

in 90%, during day – 1 – in 50%, after day 3 – in 10%» The revealed clinical signs of acute appendicitis among pregnant women, discharged from the surgical department of the railroad hospital corresponded to pregnancy period in their comparison to bibliographic data.

Materials and methods. In surgical department of the railroad hospital of the city of Aktobe during years 2013–2014 total of 810 patients were delivered with diagnosis of acute appendicitis, of them 47 (5%) – pregnant women with diagnosis acute appendicitis.

Of total 47 pregnant women 5 patients (10%) were in the 1st trimester, 23 (50%) – in the 2nd trimester, and 1 (1%) – in the 3rd trimester. Age of the patients varied from 20 to 39 years. Clinic of acute appendicitis in the 1st trimester did not differ from non-pregnant (control group was formed of 5 patients who took treatment in the hospital at the moment). In trimesters 2 and 3 diagnosis was established within 2 hours with examination of gynaecologist and US. Testing control with small period of pregnancy allowed to establish diagnosis of acute appendicitis in 78% of cases. In all cases consultation with therapist and anesthesiologist took place as well as ECG. In one case laparoscopy was undertaken with diagnostic and medical purpose, lack of obstetric-gynaecological pathology after US with presence of clinical data on stomach cavity disease for one patient as well as her desire to take laparoscopic appendectomy served as a reason of this procedure. According to the studied histories of patients, discharged with favorable outcome, one of the 47 patients, whose pregnancy period equaled 40 weeks, was directed to the maternity clinic straight after surgical department.

Results and discussions: All pregnant women in trimesters 1, 2, and 3 were discharged after appendectomy with preservation of pregnancy, only one patient, whose period of pregnancy equaled 40 weeks was directed straight to maternity clinic after surgical department. Results of 47 histories of dismissed pregnant women were discussed collectively between surgeons, gynaecologists, head surgical department, and interns.

Conclusion:

1. The article presents data of retrospective analysis according to histories of 47 pregnant women after appendectomy who were dismissed with a favorable outcome from surgical department of railroad hospital in 2013–2014, when total of 810 patients were operated in regard to acute appendicitis. During emergency duties in surgical department of the railroad hospital 2 times a week in different periods of pregnancy part of the operated women with diagnosis of acute appendicitis equaled 5,8% of total number of patients. In 25% of cases clinic of acute appendicitis flows regularly during the 1st half of pregnancy. However, diagnostic can be complicated, especially in the 2nd half of pregnancy, as local pains can happen not in the right iliac area, since cecum

and its sprout are located behind the increased alvus, other symptoms of stomach damage can also be negative: (defans), Schetkin-Blumberg, Voskresenskiy, etc. Typical symptoms for the 2nd half of pregnancy are: Obratstov, Bortomier-Michelson. Development of peritonitis often happens in later terms of pregnancy, as conditions of limiting inflammation process in stomach cavity degrade.

2. An indication for undertaking diagnostic laparoscopy for patients at early terms of pregnancy with suspect of acute appendicitis is presence of a typical pain syndrome and objective signs of stomach disease or leucocytosis in lack of data of obstetric-gynaecological pathology from US examination. A counter-indication for undertaking laparoscopic examination is gestation period of over 20–24 weeks.

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PERFORATIONS OF CECUM THAT SIMULATE ACUTE APPENDICITIS

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This article presents three cases that happened in different years of surgical practice in which patients were delivered in emergency to the surgical department of railroad hospital with primary diagnosis of acute appendicitis, and clinic of acute appendicitis was established at the moment of delivery of every patient. However, during surgery in one case perforation of cecum by fishbone (sharp edge of spine) was discovered [1, 2]. In the second case perforation was caused by sewing needle, and in the third – by excrement stone. All three patients were operated and discharged in a satisfactory condition.

Except for the 3 described clinical observations, no more perforations of cecum that simulated acute appendicitis, have been discovered in surgical department. According to archive materials (disease history, etc.) of the surgical department of railroad hospital, 0 such cases took place before.

According to A.A. Dubrovskiy and co-authors (1977) [5], perforation by alien objects takes place more commonly in large intestine (33,8%) than in stomach (15,5%). According to foreign authors, perforation of gastrointestinal tract forms 0,04–0,2% [9] of the whole number of cases with acute surgical diseases in organs of stomach cavity and happens to men more frequently.

