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CASE REPORT

Appendiceal Mucocele: A Case Report in King Fahad Hospital, Medina

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Abstract

Background: Appendiceal mucocele (AM) is a rare condition characterized by mucus accumulation in the appendix, occurring in 0.3% to 0.7% of appendectomies, predominantly in females over 50. It is caused mainly by epithelial proliferation, either benign or malignant, and less often by inflammation or obstruction. Symptoms are nonspecific, often resembling acute appendicitis, and diagnosis is made using ultrasound, CT, and colonoscopy, confirmed by histopathology.

Case report: 53 yrs female k/c HTN presented to ED with 3 days history of lower abdominal pain. Pain started suddenly, progressive, dull in nature in the RIF not radiated or shifted associated with nausea and anorexia. No history of fever, vomiting, bowel habit changes, urinary symptoms or bleeding per rectum. On Examination: Conscious, alert, oriented in pain, Vital signs within normal ranges, Abdomen is soft with RIF tenderness, positive rebound tenderness, PR examination revealed normal colored stool, no palpable masses or bleeding. CT done reported as Large fluid-filled pear shape structure is noted at the expected location of the appendix and in relation to the cecum (125 × 41 mm). There is no internal calcific density. Surrounding fat stranding is noted as well as 4-5 mm lymph nodes. Patient admitted to general surgical ward for laparoscopic appendectomy, intra-operatively huge appendix found filled with mucocele so appendectomy and typhlectomy done. Histopathology reviewed and resulted as 12 × 6 cm appendicular mucocele.

Conclusion: Appendiceal mucocele is a rare condition with symptoms similar to acute appendicitis. Accurate preoperative diagnosis is essential for choosing the right surgical method and avoiding complications. Ultrasound and especially CT scans are important diagnostic tools.

Keywords

Appendicitis, Mucocele, Pain, Abdominal pain

Introduction

Appendiceal mucocele (AM) is defined as an obstructive dilatation of the appendix caused by an accumulation of mucus within the lumen [1]. It is a rare surgical condition, occurring in 0.3% to 0.7% of all appendectomies, with a slight predominance in females and most commonly affecting individuals over 50 years of age [2-4].

The dilation of the appendix in AM results from mucin accumulation, which is identified based on the gross or macroscopic appearance of the appendix. The most common cause of mucocele formation is epithelial proliferation, which can be either benign or malignant. Less frequently, inflammatory or obstructive causes, such as appendicitis or obstruction by a fecalith or appendicolith, lead to mucin production and formation [5].

Clinical manifestations of AM are atypical and nonspecific. Patients usually present with lower abdominal pain and other gastrointestinal symptoms, making it easy to misdiagnose AM as acute appendicitis or overlook it entirely.

Additionally, no specific laboratory markers are associated with AM. Diagnosis is typically made using ultrasound (USG), computed tomography (CT), and colonoscopy, and confirmed postoperatively by histopathology [2,3].

Case Presentation

53 yrs female k/c HTN presented to ED with 3 days history of lower abdominal pain. Pain started suddenly,

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progressive, dull in nature in the RIF not radiated or shifted associated with nausea and anorexia.

No history of fever, vomiting, bowel habit changes, urinary symptoms or bleeding per rectum.

No previous similar history.

No family history of malignancy.

On Examination:

Conscious, alert, oriented in pain Vital signs within normal ranges.

Abdomen is soft with RIF tenderness, positive rebound tenderness.

PR examination revealed normal colored stool, no palpable masses or bleeding.

Laboratory investigation results:

Hgb: 13.2

WBC: 8.09

Plt: 322

All other labs were within normal ranges

Imaging: (Figure 1 and Figure 2)

Chest and abdomen XR were unremarkable.

CT done reported as Large fluid-filled pear shape structure is noted at the expected location of the appendix and in relation to the cecum (125 × 41 mm). There is no internal calcific density.

Surrounding fat stranding is noted as well as 4-5 mm lymph nodes.

Minimal pelvic free fluid. No drainable collection, extraluminal air or definite peritoneal disease. Thickening of the wall of the terminal ileum most likely reactive. The unprepared small and large bowel loops are grossly unremarkable. No bowel obstruction or perforation. Features of giant inflamed appendiceal mucocele. No definite perforation.

Incidental enlarged uterus with intramural mass.

