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APENDICULAR CYSTIC DILATATION. CASE REPORT

Palabras clave: Apendicitis; Mucocoele; Neoplasias del apéndice.

Keywords: Appendicitis; Mucocoele; Appendix neoplasms.

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RESUMEN

Introducción. El mucocoele es una dilatación del apéndice vermiforme que se caracteriza por su contenido mucoso viscoso. La incidencia de esta entidad es baja —entre el 0.2-0.3% y el 0.7% del total de las apendicectomías— por lo que se considera un caso raro, el cual afecta más a mujeres que a hombres, con una relación 4:1. Con frecuencia, el diagnóstico es incidental y su manejo es quirúrgico.

Caso clínico. Paciente de 69 años de edad, de sexo masculino, que acude a emergencias debido a un cuadro clínico de dolor abdominal de 5 días de evolución en la fosa iliaca derecha. El dolor se acompaña de anorexia, náuseas y alza térmica no cuantificada. El examen físico revela signos de Mc Burney y Blumberg positivos e irritación peritoneal, por lo que se realiza apendicectomía más rafia de base apendicular. Entre los hallazgos intraoperatorios se observó tumoración apendicular con base ancha y de paredes gruesas, y contenido mucoso. El estudio histopatológico mostró una estructura de apéndice cecal con necrosis coagulativa en mucosa y pared, así como mucosa con depósito focal de material mucoso. El paciente fue dado de alta a los 8 días sin complicaciones.

Conclusión: No existen estudios específicos que lleven a predecir el mucocoele apendicular, ni estudios que alerten sobre la futura aparición del mismo; no obstante, conocer sus características es útil para sospecharlo en casos con cuadros similares.

Debido a sus complicaciones, es necesario considerar controles radiológicos con un menor intervalo de tiempo e, incluso, un

tratamiento quirúrgico precoz, con el objetivo de evitar complicaciones tales como obstrucción intestinal, hemorragia o pseudomixoma peritoneal.

ABSTRACT

Introduction. Mucocoele is a dilatation of the vermiform appendix characterized by viscous mucoid material secretion. Its incidence is low —0.2-0.3% to 0.7% of the total of the appendectomies—, therefore, it is considered as a rare entity, which affects mainly women with a ratio of 4:1. Diagnosis is often incidental, and its management is surgical based on histology.

Clinical case. 69-year-old male patient who presented with abdominal pain of 5 days of evolution in the right iliac fossa, accompanied by anorexia, nausea and unquantified fever. Physical examination revealed positive Mc Burney's and Blumberg's signs, indicating peritonism. Appendectomy and appendiceal raffia were performed using the Parker-Kerr technique. Intraoperative findings included an appendicular tumor with a thick base and mucoid content. The histopathological study showed a cecal appendix structure with coagulative necrosis of the mucosa and the wall, as well as mucosa with focal deposit of mucoid material. The patient was discharged after 8 days without further complications.

Conclusion: Studies on appendicular mucocoele are scarce, and due to its complications, radiological controls at a shorter time interval, and even early surgical treatment, are necessary to avoid complications such as intestinal obstruction, peritoneal bleeding or pseudomyxoma.

INTRODUCTION

Carl Freiherr von Rokitansky, Austrian anato-mo-pathologist, first described appendiceal mucocoele in 1842 (1). It is defined as a cystic dilatation of the vermiform appendix, whose causes include benign and/or malignant processes. It has a low incidence estimated at around 0.3% of appendectomies (2,3). From a histological perspective, it can be classified into four types: simple mucocoele (accumulation of mucus in the appendicular cavity with obstruction), focal or diffuse hyperplasia of the mucosa, mucinous cystadenoma, and mucinous cystadenocarcinoma; when a spontaneous perforation of the appendix occurs, pseudomyxoma peritonei can be observed (4).

The clinical picture is not necessarily characteristic, since it can be asymptomatic and, in some cases, it is incidentally discovered through radiological-endoscopic studies or during surgical procedures. Half of the cases present pain in the right iliac fossa (5). This can be a benign or malignant process, so each case must be individualized to know its nature. Complications are rare and include intestinal obstruction or digestive bleeding, being peritoneal pseudomyxoma the most severe form, which occurs when mucinous material disseminates in the peritoneum.

The preoperative diagnosis is essential for planning the surgery and includes imaging techniques such as ultrasound and contrasted tomography (CT) of the abdomen and pelvis, which allow a better characterization of the tumor. An ultrasound can confirm the cystic aspect, while abdominal and pelvic CT scan with contrast defines the wall, the presence of calcifications and the density of the content. Other tests available, although less

useful for diagnosis, are barium enema and colonoscopy (6,7).

