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Case Report

Double appendix with appendicitis: case report

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ABSTRACT

The frequency of doubling of the appendix, according to the literature, is about 0.004% of the number of appendectomies. According to the literature, there were about 100 cases, of which 15 were complicated by the acute form. Doubling can be partial, complete or of several types: a shoot in the form of a double-barreled gun; "avian" in which there are two developed processes located on both sides of the cecum; and one process is located in its usual place, and the other, as a rule, rudimentary, is located along one of the muscle bands. Doubling of the appendix can be in the cecum or in the duplication of the cecum. It was first described and systematized in 1936 by Cave, then in 1962 by Wallbridge, then in 1993 by Biermann.

Keywords: Duplication of the appendix, Types of doubling, Development of appendicitis, Treatment

INTRODUCTION

In absolutely the entire society, approximately one hundred situations are recorded with an appendix.[1,2] As a rule, this will be fixed simply during the period of urgent appendectomy due to inflammatory actions in the blind intestine. Serious incident: a female, 34 years old, with annoying lower abdominal pain for 24 times with further lightheadedness, nausea and a slight increase in body temperature. Someone was subjected to auxiliary studies: the leukogram showed the disease, but the study of the abdominal cavity is a blind branch with a thickened wall, locally interconnected with a small amount of water and also an obstruction of the intestinal tract loop. A gastrointestinal tract was laid, a strong appendicitis was opened. Another intussusception of the loop of the intestinal tract was found close to the ileum, which led to the recognition of another 1st process of the blind viscera after regional dissection. Paired surgery and segmental iliectomy have been done, despite the fact that there is no need for this. The results of the anatomopathological study of surgical standards revealed a sharp suppuration in 2 processes of the blind viscera. In a similar way, during the period of such surgical interventions, it is also recommended to carry out an ordinary retroperitoneal release as well as an absolute examination of the blind viscera because of the ability to not recognize the second branch of the visually impaired viscera.

CASE REPORT

Patient, female A, 34 years old, came to the clinic on 16 November 2020 at 3 pm with complaints of abdominal pain, dry mouth, weakness, nausea, loose stools. She fell ill 5 days ago, when there was pain in the abdomen, more in the right half. From the anamnesis, a few months before the visit, the patient was hospitalized under the conditions of Almaty City Clinical Hospital no.7 with

diagnosis: periappendicular abscess, an operation was performed to drain the periappendicular abscess with tamponation and drainage of the abdominal cavity. The postoperative period was uneventful, the tampon was removed on the 7th day after the operation. Discharged with recovery.

Then, with the above complaints, she turned to the emergency room of the Almaty City Clinical Hospital no. 4, a preliminary diagnosis was exposed: acute appendicitis.

Upon admission

Objectively, the condition is satisfactory. Satisfactory nutrition, active position. The skin is of a normal color. In the lungs, vesicular breathing, heart sounds are clear, rhythmic. Blood pressure (BP) 110/70 mm Hg pulse 74 beats/min, satisfactory filling and tension. Respiration rate 8 per minute. Tongue dry, coated with white bloom. The abdomen participates in the act of breathing, pain and tension on palpation in the right iliac region. In the right iliac region, there is an unremarkable postoperative scar, under which tenderness is determined on palpation. Positive symptoms of Sitkovsky, Rovzing, and Obraztsov. The concentration of blood leukocytes is [12×109/l], the shift of the leukocyte formula to the left. Indications for emergency surgery were presented, the patient's consent was obtained for surgical intervention. Solved appendectomy, access according to Volkovich-Dyakonov.

Figure 1: A photograph taken during a laparotomy procedure depicting an inflamed double cecal appendix. Minor and major inflamed cecal appendix. Surgeon's hand is on the right side of the picture, holding the proximal segment of the ileum.

During revision, serous-fibrinous effusion up to 50 ml, the dome of the cecum in the right iliac fossa is tightly welded to a strand of the greater omentum. The appendix is tense, the vessels are injected, covered with fibrin bloom, and phlegmonous changes. Further revision in the area of the cords' confluence at a distance of 3 cm from the first phlegmonous process revealed the base of another tubular formation, the apex located retrograde. When isolated, this tubular formation turned out to be the second appendix 40×8 mm in size, also on which there are injected vessels, without fibrin plaque.

The operating finding was regarded as catarrhal inflammation of the second appendix, it was decided to perform an appendectomy. The appendages were removed without technical features. A drainage tube is installed in the pelvis. In Figure 1 shows a photo of the removed vermiform processes.

The postoperative period was relatively smooth. Infusional antibiotic therapy (ceftriaxone, metrid intravenously) was carried out. The drainage from the abdominal cavity was removed on the 3rd day. The stitches were removed on the 11th day (Figure 1).

