Case report

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Acute Appendicitis with Appendiceal Intususseption

N.I. Fetisov*✉, *S.S. Maskin, V.V. Matyukhin, J. Yuan

Department of Hospital Surgery
Volgograd State Medical University of the Ministry of Health of the Russian Federation
1 Pavshikh Boytsov Sq., Volgograd 400131, Russian Federation

✉ **Contacts**: Nikolay I. Fetisov, Candidate of Medical Sciences, Associate Professor of the Department of Hospital Surgery, Volgograd State Medical University. Email: koir60@yandex.ru

ABSTRACT

Intussusception of the appendix is the introduction of the appendix into the lumen of the cecum may be accompanied by the development of acute appendicitis, or proceed without it. The combination of intussusception and acute inflammation of the appendix makes the diagnosis of appendicitis difficult due to the absence of classic clinical symptoms. The article presents the case of successful treatment of a patient with an untypical clinical presentation of acute appendicitis that developed in an invaginated vermiform appendix.

Keywords: appendix, intussusception, appendicitis, appendectomy

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Affiliations

Nikolay I. Fetisov	Candidate of Medical Sciences, Associate Professor of the Department of Hospital Surgery, Volgograd State Medical University; https://orcid.org/0000-0002-0920-3395, koir60@yandex.ru; 35%, data analysis, text preparation
Sergei S. Maskin	Doctor of Medical Sciences, Professor, Head of the Department of Hospital Surgery of the Volgograd State Medical University; https://orcid.org/0000-0002-5275-4213, maskins@bk.ru; 28%, development of the concept and design of the article, editing
Viktor V. Matyukhin	Candidate of Medical Sciences, Associate Professor of the Department of Hospital Surgery, Volgograd State Medical University; https://orcid.org/0000-0002-8195-6172, victor.matyukhin@gmail.com; 27%, text preparation, editing
Jack Yuan	Postgraduate student of the Department of Hospital Surgery of the Volgograd State Medical University; https://orcid.org/0000-0002-5420-7686, jackyuan@yandex.ru; 10%, collection of material

INTRODUCTION

Invagination of the appendix (invaginatio appendicis) is the introduction of the appendix into the lumen of the cecum [1, 2]. They distinguish complete or partial invagination of the appendix, it can be isolated or combined invagination with introduction of the cecum into the ascending colon [3–5]. Intussusception of the appendix may be accompanied by the development of acute appendicitis or proceed without it [6, 7]. We have the observation of complete isolated invagination of the appendix into the dome of the cecum (type IV according to the classification of B. McSwain, 1941 [7]) in combination with phlegmonous inflammation of the appendix.

Purpose: to demonstrate the clinical observation of the successful diagnosis of acute appendicitis that developed during invagination of the appendix.

Clinical observation

Patient L., 39 years old woman, was treated at the hospital surgery clinic of the Volgograd State Medical University from 08/05/2016 to 08/10/2016. The patient was admitted to the surgical department 8 hours after the

appearance of recurrent cramping pains in the right iliac region, three times vomiting. The patient noted such pain for the first time, there was no history of operations on the abdominal organs.

Upon admission: the general condition is satisfactory. The skin is of a normal color. Pulse 72 beats / min, blood pressure 110/70 mm Hg art., body temperature 36.9° C. Tongue moist, coated with white bloom. The abdomen is soft, moderately distended, painless. Symptoms of Shchetkin-Blumberg, Razdolsky, Rovzing, Sitkovsky are negative. Intestinal peristalsis is enhanced. Stool and urination are not disturbed. Digital examination of the rectum revealed no pathological changes.

The patient was examined by a gynecologist – no pathology was revealed. In the general analysis of blood: erythrocytes - 3.5 10^{12} / l, hemoglobin - 110 g / l, leukocytes - 7.4 109 / l, general urine analysis without features. Ultrasound examination of the abdominal organs does not show the appendix and no free fluid. In the process of dynamic observation for 2 hours, short-term, 3-4 minutes each, attacks of cramping pains in the abdomen occurred three times, against the background of the attack increased peristalsis and local pain in the right iliac region. In the interictal period, pulling abdominal pains were clearly localized in the right iliac region.

