

## Appendicular Giant Mucinous Neoplasms (Case Report)

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### ABSTRACT

The article describes a rare case of appendix pathology. Historical information, frequency of occurrence, possible mechanism of development of cysts of the appendix are given.

Appendicular mucinous neoplasms (AMN) are rare tumors. Only a few cases have been reported, and most patients did not have typical clinical manifestations. Thus, diagnosis and treatment are clinically uncertain treatment tactics and problems. Even the AMH terminology remains controversial and not yet standardized. It is called variously, appendix mucocele, appendix mucocele, appendix myxoma, appendicular mucinous neoplasm. [2,10,11,12]

Proper preoperative diagnosis helps prevent tumor rupture during surgery, which can lead to iatrogenic implantation and the formation of peritoneal pseudomyxoma (PMP).

Here we report a case of low-grade AMH that was diagnosed by surgical and histological findings and treated in our hospital. A review of the latest literature is also underway to increase awareness and understanding of this disease. [6]

AMN - appendix, containing mucus of various consistency - from a jelly-like mass to a watery liquid, is a kind of rare neoplasm of the appendix and, according to different authors, occurs in 0.02-0.5% of all appendectomies [2]

Mucocele of the appendix is one of the rarest pathologies with an uncharacteristic clinical picture resembling acute appendicitis. Mucocele of the appendix is a cystic enlargement of the lumen of the appendix - a rare pathology, first described by Rokitansky in 1842, supplemented in 1863 by Virchow. The term "mucocele" was proposed by Fere in 1877 [2,3].

Tumors of the appendix are a group of mucus-filled lesions that cause obstructive

enlargement of the appendix to a gigantic size. They are rare, accounting for only 0.25% of all performed appendectomies and 8% of appendix tumors. 1,2 They may be asymptomatic and discovered incidentally on x-ray or endoscopic examination, or during laparotomy or laparoscopy performed for another reason; 3-5 Thus, more than 50% of cases are accompanied by pain in the right iliac fossa, suggestive of acute appendicitis.

Mucocele of the appendix can be a benign or malignant process, leading to individualized treatment on a case-by-case basis. With improper treatment of the mucocele, pseudomyxoma of the peritoneum can develop, which is characterized by a malignant process. About 10%-15% of mucoceles progress to malignant pseudomyxoma . [1]

Sometimes it is discovered by chance, and sometimes it resembles acute appendicitis. Correct diagnosis before surgery is very important for choosing an adequate surgical treatment in order to avoid intraoperative and postoperative complications. For this purpose, ultrasound, and especially computed tomography, should be widely used.

There are 4 histological types of appendix mucocele: retention cyst, mucosal hyperplasia, mucinous cystadenoma and mucinous cystadenocarcinoma. [2,3]

According to most authors, the main cause of mucocele is chronic obstruction of the appendix lumen, leading to mucosal hyperplasia and pathological accumulation of mucous contents [7,8,10]. The prolonged existence of the mucocele leads to atrophy of the mucous membrane of the appendix. Cysts up to 3 cm in size are considered small, up to 6 - medium and more than 9 cm - giant [9,11,12]. The most accessible and widely performed method is appendectomy.

Ultrasound and CT are used to diagnose the disease. However, the diagnosis is established only during the operation. Sometimes the appendix can be located low enough in the pelvis, which can mimic gynecological diseases such as hydrosalpinx or ovarian cysts [13].

**Taking into account the rarity of this pathology, we present our own clinical observation.**

We present our own observation. Patient T., born in 1932, was admitted to the emergency department of the Bukhara branch of the Republican Scientific Center for Emergency Medical Care on 06/15/2016. The patient was admitted with complaints of pain in the right iliac region, weakness, dry mouth. An objective examination of the condition is relatively satisfactory. Skin of normal color. Peripheral lymph nodes are not enlarged. Hemodynamic parameters are normal. Vesicular breathing in the lungs. Tongue dry, covered with white coating. The abdomen is not swollen, participates in the act of breathing, on palpation there is pain and muscle tension in the right iliac region and in the lower abdomen. Symptoms of peritoneal irritation are weakly positive. Appendicular symptoms: Kocher-Volkovich, Razdolsky, Bartomier-Michelson are positive. Intestinal peristalsis is auscultated, gases depart. Stool and diuresis are normal.

General blood test: hemoglobin - 102 g / l, erythrocytes -  $3.9 \times 10^{12}$  / l, CP - 0.9, leukocytes -  $11 \times 10^9$  / l, ESR-16mm / h.