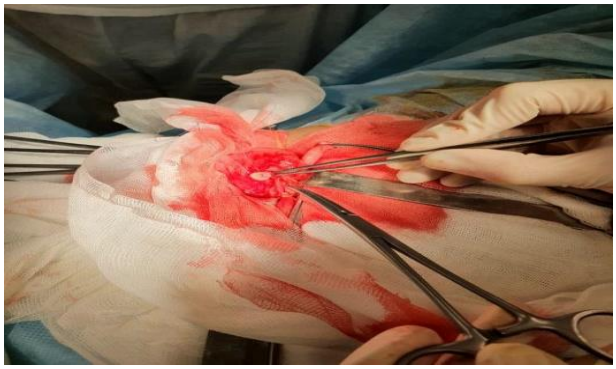

Figure 2: A photograph taken during a laparotomy procedure depicting an inflamed double cecal appendix. Minor and major inflamed cecal appendix. Surgeon's hand is on the right side of the picture, holding the proximal segment of the ileum.

DISCUSSION

Doubling of the gastrointestinal tract is an exceptional natural deviation, and more than 85% of patients in a year up to 2 years have a sharp intussusception of the abdominal cavity or intestinal tract.[3] Duplications of processes existed for the first time and were systematized by Cave in 1936 in accordance with their anatomical location.[4] This concept of systematization existed, refreshed and changed in 1963 by Wallbridge. Already after the more cited version, 2 more types of process deviations were depicted.

In our case, an appendix deviation of the type B2 was found (Cave-Wallbridge systematization). It is reported that this doubling is formed due to the saving of transient protrusion of the visually impaired viscera in the 6th embryonic week.[5] The conclusion was assessed according to the Alvarado scale as the basis of medical examination and laboratory information.

Our patient underwent experimental gluttony. Patients depicted in other studies, in addition, underwent gastrointestinal surgery. But Travis et al. chose laparoscopy to diagnose their own patient, who had

previously undergone appendectomy. Diagnostic laparoscopy, as well as a minimally invasive method, in our time period is considered to be more widely used, also the predominant method, in comparison with laparotomy.[6] Advanced radiological methods can be useful for the diagnosis of intraperitoneal pathology before surgery.[15-17] Despite in this case, the fact that computed tomography is in vain is also not used in absolutely all variants, the conclusion of an appendix duplication with inflammation can be determined. An incorrect conclusion is also an incorrect therapy - frequent episodes in such variants due to the rarity of appendix deviations. Equally as in our case, the previously depicted appendix duplications also existed and were diagnosed during the procedure around these patients.[20] It has been said that the 2nd branch is able to be histologically normal during appendectomy, which leads to the suspension of misdiagnosis. Deceleration in the diagnosis of the 2nd process may cause a high risk of perforation. The repetition of the appendix must be analyzed in absolutely all variants of malaise from the bottom of the abdomen, including if the patient informs about the previous appendectomy. Inflammatory formation, interconnected with a single diverticulum of the visually impaired viscera, can have a similar medical appearance, and can also be found in conjunction with a duplication of the appendix during laparotomy. But clinically it is unrealistic to recognize them, and the difference is also able to be laid only as a line of histological study of the standard.[21] In the wall of the diverticulum of the blind viscera, there is no lymphoid material, which is usually found in the standard of the appendix. Repetition of the appendix is also able to express itself as a decrease in the ascending colic viscera and simulate adenocarcinoma of the colic viscera.

Table 1: Modified systematization of Cave Wallbridge.

Type	Description
Enter	Single cecum with partial duplication of the appendix
Type B	Single cecum with two distinctly separate processes
B1	Two processes arise on either side of the ileocecal valve in an avian fashion
B2	In addition to the normal process extending from the cecum in the usual area, there is also a second, usually rudimentary process extending from the cecum along the taenia lines at different distances from the first
B3	The second process is located along the length of the hepatic flexure of the colon
B4	The second process is located along the length of the splenic flexure of the colon
Type C	Double cecum, each of which has its own process and is associated with multiple anomalies of the duplication of the intestine, as well as the urinary tract
Type D	Horseshoe anomaly of the appendix (one appendix has two holes in the common cecum)

CONCLUSION

Duplication of the appendix should be considered in the differential diagnosis of lower abdominal pain, even if the patient reports a previous appendectomy. Surgeons should be aware of possible anatomical changes in the appendix, and a thorough examination of the cecum should be performed during laparotomy. An incorrect diagnosis can cause serious life-threatening complications for the patient and lead to a forensic problem.

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