Urgency: According to the law of Laplas, cecum is the most exposed to damage – perforation, as it is located intraperitoneally and is the widest part of large intestine with diameter of 7,5–8,5 cm [9]. Cecum is a place that connects small and large intestine (where iliac intestine falls into large bowels), and where appendicular sprout is located. Cecum is blood-supplied from higher mesenteric artery with branches of iliac-colon, right colon, and middle colon. From there begins mesenteric vein that connects with vessels of spleen and forms portal vein of large intestine

According to statistic data, 40% of all pathological changes of intestine happen in cecum [6] that is a place of the most frequent localization of inflammations, innocent and malignant formations. Moreover, they develop slowly, especially cancer of cecum. Cecum is surrounded by peritoneum from all sides and can be moved from its place quite easily. It simplifies surgical interventions. Symptoms of disease can be different depending on size of inflammatory formation in cecum and also on presence of complications that can be linked to perforation of cecum wall. The following signs indicate the mentioned complications of cecum: stomach pains, tachycardia, vertigo. In cases of emergency it is difficult to distinguish perforation of cecum from acute appendicitis. All symptoms, typical for acute appendicitis, such as those of Schetkin-Blumberg, Sitkovskiy-Rovzing, Voskresenskiy, Obrastsov, etc. are positive for cecum perforation. During differential diagnostics of this pathology with perforation of cecum it is necessary to consider the most common complaint of patients – presence of blood in defecation. These symptoms are often attended by continuous pains that are localized in right iliac area of stomach. Due to frequent bleedings, anemia can be observed among patients, and patients themselves might feel sickness, caused by anemia – vertigo, constant weakness, disturbance of eyesight, unnatural skin color. Therefore, establishing such diagnosis as anemia is a reason to suspect internal bleedings that can also be caused by cecum cancer. Since defecation blood is often recognized by patients as a beginning of haemorrhoids, they don't hurry to receive medical assistance and undertake treatment of non-existing disease. At the same time precious time is lost that can help to accelerate the recovery. As until cancer has discharged metastasis, chances of recovery are relatively high. Constipations are not typical for cecum cancer [3] as the spacing of intestine remains wide, and defecation are not yet formed at this stage of intestine and are not an obstacle for normal intestine discharge. Meteorism and

sickness emerge, patient lose interest in food. In this case so-called «cancer intoxication» can take place – yellow shade of skin, insignificant growth of liver, weight loss. In case when tumor reaches significant size, edema can happen due to the pressure, placed upon the surrounding organs. When a patient is sent for roentgen examination [8], a large defecation is found in the picture, and it has no clear contour. In order to verify inflammation of cecum by tumor genesis, a doctor refers to irrigoscopy, colonoscopy, US, CT, and MRT.

Goals and objectives: Specific observations of the practice on problems of removing alien objects from gullet, stomach, sigma-like and straight intestinal have been published. In these cases objects were removed from patients via FGDS and colonoscopy. Rarely have been presented cases of operative treatment in regard to complications, caused by perforation of cecum by alien objects, that simulated acute appendicitis [7]. Our objective is to share experience of rare complications caused by perforation of cecum by fishbone, sewing needle, and fecal bolus that simulated clinic of acute appendicitis.

Materials: In different years three male patients were delivered to surgical clinic of railroad hospital, two of them of young age. The elder patient (participant of the Great Patriotic war), due to his inserted teeth, obviously, didn't notice a fishbone (vertebra) and swallowed it during meal, typical clinic of acute appendicitis was discovered during anamnesis and examination. After ECG and examination by cardiologist, the patient was taken to surgery under local anaesthesia, as one month ago he had experienced myocardium infarction. After anaesthesia of mesentery root, during revision of stomach cavity, cupola of cecum was withdrawn. Serous sweat, present in small quantity, was dried off. On the cupola of cecum, 5–6 cm away from appendicular sprout, that was intact, was discovered an inflammatory wave in diameter of 2–3 cm with perforated whole in its center, from which sharp edge of fish vertebra projected. Removal and toilet was undertaken along with refreshment of inflammatory wave edges in cupola of cecum, unbroken purse-string suture was placed, then second row of stitches, and then peritonization. Closed layered stitches were placed upon the surgical wound (according to cut of Volkovich-Diakonov) up to the drainage. The patient was discharged on days 10–12 in satisfactory condition after removal of drainage from stomach cavity and skin stitches, control ECG and examination by therapist.

