

Case Report

A laparoscopic resection of mucocele appendix in COVID time: a case report

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ABSTRACT

We present a case of 62 year old female presented with complaints of pain right lower abdomen. Contrast enhanced computed tomography (CECT) abdomen showed appendicular lesion likely mucocele appendix. Diagnostic laparoscopy and proceed was planned. Intraoperatively there was no pathological condition found at the base of appendix and there were no lymph nodes enlarged so laparoscopic appendectomy was done carefully and specimen was retrieved in endo bag. Appendiceal mucocele is a rare disease and has a clinical picture that may resemble acute appendicitis. Mucocele of the appendix can also mimic an adnexal mass due to its nonspecific symptoms and prove to be a diagnostic challenge. A correct diagnosis before surgery is very important for the selection of surgical technique. Ultrasonography (USG) and CECT abdomen, should be used extensively for this purpose. Laparoscopic surgery provides the advantage of good exposure with more rapid recovery and a better cosmetic outcome provided that there should be no intraperitoneal spillage.

Keywords: Mucocele appendix, Laparoscopic surgery, Appendicular lesion

INTRODUCTION

Mucocele appendix is an obstructive dilatation of appendix as a result of accumulation of large amount of mucus and may include mucosal hyperplasia, a mucinous cystadenoma, or a mucinous cystadenocarcinoma.¹ It is often detected as an incidental finding during surgery, routine radiological investigations or endoscopic examination. Mucoceles of the appendix are uncommon, accounting for only 0.2 to 0.3% of appendectomy specimens.² We present a case of 62 year old female presented with complaints of pain right lower abdomen. Contrast enhanced computed tomography (CECT) abdomen showed appendicular lesion likely mucocele appendix. Diagnostic laparoscopy and proceed was planned. Intraoperatively there was no pathological condition found at the base of appendix and there were no lymph nodes enlarged so laparoscopic appendectomy was done carefully and specimen was retrieved in endo bag.

CASE REPORT

A 62 year old female presented with history of pain in right lower abdomen for 4 months with on and off episodes of nausea vomiting and loose stools for 2 months. Pain was dull aching and progressive which relieved on taking analgesics. There was no fever, dysuria, melena or change in consistency of stools. On palpation abdomen was soft, nondistended. Tenderness was present in right lower abdomen with moderately rigid muscle and firm tender lump of size 8×5 cm in right iliac fossa (RIF). There was no rebound tenderness. Total leucocyte count (TLC) 8500, hemoglobin (Hb) 12.5 mg%. All biochemical parameters were within normal limits. Ultrasonography (USG) showed an elongated heterogenous solid mass lesion in right lumbar region of size 8.5×5 cm (Figure 1). CECT abdomen showed a thin walled, well defined elongated lesion in RIF abutting the base of caecum inferior to ileocecal junction (ICJ) likely appendiceal mucocele

(Figure 2). Patient was prepared and taken for diagnostic laparoscopy and proceed. Intraoperatively there was a cystic appendicular mass of size 9×6 cm with inflamed wall was seen in RIF originating from caecum inferior to ICJ with omental adhesions (Figure 3).

There was no spillage in peritoneal cavity and also no palpable lymphadenopathy. Adhesiolysis done and base of appendix dissected. Mesoappendix dissected and mucus aspirated carefully. Appendectomy done and specimen extracted out in endo bag (Figure 4). Port closure done. Postoperatively patient was doing well and orally started on post-operative day (POD) 1. Patient was discharged on POD 3 in a stable condition.



Figure 1: USG showing mucocele appendix.

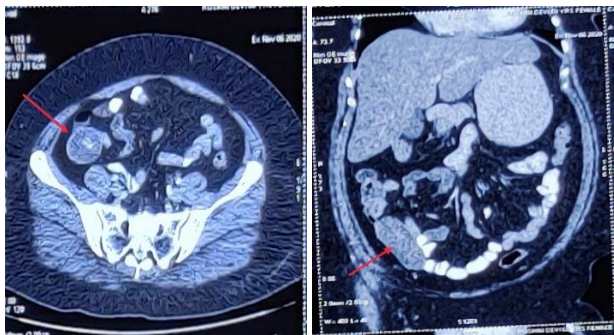


Figure 2: CECT abdomen film of mucocele appendix.



Figure 3: Intra-operative finding.