Decision was taken to admit the patient for laparoscopic appendectomy which is done with intra-operative findings of (huge appendix filled with mucocele) appendectomy and typhlectomy done laproscopically using ligature for me so appendix ligation and endo GIA with great caution not to rupture the appendix (Figure 3).

Patient observed postoperatively in the in the general surgical ward for 2 days, she tolerated the procedure and discharged after improvement with OPD follow up appointment 2 weeks later, patient presented to the clinic in a good condition and well healed wounds.

Histopathology reviewed and resulted as 12 × 6 cm appendicular mucocele. Then patient discharged finally from GS side and referred for gynecology for further work up regarding uterine mass CT incidental finding.

Discussion

Appendiceal mucocele can be classified into four

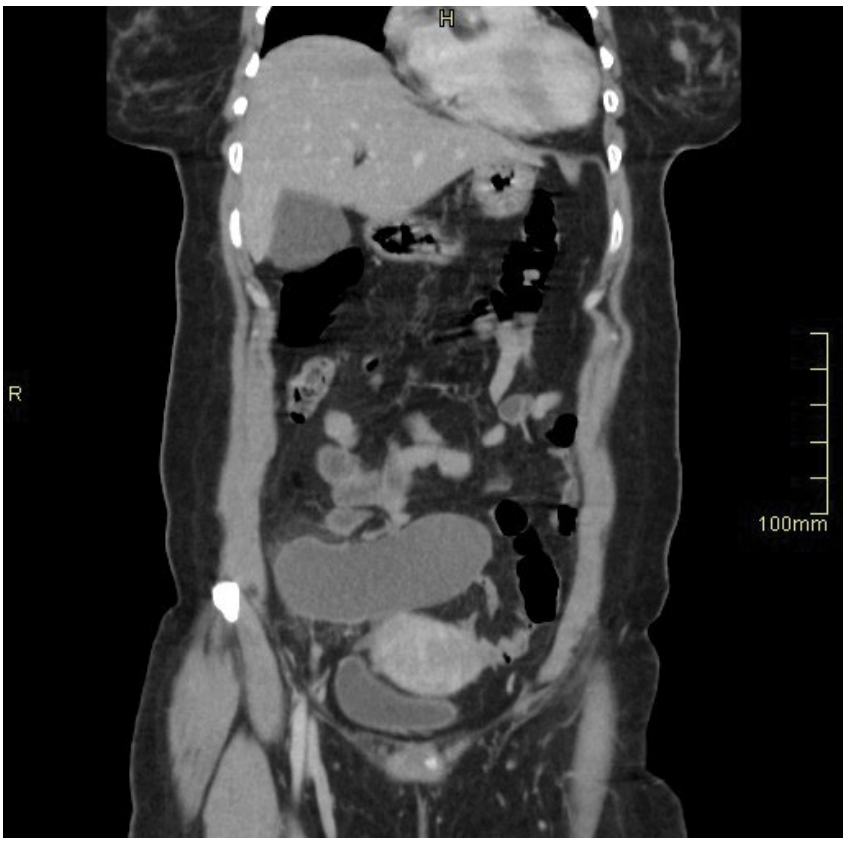

Figure 1