The treatment indicated for appendiceal mucocoele is the surgical removal of the appendix, even if the affected mucocoele compromises the terminal ileum or the cecum. Cystadenocarcinoma cases with mesenteric involvement or an adjacent organ require hemicolectomy (8).

The objective of this work is to report a case of this rare pathology, discuss its particular characteristics and present a brief literature review.

CLINICAL CASE

69-year-old mestizo, male patient, without a relevant medical history, who attended the emergency room with a clinical picture of 5 days of evolution characterized by colicky abdominal pain of slight intensity, which progressed to moderate, at the right iliac fossa level. The pain was accompanied by nausea, malaise and unquantified fever.

The patient reported that he was unable to pass flatus and was constipated, which led him to self-medicate with oral analgesics. After realizing that the picture did not improve, he decided to visit the emergency room of the Luis Vernaza Hospital. Physical examination showed the following vital signs: blood pressure 140/80 mmHg, heart rate 103 bpm, SpO2 98%, temperature 37.5°C, conscious state, orientation in space, time, and person, afebrile and semi-moist mucous membranes. The abdomen was soft, depressible, and painful in the right iliac fossa, with positive McBurney's point and Blumberg's sign. The results of the laboratory tests were: leukocytes 10,440/ul, segmented of 76.1%, and CRP: 249.97 mg /L.

An abdominal ultrasonography was performed, which showed a dilatation of the cecal appendix of 93.9mm x 35.9mm, thickening of the wall and laminar fluid in the right iliac fossa (Figure 1).

An exploratory laparotomy was decided with conventional appendectomy plus raffia with appendicular base, similar to the Parker-Kerr technique. Findings included appen-

diceal tumors with a wide base of thick walls and mucoid content. The samples taken were sent to pathology (Figure 2).

The macroscopic study revealed a cecal appendix of 8x6x5cm, appendiceal space reaching 4.5cm in diameter, and serous surface completely occupied by a whitish plate with fibrinous appearance. The parietal bone thickness ranged between 0.2 and 1 cm (Figure 3).

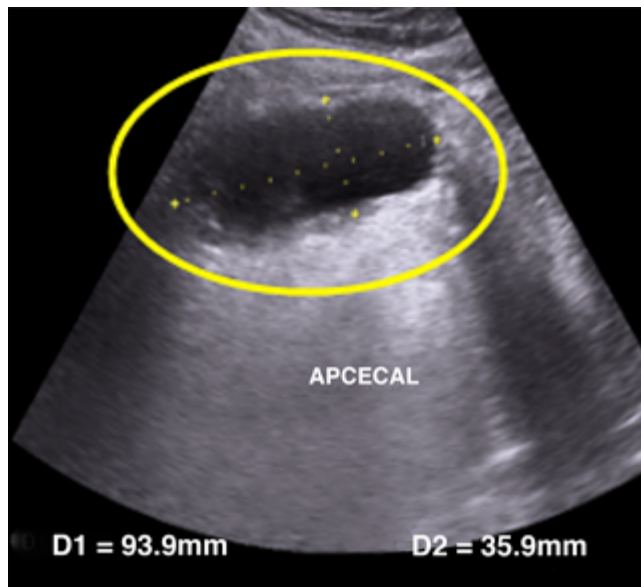


Figure 1. Abdominal ultrasound: dilatation of the cecal appendix (circle).

Source: Own elaboration based on the data obtained in the study.

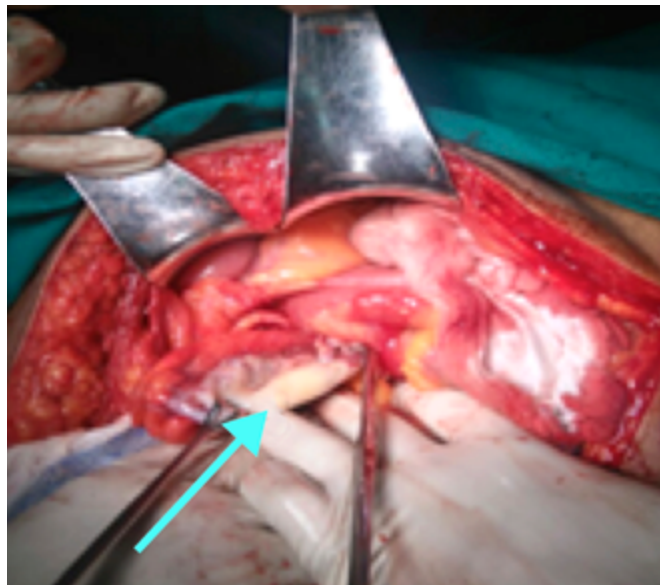


Figure 2. Sample of dilated cecal appendix compatible with mucocoele.

