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Case Report of Appendiceal Mucocele

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ABSTRACT

Appendiceal mucocele is an appendicular dilation secondary to intraluminal accumulation of mucosal material. Appropriate preoperative diagnosis and surgical resection remain the standard treatment. Here we present the case of a female patient in her third decade who came to the emergency room due to abdominal pain, with a tomography suggestive of appendiceal mucocele, for which she underwent surgery and a conventional appendectomy was performed without complications. The histopathological examination demonstrated simple appendiceal mucocele. without neoplastic activity, at follow-up in one year without recurrences.

KEYWORDS: Appendiceal mucocele, cystadenoma, appendix

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INTRODUCTION

A mucocele of the appendix is the result of obstruction of the appendiceal orifice with distension of the appendix caused by intraluminal accumulation of mucoid material. It is a rare disease, with a reported incidence of 0.2% to 0.7%, four times more common in women, and is usually detected in patients <50 years of age.

The most common symptom is abdominal pain, whether acute or chronic in nature. Considering the predominance of pain in the right lower quadrant, nausea, vomiting and anorexia, many patients resemble the clinical scenario of appendicitis and/or gynecological pathology. [4]

Appendiceal mucoceles have a low risk of malignancy. Treatment should begin only with appendectomy and subsequently be guided by pathological diagnosis. [5]

CASE PRESENTATION

27-year-old female with a 2-year history of diabetes mellitus under treatment and uncontrolled, with last hb1ac of 11. Surgical: 3 cesarean sections, the last one 7 years ago.

Non-pathological personal history: occasional smoking and alcoholism present.

He went to the emergency room due to generalized abdominal pain of 24 hours of evolution, accentuated in the right hypochondrium, not irradiated, he denied fever, and denied nausea or vomiting.

On physical examination, soft depressible flat abdomen, not painful, Mcburney negative, rebound negative, intense pain on palpation in the right flank and right hypochondrium, Giordano negative, decreased peristalsis present.

Laboratories: leukocytes 16.3, Neutrophils 81%, lymphocytes 15%, hemoglobin 15.3, hematocrit 47, platelets 321, glucose 233, creatinine 0.4, bun 10.6, total cholesterol 200, HbA1c 11.45

Very diffuse and unusual symptoms, which is why a CT scan with IV contrast is requested, which reports a probable mucocele of the cecal appendix, and an exploratory laparotomy is scheduled. An incision is made along the midline, an enlarged cecal appendix is identified with thickened walls, a cystic appearance, and the base of the cecum is respected. A conventional appendectomy is performed, and the entire colon is explored for tumors, with no findings, so the procedure is terminated without complications. The histopathological report indicates simple mucocele without neoplastic activity. Follow-up was carried out by consultation with a CT scan of the abdomen without significant findings, one year without abnormalities.

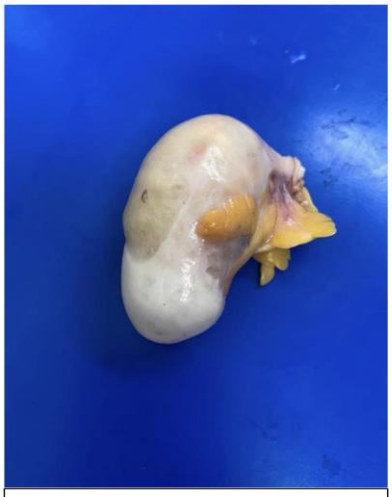

Figure 1. Cecal appendix with thickened wall

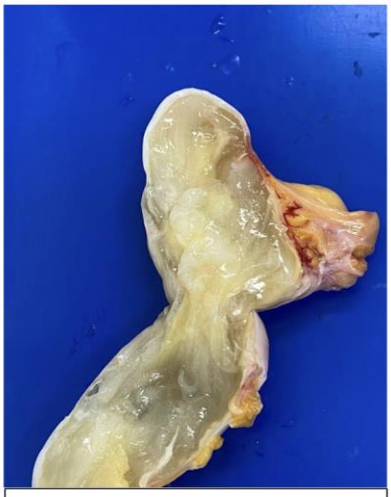

Figure 2. Mucous content

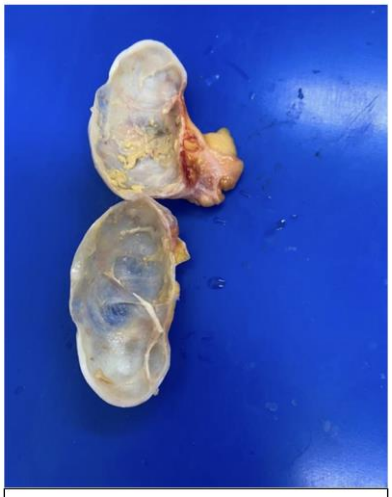

Figure 3. Cecal appendix with cystic wall

DISCUSSION

Appendiceal mucocele is a rare surgical emergency secondary to intraluminal accumulation of mucoid material due to a blockage induced by a variety of neoplastic and non-neoplastic causes. Based on histological examination, mucinous neoplasms of the appendix are classified on a spectrum ranging from benign mucinous cystadenoma with no risk of recurrence to malignant mucinous adenocarcinoma with poor prognosis and high rate of metastasis to lymph nodes and liver. [4]

