International Journal of Research in Medical Sciences
Sánchez OS et al. Int J Res Med Sci. 2023 Aug;11(8):3083-3086
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20232454

Case Report

Right radical hemicolectomy secondary to cecal appendix mucocele: case report

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Received: 04 July 2023
Accepted: 18 July 2023

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ABSTRACT

The cecal appendix mucocele is considered a cystic dilation of obstructive etiology that produces an accumulation of mucoid substance. It may be of benign or malignant origin. 50-year-old female, with no significant personal pathological history, presents with repetitive clinical symptoms of abdominal pain, similar to the process of acute appendicitis, without systemic inflammatory response data, which improves with analgesic management, is protocolized by laboratory studies and imaging, diagnosing appendicular tumor, so it is protocolized for surgical resolution, during which it is decided to do right hemicolectomy due to the macroscopic features of ascending colon. The clinical course and prognosis of mucinous appendicular lesions are closely related to their histology and the presence and extent of peritoneal dissemination. With a survival of 91 to 100% after a conventional appendectomy. The cecal appendix mucocele is considered a benign neoplasm; with good survival provided it is diagnosed in time and an appropriate surgical approach is performed; in our case fortunately it could be protocolized correctly; perform a surgical resection with free edges of oncological cells confirmed by histopathology, so our patient could be discharged from the service being free of oncological pathology at this time.

Keywords: Appendicitis, Mucocele, Appendectomy, Pseudomyxoma peritonei, Tumor markers

INTRODUCTION

The cecal appendix mucocele is considered a cystic dilation of obstructive etiology that produces an accumulation of mucoid substance. It may be of benign or malignant origin.[1]

It was first described in 1842 by Rokitansky who named it "hydrops processes vermiform, and received its name as we now know it in 1876.[2]

Acute appendicular pathology accounts for approximately 50% of hospital surgical emergencies; and there are cases not necessarily related to inflammation such as tumours at this level, where 90% are carcinoid, 8% to mucoceles and only 2% adenocarcinomas.[3]

CASE REPORT

50-year-old female; no significant personal pathological history, initiates discrete pain in the region of right hypochondria type colic 4/10 on EVA scale, one month evolution, denies fever, nausea, weight loss; not observing remission is evaluated by gynecology, where they perform abdominopélvico USG dated 24 May, 2022: which reports tubular lesion of cystic appearance of heterogeneous content of etiology to be determined; so they're asking for contrast abdominal and pelvic CT and tumor markers; CT scan carried out on day 04 June 2022 of abdomen and

pelvis simple and contrasted: in topography of right parietal slide, adjacent to the cecum and cecal appendix a tubular image is observed, sacular of hypodense inner thin walls with attenuation index 28 UH with areas of higher density, extending in the cranial direction towards right hepatic lobe without contacting it. Diagnostic impression: suggestive images with appendicular mucocele without signs of exacerbation (Figure 1). Laboratory studies: 01.06.22: hemoglobin 13.1, hematocrit 39.6, platelets 221, neutrophils 56.8%, group and Rh O positive, TP 13.7, INR 1.04, TTP 26.7, glucose 96, urea 23.54, BUN 11, triglycerides 120, total cholesterol 129, Alpha-fetoprotein 2.11, carcinoembryonic antigen 10.1, Ca-125: 156, beta fraction of HGC-1 less than 2.39; colonoscopy performed on day 27.10.22: rectum, colon, sigmoid, descending colon, transverse colon, and ascending with adequate distensibility without alterations, blind with certain areas of diffuse hyperemia, ileocecal valve and appendicular orifice without alterations; biopsies are taken and reported on 10.11.2022: Blind, ascending colon, descending and sigmoid in alterations. Chest tomography 28.10.22: decrease in bone density, with osteodegenerative changes without alterations. Rest of the study of normal characteristics.