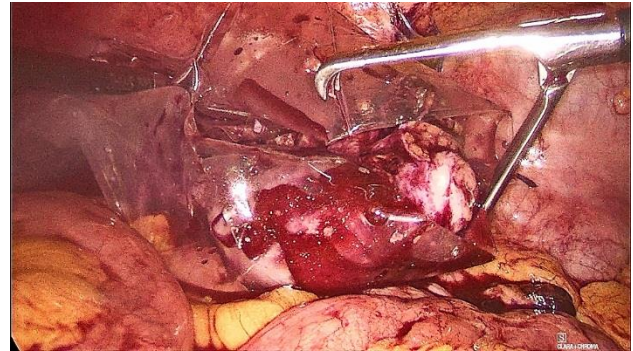


Figure 4: Specimen retrieval.

DISCUSSION

Mucocele appendix is a rare disease characterized by dilatation of appendicular lumen as a result of accumulation of large amount of mucus. It was first described by Rokitansky.³ The clinical presentation of mucocele appendix is usually nonspecific, with difficult preoperative diagnosis. The most common complaint is pain in the right lower quadrant of the abdomen which may last for months with or without a palpable mass, nausea, vomiting. Our patient also presented with similar complaints. Gastrointestinal bleeding and weight loss. About 25 to 50% of the subjects can be asymptomatic.^{4,5} Its incidence ranges between 0.2-0.3% in all appendectomy specimens with a higher occurrence in female and people over 50 years of age.^{6,7} Preoperative diagnosis of mucocele appendix is difficult because of the rarity of the condition and nonspecific presenting symptom. Four histologic types exist: retention mucinous cyst, mucosal hyperplasia, mucinous cystadenoma and mucinous cystadenocarcinoma.⁶ Mucinous cystadenocarcinomas are less common than mucinous cystadenomas. This neoplasm rarely spreads through the lymphatic or vascular routes, but has a peculiar tendency of penetration and spread well beyond the appendix to the peritoneum. Moreover, in advanced cases the whole peritoneal cavity becomes distended with adhesive semi-solid mucous; a condition termed pseudomyxoma peritonei.⁸ The initial detection of the disease may be facilitated by radiological or endoscopic means. Ultrasound findings can be variable. Purely cystic lesions with anechoic fluid, hypoechoic masses with fine internal echoes as well as complex hyperechoic masses can be seen depending on the contents.⁹ The onion skin sign is considered to be specific for mucocele of the appendix.¹⁰ In the above case the USG was unable to provide a preoperative diagnosis. Computed tomography (CT) scan is important to confirm the diagnosis and to evaluate the extent of the disease. In the above case CECT abdomen provided a likely diagnosis of mucocele appendix. Colonoscopic findings include the 'volcano sign', the appendiceal orifice seen in the center of a firm mound covered by normal mucosa or a yellowish, lipoma-like submucosal mass in addition to a yellowish discharge.¹¹ Surgical excision of mucocele of appendix can either be done by laparotomy or laparoscopy. Laparoscopic surgery

provides the advantages of good exposure and evaluation of entire abdominal cavity, as well as more rapid recovery with avoidance of a large incision and a better cosmetic outcome. However careful handling of the specimen is recommended as spillage of the contents can lead to pseudomyxoma peritonei. This can be achieved by atraumatic handling of the appendix and use of impermeable bag for removal of the specimen. This depends on the experience of surgeon in advanced laparoscopic techniques. In our case the aspiration of mucus from appendix, atraumatic handling and removal of specimen was done very carefully to avoid any spillage. Conversion to laparotomy should be considered if the lesion is traumatically grasped or if the tumor clearly extends beyond the appendix or if there is evidence of malignancy such as peritoneal deposits.¹²

CONCLUSION

Appendiceal mucocele is a rare disease and has a clinical picture that may resemble acute appendicitis. Mucocele of the appendix can also mimic an adnexal mass due to its nonspecific symptoms and prove to be a diagnostic challenge. A correct diagnosis before surgery is very important for the selection of surgical technique to avoid severe intraoperative and postoperative complications. USG and CECT abdomen, should be used extensively for this purpose. In our opinion, every patient more than 50 years old particularly females who arrives with clinical symptoms of appendicitis must undergo USG and CT to come to a preoperative diagnosis. Laparoscopic surgery provides the advantage of good exposure with more rapid recovery and a better cosmetic outcome provided that there should be no intraperitoneal spillage.

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