Source: Own elaboration based on the data obtained in the study.



Figure 3. Macroscopic piece

Source: Own elaboration based on the data obtained in the study.

The histopathological study showed a cecal appendix with coagulative necrosis in the mucosa and the wall, mucous membrane with focal mucoid deposit that did not invade the parietal thickness, fibrinonecrotic and hemorrhagic exudate that extended to serosa and periappendicular mesentery, and multiple microabscesses. The final diagnosis was acute gangrenous appendicitis and appendiceal mucocoele. Finally, the patient was discharged after 8 days, without further complications.

DISCUSSION

Appendiceal mucocoele is a cystic dilatation of the appendiceal lumen with accumulation of mucus. It is caused by an obstruction of the appendix due to the excessive accumulation of mucus with abnormal dilatation. However, the term mucocoele does not describe the potential aggressiveness or biological behavior and, therefore, is a descriptive term that does not have a diagnostic character

and does not correspond to a defined clinical-pathological entity.

Appendiceal mucocoele is a rare pathology, found in 0.2% to 0.3% of appendectomies, which corresponds to 8% of the total appendiceal tumors, with a higher incidence in women (ratio 4: 1) and average age of presentation of 55 years (9,10).

This report describes the case of 69-year-old male patient, that is, in the seventh decade of life, which coincides with the literature. The pathology report revealed simple mucocoele, which is found in 20% of cases (11). The histopathological result described acute gangrenous appendicitis and acute fibrinopurulent periappendicitis, appendiceal mucocoele and omentum without histopathological alterations.

The form of presentation is non-specific and incidentally appears in 25% of cases. The most frequent symptoms include abdominal pain (27%), palpable abdominal mass (50%), weight loss (13%), nausea or vomiting

(9%), and less frequently, dysuria, hematuria or complications such as perforation (12), bleeding, intussusception or torsion (13).

This patient presented a picture similar to acute appendicitis with pain in the right iliac fossa, anorexia, nausea, and positive Mc Burney' point and Blumberg's sign, which led to a differential diagnosis of acute appendicitis, which is very frequent.

Laboratory tests may be useful to determine an infectious disease, but not to suspect mucocoele. For this reason, it is advisable to perform imaging tests, including ultrasounds, which, in this case, served to observe an elongated and tubular structure (also known as chicken drumstick) compatible with the appendix, with a diameter greater than 1.5cm, a thin wall and calcifications (14). Nuclear magnetic resonance (NMR) is also useful for studying this picture. In this case, ultrasound showed a dilated tubular image, with a diameter of 35mm, which led to suspect appendiceal mucocoele, although the result was not conclusive.

The treatment for this entity is surgical by laparotomy or laparoscopy; the careful handling of the piece is very important to avoid its rupture and consequent dissemination (pseudomyxoma peritonei). When only the appendix is affected without local or cecal invasion, it can be treated with appendectomy and mesoappendix excision, but if the caecum or an adjacent organ is involved, a right hemicolectomy should be performed (5).

Since the condition of the patient resembled an acute abdomen of 5 days of evolution, an exploratory laparotomy was performed, in which a dilated tumor-like appendix was found, as well as necrosis in its lower third and broad base, which led to suspect mucocoele. The caecum was in good condition, so a conventional appendectomy was performed.

The patient was finally discharged at 8 days without further complications.

The final result was mucocoele without histopathological alteration of the omentum. Based on this finding, periodic check-ups by external consultation were indicated without the need to perform any other surgical procedure until now.

CONCLUSION

Mucocoele has a low incidence of 0.2-0.3% among the total of appendectomies. The treatment is surgical due to the potential risk of malignant transformation and to prevent other complications such as rupture and dissemination. It is important to consider the diagnosis prior to surgery and to perform a careful resection, either by laparoscopy or laparotomy.

CONTRIBUTION OF THE AUTHORS

The author and co-authors participated throughout the process of preparation of this case report.

CONFLICTS OF INTEREST

None stated by the authors.

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