It was decided to initiate a presurgical protocol with the following results: assessment by internal medicine 19.10.22: calculation of cardiovascular risk Goldman II; evaluation by anaesthesiology 24.10.22: ASA I; mean Raq.

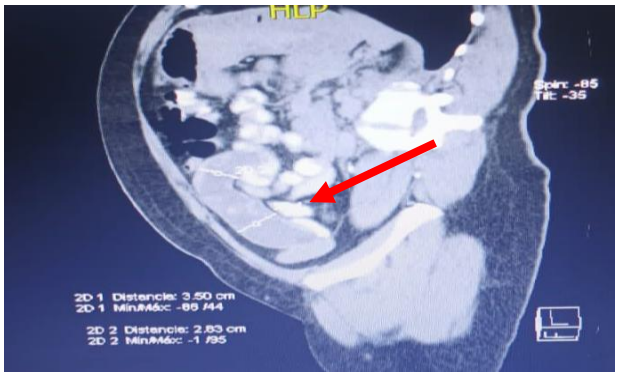

Figure 1: TC: Suggestive image of appendicular mucocele without signs of exacerbation.

Surgery: 17.11.2022: under general anesthesia incision is made in the infra and supraumbilical midline, identifying an enlarged appendix of 15 cm with 3 cm of diameter, absence of tumor activity; therefore, it is decided to perform a right radical hemicolectomy, with terminal ileum section at 20 cm of ileocecal valve, and resection of ascending colon and transverse portion, performing terminal manual anastomosis with closure in two planes (Figures 2). Pathology report: Low grade appendicular mucinous neoplasia, with extension confined to appendicular mucosa, lymphovascular and perineural negative condition. Negative margins (Figure 3). He attended a follow-up appointment at the surgical oncology outpatient office on 18.01.23: at that time without abdominal pain, asymptomatic; chest X-ray without alterations, he decided to leave the oncology service, after the absence of oncological disease.

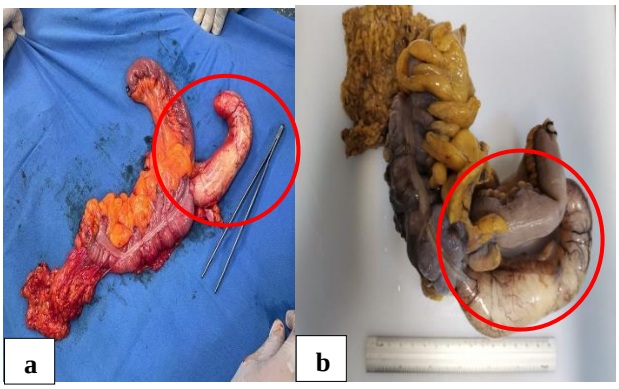

Figure 2: (a) and (b) Piece of right hemicolectomy with presence of tumor (mucocele) in appendicular region.

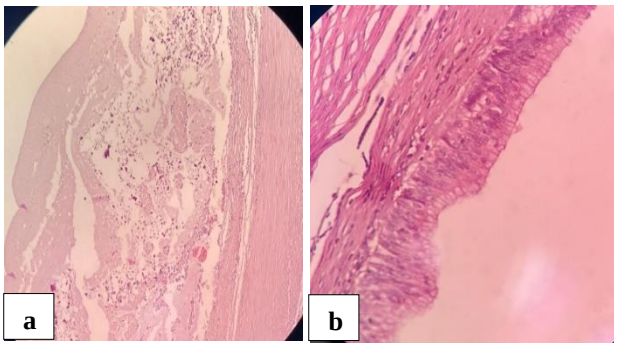

Figure 3: (a) and (b) Histopathological images of appendicular mucocele with presence of mucoproducer columnar epithelium.