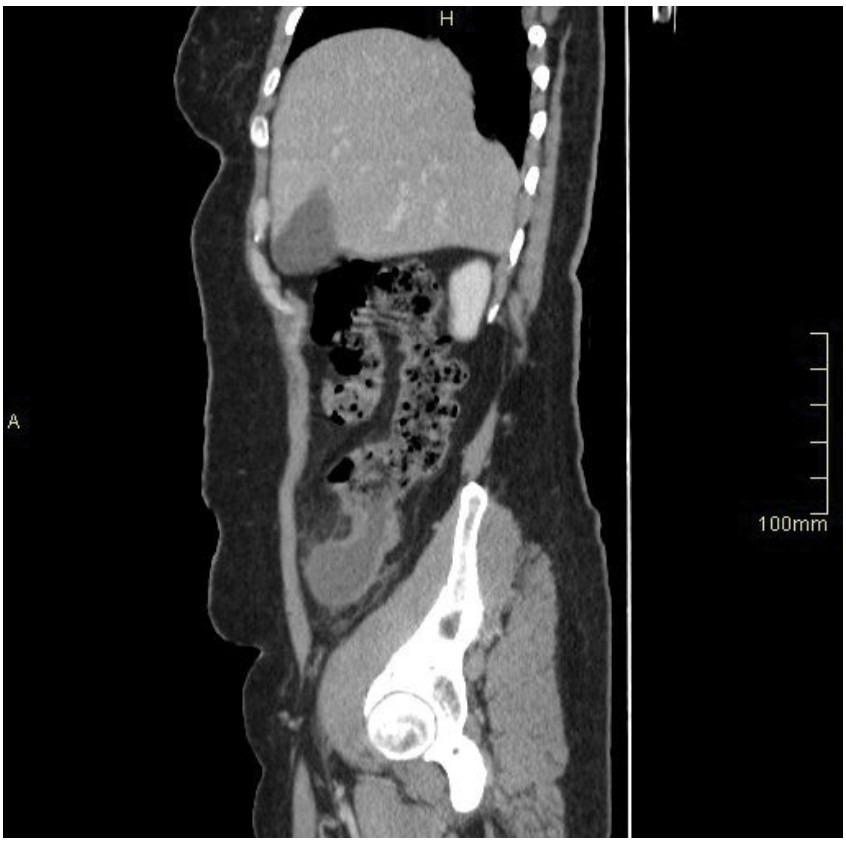

Figure 2

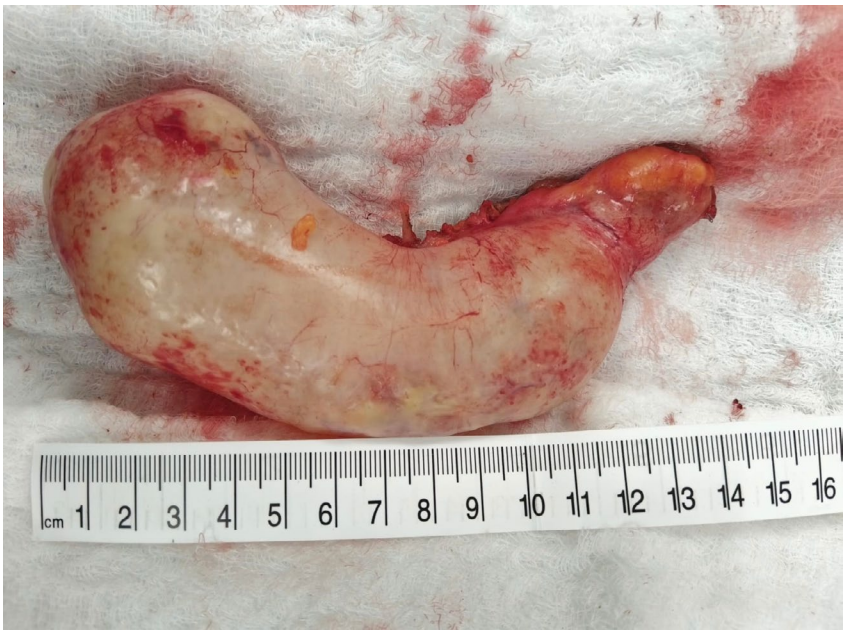

Figure 3

pathological types: Simple retention cyst, mucocele with mucosal hyperplasia (5-25% of cases), mucocythadenoma (63-84% of cases), and mucocythadenocarcinoma (11-20% of cases) [3].

Preoperative diagnosis of appendiceal mucocele is crucial for selecting an appropriate surgical method to prevent peritoneal dissemination and minimize intraoperative and postoperative complications, as well as the need for repeat surgeries [2].

In our case, the diagnosis of AM was made by CT, and once confirmed, surgical intervention was necessary. Surgical options include appendectomy, appendectomy with partial cecectomy, ileocecectomy, or right hemicolectomy. Among these, laparoscopic appendectomy with partial cecectomy has shown favorable postoperative outcomes, making it a preferred surgical method [3] (Figure 4).