After 2 hours of observation in the general blood test: erythrocytes - 4.15 · 1012 / l, hemoglobin - 128 g / l, leukocytes - 15.3 · 109 / l. With control ultrasound, a vermiform appendix 7x1 cm is visualized, its wall is thickened, has a double contour. Conclusion: ultrasound signs of destructive appendicitis, with a possible retrocecal location of the appendix.

In 3 hours after admission to the clinic, the patient was operated on. Access by Volkovich – Dyakonov. During revision in the dome of the cecum, the appendix was palpated through its wall, in the area of the supposed base of the appendix, the intestinal wall was edematous, hyperemic. When trying to disinvaginate, it was possible to remove the base of the appendix and bring a ligature under it, further disinvagination was unsuccessful (Fig. 1).

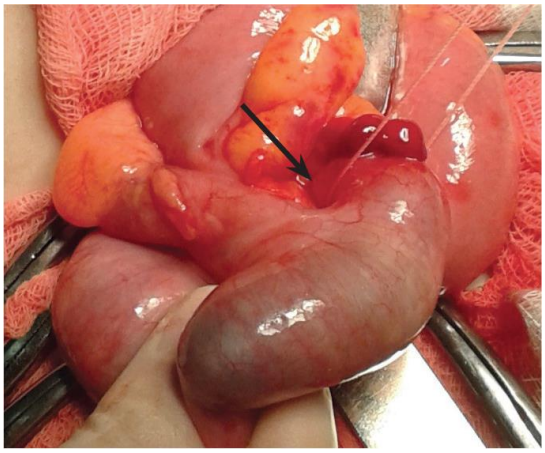

Fig. 1. Intraoperative picture of patient L. In the lumen of the dome of the cecum, the appendix is palpable, which is visible through the intestinal wall. The arrow indicates the ligature under the base of the appendix

The wall of the dome of the cecum was circularly dissected around the base of the appendix, the process was removed. The operation was completed by the imposition of a continuous single-row suture (Safil 3/0) on the dome of the cecum and layer-by-layer suturing of the postoperative wound.

Macroscopic view: the appendix was completely turned out by the mucous membrane, at the base of the wall of the dome of the cecum, the mucous membrane was black, the wall of the appendix was edematous, in the mesentery there were multiple confluent hemorrhages (Fig. 2).

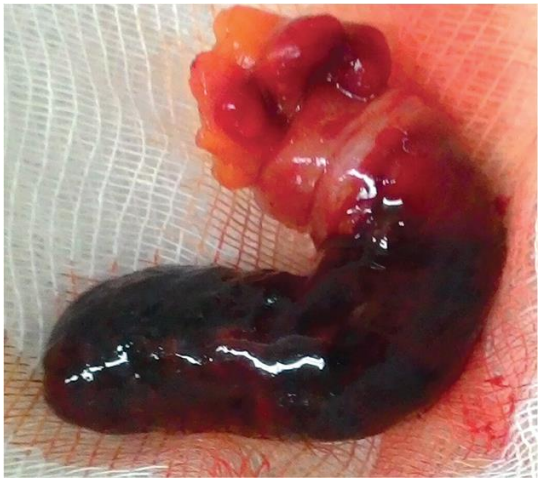

Fig. 2. Macro-specimen of patient L. The appendix is completely turned outward, at the base of the wall of the dome of the cecum, the mucous membrane is black, the wall of the appendix is edematous, in the mesentery there are multiple draining hemorrhages

Pathological examination: the process is completely inverted, brown in color, the wall is thickened to 0.4 cm, dense, white, mucous membrane with areas of necrosis - phlegmonous appendicitis.

The postoperative period was uneventful, the healing of the postoperative wound *per primam*, the patient was discharged from the clinic on the 5th day in a satisfactory condition.

CONCLUSION

The given clinical observation demonstrates the difficulties of preoperative diagnosis of invagination of the appendix. The classical clinical picture of acute appendicitis is absent [6]. Only local soreness in the right iliac region in combination with an increase in the number of leukocytes and a change in the ultrasound picture in dynamics made it possible to verify the diagnosis of acute inflammation in the invaginated appendix.

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