DISCUSSION

The cecal appendix mucocele is considered a cystic dilation of obstructive etiology that produces an accumulation of mucoid substance. It may be of benign or malignant origin.[1]

Acute appendicular pathology represents approximately 50% of hospital surgical emergencies; and there are cases not necessarily related to inflammation such as tumours at this level, being our patient part of 8% of cases with histopathological diagnosis of mucocele.[3]

The most frequent clinical picture as it is present is by incidental finding, presence of pain or discomfort at the level of right iliac fossa, like a clinical picture of acute appendicitis or as the presence of tumor at the level of right lower quadrant, such as what happened in the present case, where the patient presented multiple symptoms of abdominal pain with acute appendicitis characteristics, without systemic inflammatory response data.[4]

There are 10-15% cases in which this type of tumors progress to peritoneal pseudodomixoma.[4] This occurs secondary to rupture, effusion, or metastasis of a primary mucinous tumor of a peritoneal organ, mainly due to appendicular tumor and in other cases secondary to ovarian tumor.[5]

Laboratory findings for appendicular mucinous lesions are not specific, but may include anemia or elevated levels of tumor markers (carcinoembryonic antigen, CA 19-9 and CA-125) in patients with neoplastic mucinous lesions.[6,7] Although information is scarce, available data suggest that tumor markers are elevated in most patients with advanced appendicular mucinous tumors, and levels correlate with treatment outcomes.[8] Therefore, tumor markers should be measured after the diagnosis of appendicular mucinous neoplasia and routinely repeated to control disease progression; in the case of our patient, tumor markers before and after surgery, were kept within normal parameters.

Studies such as abdominal computed tomography (CT) and ultrasound can diagnose an appendicular mucocele, but they cannot definitively distinguish between nonneoplastic and neoplastic lesions. Certain characteristics can be suggestive. The presence of thickening of soft tissues, calcifications of the wall and wall irregularity, but not an increase in wall thickness, suggests a neoplasm.[9]

From the histological point these tumors consist of simple mucoceles (also known as "retention cysts" or "inflammatory mucoceles") and are not neoplasms. And neoplastic lesions include serrated polyps, hyperplastic polyps, low-grade appendicular mucinous neoplasms (LAMN), high-grade appendicular mucinous neoplasms (HAMN), and mucinous adenocarcinomas. In which case our patient turned out with a simple mucocele, in addition to reporting tumor-free edges.[9]

The treatment for most mucinous lesions confined to the cecal appendix is performing a conventional appendectomy, we perform a standard appendectomy. The decision to perform a more extensive resection than appendectomy is usually made intraoperatively, but can sometimes be planned in patients with complicated radiographic mucocele with terminal or blind ileum involvement and in patients with known adenocarcinoma with mesenteric or adjacent organ involvement.[10] In the case of our patient, due to the transoperative characteristics of the ascending colon, and since the tumor was not properly delimited, we opted for performing right hemicolectomy and ileotransverse anastomosis at the same time.

The clinical course and prognosis of mucinous appendicular lesions are closely related to their histology and the presence and extent of peritoneal dissemination. Simple retention cysts (mucoceles) and serrated polyps are benign lesions, with 91% to 100% survival after a conventional appendectomy. Neoplastic lesions, such as low-grade appendicular mucinous (LAMN) and high-grade appendicular mucinous neoplasms (HAMN), have an excellent prognosis with complete resection, while mucinous adenocarcinomas have a more reserved prognosis that depends on the histological grade and stage.[11]

CONCLUSION

The mucocele is considered a benign neoplasm of the cecal appendix; with good survival provided it is diagnosed in time and an appropriate surgical approach is performed; in our case fortunately it could be protocolized correctly; perform a surgical resection with free edges of neoplasia confirmed by histopathology so our patient could be discharged from the surgical oncology service being free of oncological pathology at this time.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Sánchez OS, Ramos MAV, Pérez YJS, Morales CP, Barrientos CZD, Orea MAC. Right radical hemicolectomy secondary to cecal appendix mucocele: case report. Int J Res Med Sci 2023;11:3083-6.