For simple mucocele less than 2 cm in diameter,

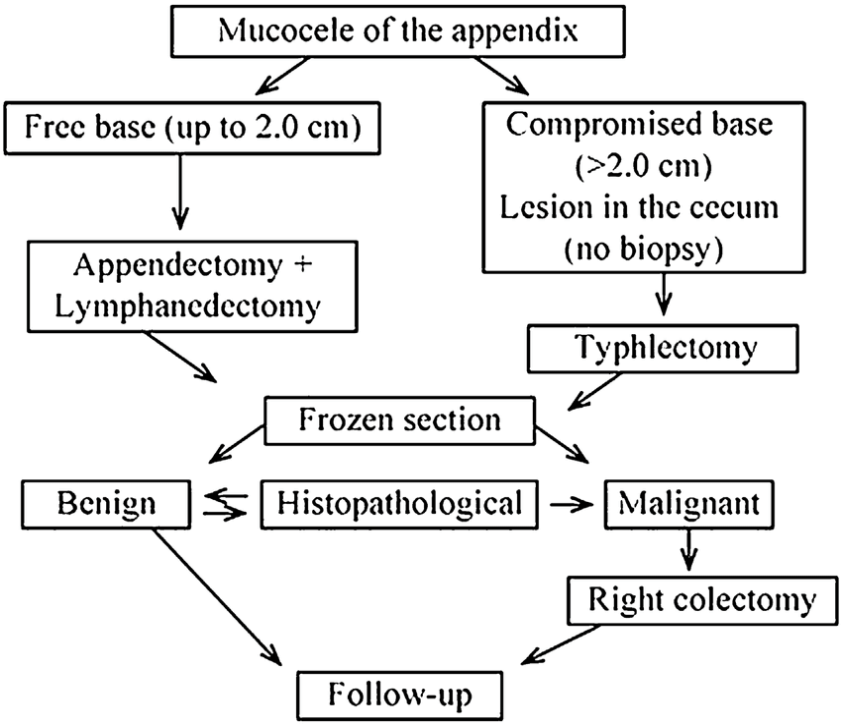

Figure 4

an appendectomy with the removal of all fat and lymph nodes in the mesoappendix is recommended. However, if there is a positive margin at the base, a dilated appendicular base larger than 2 cm, or positive periappendiceal lymph nodes, a right hemicolectomy or ileocecectomy is warranted.

Patients with low-grade epithelial neoplasms without evidence of mucin or epithelial cells beyond the appendix have a very low risk of developing pseudomyxoma peritonei (PMP). A colonoscopy should be performed to exclude any associated colonic epithelial lesions, and patients should be monitored postoperatively for at least five years. Surveillance may include clinical reviews, annual abdominopelvic CT scans, and monitoring of appendix-related tumor markers (CEA, CA 19-9, CA 125) [1].

Patients with high-grade tumors, invasive adenocarcinoma or goblet cell tumors, or those with mucin containing epithelial cells outside the appendix have a higher risk of nodal involvement and subsequent development of PMP. These patients should undergo right hemicolectomy and prophylactic regional (right parietal) peritonectomy, omentectomy, and intraperitoneal chemotherapy. Bilateral salpingo-oophorectomy should also be considered when feasible.

Treatment of PMP involves cytoreductive therapy combined with hyperthermic intraperitoneal chemotherapy. Cytoreductive therapy is achieved through multiple peritonectomy procedures and visceral resections.

There are various reports of an association between mucocele of the appendix and colorectal or ovarian mucinous tumors. Therefore, colonoscopy should be performed on all patients preoperatively as well as postoperatively during follow-up [1].

Conclusion

Appendiceal mucocele is a rare condition with clinical symptoms that often mimic acute appendicitis. Accurate preoperative diagnosis is crucial for selecting the appropriate surgical technique to prevent severe intraoperative and postoperative complications. Ultrasound (USG) and, particularly, computed tomography (CT) should be extensively used for diagnostic purposes.

References

1. Singh MP, Huda T (2022) Mucocele of the appendix: A presentation. Surg J 8: e215-e218.
2. B.B SK, Jasuja P (2019) Appendiceal mucocele - A rare case report. Int J Surg Case Rep 58: 21-25.
3. Gao J, Chu Z, Chen J, Zheng Y, Huang X, et al. (2022) Retrospective analysis of 9 cases of appendiceal mucocele in 3,071 cases of appendicitis. Biomed Rep 17: 55.
4. Overman MJ, Compton CC, Raghav K, Lambert LA (2024) Appendiceal mucinous lesions. UpToDate.
5. Louis TH, Felter DF (2014) Mucocele of the appendix. Proc (Bayl Univ Med Cent) 27: 33-34.