The two patients of the same young age, delivered with emergency indications were received with diagnosis of acute appendicitis. Typical clinical symptoms of acute appendicitis were obvious. During surgery of the first patient via access of Mack-Burney under potentiated narcosis and local anaesthesia no inflammatory processes were found in appendicular sprout, but perforated whole of size 0,8x0,8 cm was found on lateral wall of cecum with a small outpouching. In the center of this «saccular» outpouching from the

perforated whole was seen a sharpened edge of fecal bolus, surgery of cecotomy with cutting off the «saccular» outpouching of mucous membrane was carried out, removal of fecal bolus sized 3–4 cm, round shape, was removed, stomach cavity drained. Stitches were placed on cecum wall according to the accepted rules of surgery. The patient was discharged on days 12–14 (after removal of skin stitches) to ambulatory observation by surgeon.

The third patient was a serviceman, he was also delivered by emergency carriage with a directed diagnosis acute appendicitis. Clinic of acute appendicitis was clear. In his anamnesis the patient denied the fact of swallowing sewing needle. The patient was operated under local anaesthesia with exponentiation. During revision of stomach cavity cupola of cecum was withdrawn, and from the perforated point was visible 1,5 cm of black sewing needing with «eye without a string». Around it insignificant hyperaemia was observed. It was impossible to palpate the sharp end of needle, therefore, soft clamp was used to grab the visible edge of the rusty needle and remove it completely from cecum cavity. In this case purse-string suture was placed around the inflamed point of injury, and above it – peritonization. The sprout was not removed in all three cases. As small amount of serous sweat was found in stomach cavity, drainage-microirrigator was left for introduction of antibiotics, layered stitches were placed on the wound of stomach wall and then removed on days 7-8, healing took place due to initial strain. The patient was provided with active immunization against tetanus, and he was discharged on days 9-10 to ambulatory treatment by surgeon. No signs of typhlitis or appendicitis were observed among these three patients, therefore, appendectomy was not undertaken.

Conclusion: Thus, three cases of practice in clinical observations with perforations of cecum that simulated acute appendicitis, present a certain practical interest as alien objects of large intestine happen quite often and treatment tactic, according to other reports, is developed separately for each individual case.

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PREDICTION OF FATIGUE IN ATHLETES

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Intense physical exercise in sport often lead to the development of fatigue. The mechanism of this phenomenon is not fully understood. It is assumed that the basis of the development of fatigue in athletes is a violation of purine metabolism.

The study involved highly qualified swimmers males aged 17 to 20 years. The athletes according to the data functional methods of research were divided into two groups: no signs of fatigue (C1, n = 61) and having a their (C2, n = 20). The control group (K) consisted of 30 young men not involved in sports the same age. Blood sampling was performed in athletes after training. In blood serum was estimated concentration lactate, uric acid and glucose; in erythrocytes – the activity of glucose-6-phosphate dehydrogenase (G6PD), the content of malondialdehyde (MDA) and glutathione.

Found that at group athletes C2 efficiency reutilization lactate reduced, which contributes to the development of hypoglycemia. Deficiency of glucose and decreased activity G6PD leads to inhibition of the pentose cycle. All this contributes to the catabolism of purines. Concentration of urates in athletes groups C2 was reliably higher than in group C1 (42.4%) and K (41.2%). The consequence of the activation of xanthine oxidase is generation of free radicals, leading to a deficiency of glutathione and lipid peroxidation of membranes. Glutathione levels in athletes group C2 below on the 18.5% (P = 0.033) and 11.1% (P = 0.017) on relation to the groups K and C1 respectively. Content MDA in erythrocytes athletes group C2 above to 29.2% (P = 0.042) and 32.6% (P = 0.003) on compared with the this indicator in group K and C1 respectively.

Development of fatigue in athletes swimmers contribute lactic acidosis and hypoglycemia, leading to catabolism of purines up to uric acid. Last accompanied by the activation of free radical oxidation in cells, inhibition of the antioxidant system and enzymes of the pentose cycle.

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