**The patient was diagnosed with: - acute appendicitis.**

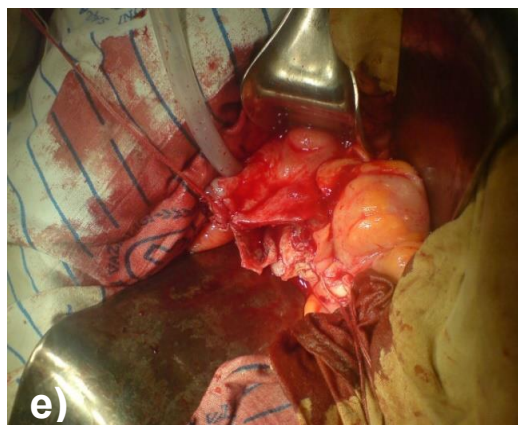
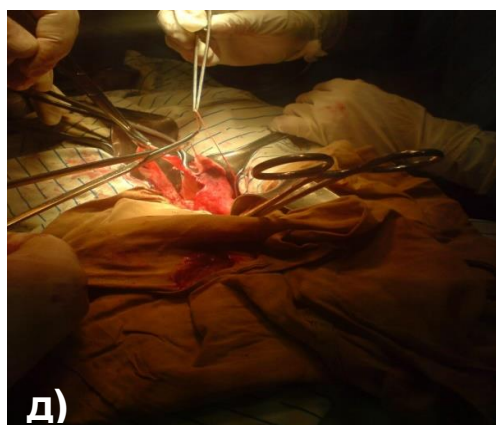
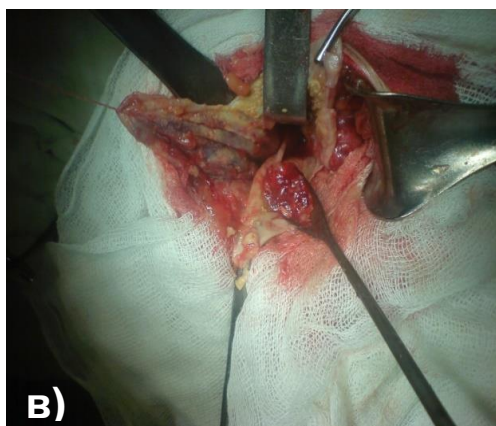
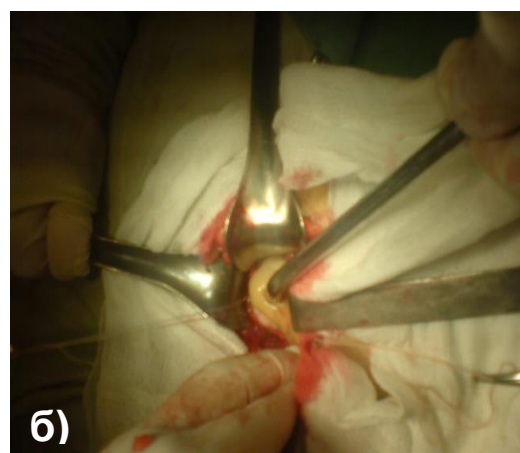
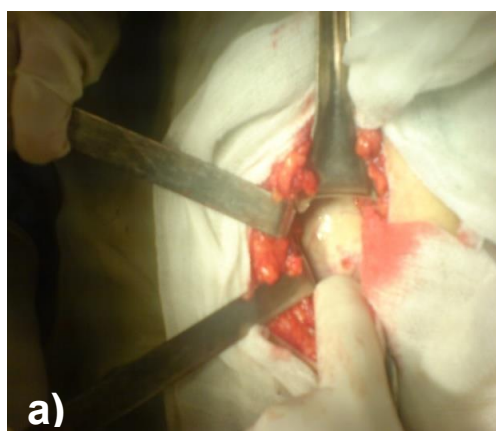
Under intravenous anesthesia with a Volkovich-Dyakonov incision 10 cm long, the tissues of the anterior abdominal wall were dissected in layers. The abdominal cavity was opened. During the revision, in the projection of the appendix, a grayish-yellow formation 15.0x10.0 cm in size, densely elastic consistency with clear contours was revealed, which was regarded as a giant cyst of the appendix (mucocele) of the appendix. An exudate of about 30 ml was found, drained. The caecum is not changed. The case was regarded as a mucocele of the appendix (Fig.

a). Further tactics. The cyst was dissected near the wall of the wound, an unsuccessful attempt was made to evacuate the contents of the cyst with an electric suction, since the cyst cavity was filled with a mucous mass (Fig. b). The cavity of the cyst is cleaned with a spoon. The edges of the cyst were incised (Fig. c) and sutured with interrupted sutures (Fig. f, e).

Postoperative diagnosis: appendicular giant mucinous neoplasm. The macropreparation was opened, a jelly-like mass was obtained (Fig. d), the cyst wall was sent for histological examination, the results of which confirmed the diagnosis of the appendix mucocele.

We thought it was acute appendicitis and didn't do a CT scan. In our opinion, this was a mistake, because every patient over 50 years of age who has pain in the right lower quadrant of the abdomen should undergo a CT scan. [2]

The postoperative period proceeded favorably. On the 7th day after the operation, the patient was discharged from the hospital in a satisfactory condition, the drainage was removed on the 5th day after the operation, the postoperative wound healed by primary intention.



One of the main principles of the surgical treatment of this disease is that intact mucous membranes do not pose a threat to the patient. If it is perforated and mucus enters the peritoneal cavity, there is a high chance of developing peritoneal pseudomyxoma, which is very difficult to treat and long-term results are very unsatisfactory. Therefore, the choice of an adequate surgical method is very important. Some surgeons believe that open surgery should be preferred over laparoscopy. If the operation was started using the laparoscopic method and it turns out that there is an appendix mucocele, it should be converted to open surgery. This has 2 purposes: (1) to operate carefully so that the cyst does not rupture and the mucus does not get into the abdominal cavity; (2) With open surgery, compared with laparoscopy, a more complete examination, palpation, and direct examination of spots in the abdominal cavity, where mucinous tumors can be most common, can be performed. [2,3,5]

Thus appendix mucocele is a rare disease and has a clinical presentation resembling acute appendicitis. Correct diagnosis before surgery is very important for the choice of surgical technique in order to avoid serious intraoperative and postoperative complications. Ultrasound, especially CT, should be widely used for this purpose. In our opinion, every patient over 50 years of age presenting to the emergency department with clinical symptoms of acute appendicitis should undergo a CT scan, and open surgery should be preferred over laparoscopic surgery.

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