation - breathing is not heard on the right side. On the right posterior axillary line, approximately at the level of the 7th intercostal space, there is a lacerated puncture wound with slight bleeding from it.

The child underwent an X-ray of thoracic cavity (Figure 1)



Figure 1. Plain X-ray of thoracic cavity

# QUESTIONS

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Parents with a 3-year-old child came to the hospital. According to the parents, about two weeks ago, the child became lethargic, adynamic, began to periodically complain of abdominal pain, mostly in the lumbar region. During last two days, there has been a delay in urination, numbness in the lower extremities. Taking non-steroidal anti-inflammatory drugs has no visible effect. There were no defecation for 3 days.

On examination, the child is adynamic, sleepy. The skin is pale. Body temperature is 36.7°C. Breathing rate - 26 per minute. Heart rate - 120 beats per minute. Blood pressure - 90/50 mm Hg. The child reacts on palpation with anxiety. The abdomen is enlarged, symmetrical. During palpation in the epigastric area, a rounded formation of considerable size, dense, immobile is determined. Symptoms of peritoneal irritation are negative. Peristalsis is weakened. Sonographically, a large epigastric area formation with calcifications is visualized. Referred to CT (Figure 1)



#### Figure 1. CT of abdominal cavity

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A mother with a 7-year-old boy came to the clinic with complaints of lethargy, paleness, poor appetite, constipation. From the anamnesis, it is known that the problems with defecation started after about two years of life. Their family doctor recommended to eat more lactic acid products and raw vegetables. From the age of 4, there were bowel movements only after taking drugs for constipation or after enema. Recently, parents manage that it was difficult to get a bowel contents. The boy's condition progressively declines, he refuses to eat. The abdomen is significantly increased in size, the swollen loops of the intestine are contoured. An X-ray with a contrast of abdominal cavity was done (Figure 1)

Figure 1. X-ray of abdominal cavity



### QUESTIONS

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Parents with a 15-year-old child came to the emergency room. The child complains of nausea and repeated vomiting, frequent urges to urinate, periodic attack-like pains in the left lumbar region, which radiate to the groin and external genitalia. Body temperature is 37.3°C. During the examination, the patient is restless, constantly changes the position of the body on the couch, without finding relief. During palpation, the abdomen is soft, accessible for inspection, sensitive in the left flank. Murphy's punch sign (Pasternacki's sign) is positive on the left. Defecation without features. It is known from the anamnesis that a month ago the patient had a similar attack of pain, which stopped after the use of antispasmodics. An X-ray examination of abdominal cavity (Figure 1).





### QUESTIONS

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A 7-year-old boy was admitted to the emergency department 10 hours after the onset of the disease. Complaints of constant pain in the right iliac region, which is not significantly relieved in the position on the right side with the lower limbs bent. From the anamnesis, it is known about nausea, vomiting three times with short-term relief, migration of pain from the epigastrium to the right iliac region, an increase in body temperature to 37.6°C. The general condition is moderate, conscious, adynamic. Defecation without violations. The skin is pale, the tongue is coated with a white coating, the body temperature is 38.0°C. Vesicular breathing in the lungs. Heart - tones are rhythmic, pure. Pulse - 90 beats/min, blood pressure and breathing rate - within the age norm.

On palpation, the abdomen is sharply painful, in particular, in the right illiac area, , right-sided passive muscular tension, positive symptoms of peritoneal irritation (Rovsing and Blumberg). Dulling of percussion sound in the right iliac region. Pasternatsky's symptom is negative on both sides. The child underwent an ultrasound examination of the abdominal cavity (Figure 1)

Figure 1. Ultrasound of the child's abdominal cavity.



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A 7-year-old boy comes with complaints of severe abdominal pain and general weakness, and overall worsening self feeling. From the anamnesis it is known that 30 minutes ago he was struck in abdomen during a car accident. The general condition of the child is severe, the consciousness is cloudy. The skin is pale. In the area of mesogastria - hematoma. In the lungs – vesicular breathing sounds. Heart – rhythmic, pure tones. Pulse – 120 beats / min, weak filling and tension, blood pressure – 85/50 mm Hg. Respiratory rate – 32 per minute. Body temperature is  $35.5 \circ C$ . The anterior abdominal wall is not uniformly involved in the act of breathing. The abdomen is painful in all departments, especially in the right and left subcostal area. In percussion, blunting in the right lateral side of the abdomen is determined. A positive symptom of peritoneal tenderness, muscle tension of the anterior abdominal wall. Pasternatsky's symptom is negative on both sides. The child underwent an ultrasound examination of the abdominal organs (Figure 1).

Figure 1. Ultrasound of the child's abdominal cavity.



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