

# DESTRUCTIVE APPENDICITIS AFTER APPEDICULAR ABSCESS

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In urgent abdominal surgical practice the patients after apendicular abscess drainage are generally thought to require no follow up, since vermix is completely lysed. In the present clinical observation the authors show that in some cases no complete appendiceal destruction occurs, and it can result in a complicated recurrent acute appendicitis. Therefore, such patients, as well as those being treated for appendicular infiltrate are indicated a subsequent examination to reveal a residual appendix. Incomplete appendiceal destruction is to be followed by a planned appendectomy.

**Key words:** apendicular abscess; incomplete appendiceal destruction; destructive appendicitis; appendectomy.

Periappendicular abscess develops mostly in the appendicular infiltrate. In draining the abscess appendectomy is not performed, and this is one of the specific features of treating appendicular infiltrates with abscess formation. As a rule, this aspect is not commented, because such observations are relatively rare. In the manual, edited by V.S. Savelyev [1], it is only mentioned, that in suppuration of appendicular infiltrate complete destruction of the vermix with its detachment in the form of necrotized masses within the pyogenic discharge rather often takes place. However, sometimes a part of the vermix is left, which may later result in acute appendicitis. After conservative treatment of appendicular infiltrate a planned appendectomy in 3–4 months to avoid recurrent acute attack is commonly recognized, while patients with appendicular abscess are overlooked by the surgeons. Our observations testify the urgency of these questions.

Patient Z., aged 56, was admitted to Municipal Hospital No.35 of Nizhny Novgorod (Russia) in Feb. 16, 2011 in 6 days after the onset of the disease, complaining of the constant pains in the right iliac area, weakness, dry mouth, febrile temperature, chills. She did not seek medical aid. On examination, her condition was assessed as moderately heavy. Pulse was 100 beats/min, full and regular. ABP — 160/100 mm Hg. Heart sounds were dull, rhythmic. On auscultation, vesicular respiration in the lungs and respiratory rate 16 breaths/min were revealed. The skin was dry, without any rash. Subcutaneous adipose tissue was elevated. The tongue — dry and clean. Abdominal palpation was tender in the right iliac area, where infiltrate sized 15x15 cm was defined. Stchetkin, Rovsing, Sitkovsky, Voskresensky symptoms were weakly positive. Laboratory findings on admission were as follows; hemoglobin — 138 g/L; leukocytes —  $15.8 \times 10^9/L$ ; blood glucose — 15.8 mmol/L; sugar in the urine — 4.5%; test for acetone bodies — negative. Diagnosis of appendicular

infiltrate was made. Concurrent pathology: insulin-dependent diabetes mellitus type I with a heavy course, ischemic heart disease, arterial hypertension. She has been an invalid (group III) because of ischemic heart disease since 2004. The patient was administered antibacterial therapy and dynamic follow-up. On Feb. 24 the patient's condition became worse, symptoms of abscess formation appeared: pains in the right iliac area increased, the temperature elevated to febrile values, US examination showed liquid in the zone of infiltrate. An operation was performed: the abscess cavity was opened using Pirogov access, 30 ml of thick pus with colibacillary odor were dried, the vermix was not found. The abscess cavity was washed, dried, drained with "Levomecol" gauze. The wound healed by the second intention. The patient was discharged on the 24-th day after the operation.

After being discharged from the in-patient department the woman's condition remained satisfactory, but in two years, Feb. 27, 2013, about 10 p.m. she felt again acute pain in the right iliac area, which was quickly progressing, extending to the lower parts of the abdomen. In 9 hours from the onset of the event she was brought by an ambulance to the reception ward of Municipal Hospital No.35.

On examination her condition was estimated as moderately heavy. Pulse — 108 beats/min, full and regular. ABP — 140/90 mm Hg. Heart sounds were dull, rhythmic. On auscultation vesicular breathing was heard, respiratory rate — 16 breaths/min. The skin was dry without any rash. Subcutaneous adipose tissue was elevated. The tongue was dry and clean. The abdomen was bloated, on palpation — tense and tender in the right iliac area and over the pubis. Appendicular symptoms were positive. Laboratory findings on admission: Hb — 165 g/L; leukocytes —  $11.2 \times 10^9/L$ ; rod neuclear — 33%; segmented neutrophils — 61%; lymphocytes — 4%; monocytes — 2%; ESR — 9 mm/h; blood glucose — 21.8 mmol/L; urinalysis: sugar — 5.5%; test for acetone bodies — negative.

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US examination revealed: traces of fluid in the free abdominal cavity, in the right iliac area — infiltrate of heterogenous echo structure with a small liquid component. A part of the vermiform appendix 3x1cm was located. The diagnosis of “acute destructive appendicitis, peritonitis” was made.

On Feb. 28 at 0.15 a.m. in 2 hours after hospitalization an operation was performed — low midline laparotomy. About 100 ml of turbid yellowish exudate with colibacillary odor and fibrin flakes was dried in the small pelvis. The caecum cupula and terminal part of the ileum were brightly hyperemic over the length of about 80 cm, the wall was infiltrated. The vermiform appendix 9 cm long was typically located, tense, of crimson color. There was a perforation of 1.0 cm in diameter at the base of the appendix. Standard appendectomy was performed.

The abdominal cavity was tightly closed. Postoperative period was uneventful. In 20 days the patient was discharged from the hospital.

The study complies with the Declaration of Helsinki (the Declaration was passed in Helsinki, Finland, June, 1964, and revised in October, 2000, Edinburgh, Scotland). Written informed consent was obtained from every patient.

The uniqueness of this observation is in the fact, that in the development of appendicular abscess, when complete destruction of the vermiform appendix would seem to occur, it retained its anatomical structure and was “waiting” for its time to come. Probably, in the first case the cause of abscess

formation was the destruction of its top only. Diabetes mellitus of type I with a heavy course resulted in rapid development of the destructive changes in the appendix and peritonitis.

The given clinical observation demonstrates, that sometimes in spite of the abscess formation the vermiform appendix retains its anatomical structure and may cause an acute attack, creating a risk of the complicated course. The presented case convincingly shows, that the previous appendicular abscess, as well as appendicular infiltrate, must serve the basis for examining these patients later, using such diagnostic techniques as irrigo- or colonoscopy, US, CT in order to define whether a part of the appendix is left or it has completely necrotized in the course of abscess formation. In case of preserved vermiform appendix a scheduled appendectomy is tactically grounded.

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## References

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