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

It is a rare disease, with a reported incidence of 0.2% to 0.7%, four times more common in women, and is usually detected in patients <50 years of age. [4]

The clinical presentation of a mucocele is usually nonspecific. Up to 50% are found incidentally at the time of operation and 51% of patients will be asymptomatic. The most common symptoms are: 27% abdominal pain, 14% had an abdominal mass, 13% weight loss, 9% nausea, vomiting or both, and 8% acute appendicitis. The presence of symptoms was associated with a higher incidence of cystadenocarcinoma. [3]

Mucocele developing on a stump of the appendix, that is, a remnant of appendicular tissue after surgical removal of an inflamed organ, is an extremely rare phenomenon. A suggested protective mechanism is to leave a smaller stump, usually <5 mm from the base. [1]

Diagnosis

In case of acute appendicitis, the threshold of the external diameter of the appendix is 6 mm, and 15 mm and more indicate the presence of a mucocele, with a sensitivity of 83% and a specificity of 92%.[2]

Ultrasound of the abdomen can distinguish between benign and malignant mucoceles and the “onion skin sign” is specific for mucinous lesions of the appendix. Multidetector computed tomography is required to confirm the diagnosis and is the radiological image of choice. Appendiceal mucocele is confirmed by a round or tubular, well-encapsulated, low-attenuated to mixed cystic mass adjacent to the cecum. 4 With appendicular lumen greater than 1.3 cm. [2]

Colonoscopy can be used to evaluate other lesions of the colon and to diagnose synchronous or metachronous colon cancers. Appendix mucocele is indicated by a mound-like elevation of the orifice of the appendix (volcano sign) and a discharge of yellowish mucus. Because of the mass effect of a large mucocele, barium contrast examination may reveal a cleft or lateral shift of the cecum. [4]

Treatment

If a mucocele is visualized during laparoscopy, conversion to a midline abdominal incision is suggested. A laparotomy will prevent inadvertent spread of malignant cells and allow for a complete abdominal and pelvic exploration. Any fluid in the abdomen or pelvis should be sent for cytologic study. When performing appendectomy, the appendiceal lymph nodes and appendiceal stump should be carefully evaluated. If the nodes are positive, a right colectomy is needed. If the margin is positive and the nodes are negative, a simple cecectomy is sufficient. If epithelial cells are found in the mucoid fluid, referral to an established peritoneal carcinomatosis treatment center for chemotherapy treatment with simultaneous cytoreductive surgery is necessary. [3]

If not treated properly, mucocele can progress, epithelial cells can escape into the peritoneal cavity and pseudoixoma peritonei develop, which has a high mortality.

One of the cardinal principles of surgical treatment of this disease is that intact mucoceles do not pose a threat to the patient. If it is perforated and the filling appears in the peritoneal cavity, there is a high probability that pseudomyxoma peritonei will develop, the treatment of which is very problematic and the long-term results are quite unsatisfactory. Therefore, the selection of a suitable surgical method is very important. Some surgeons think that open

surgery should be preferred to laparoscopic surgery, this has 2 objectives: (1) perform the surgery carefully so that the cyst does not rupture and the filling does not spread into the peritoneal cavity and (2) with a Open surgery compared to the laparoscopic method, it is possible to have a more complete inspection, palpation and direct inspection of the points in the abdomen where mucinous tumors are most common. Some surgeons consider that the operation can be performed laparoscopically, respecting safety regulations, especially when removing the mucocele from the abdomen, and an endobag should be used. [2]

The pathologist is forced to carry out an exhaustive study, looking for inadvertent perforations that could change the good prognosis of the mucocele. Follow-up is recommended for all patients with mucoceles, because they are sometimes associated with colorectal neoplasms and recurrences such as pseudomyxoma peritonei. [6]

Prognosis

The survival rate after surgery is high, but the overall survival rate after initial surgery for appendix mucocele is excellent, with a low recurrence rate of 3 to 7% for patients with acellular mucin deposits, but an increased risk of recurrence of 33 to 78% with cellular mucin outside the appendix. [4]

CONCLUSIONS

Appendiceal mucoceles are rare mucin-containing neoplasms with malignant potential.

In our patient, the mucocele was not perforated, there was no pathological process at the base of the appendix, therefore, only an appendectomy was performed, no further intervention was required.

In conclusion, appendiceal mucocele is a rare disease and has a clinical picture that resembles acute appendicitis. A correct diagnosis before surgery is very important for the selection of surgical technique to avoid serious intraoperative and postoperative complications. For this purpose, USG, and in particular CT, should be widely used. Mucoceles have a low risk of malignancy. Treatment should begin only with appendectomy and subsequently be guided by pathological diagnosis.

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