Case Report

New Indian Journal of Surgery
Volume 8 Number 1, January - March 2017
DOI: https://dx.doi.org/10.21088/nijs.0976.4747.8117.21

Mucinous Cystadenoma of Appendix: A Rare Presentation

Thanga Saravanan B.*, Chidabarajothi M., Sai Krishna*****

*Consultant General Surgeon, Department of General Surgery, Apollo Clinic, Valasarvakkam Chennai. **Associate Professor, Department of Surgery, *** Assistant Professor, Department of Pathology, Pondicherry Institute of Medical Science, Pondicherry.

Abstract

Mucinous cystadenoma of the appendix is a rare benign tumor of appendix. Histopathologically divided into three groups: focal or diffuse mucosal hyperplasia, mucinous cystadenoma and mucinous cystadenocarcinoma. This condition is often associated with other neo-plasia, especially adenocarcinoma of the colon and ovaries. In this case report we discuss a case of a 48 yearold male diagnosed with mucinious cystadenoma of the appendix treated successfully. We have added the pathology, various diagnostic modalities and treatment for the above mentioned disorder.

Keywords: Mucinous Cystadenoma Appendix; Appendicitis; Benign Tumor Appendix.

Introduction

Mucinous cystadenoma of the appendix is a type of appendiceal mucocele and a quite rare condition as 0.3% incidence [1,2]. It is usually discovered incidentally in the course of other abdominal surgery [1,3]. Contrary to the other appendicular lesions it presents no symptoms despite cystic dilatation of the appendix lumen with stasis of mucus. This leads to a delay in its detection, a rupture of mucinous cystadenoma may occur, resulting in pseudomyxoma peritonei, a condition involving the spread of adenoma cells throughout the peritoneal cavity in the form of multiple mucinous deposits [4, 5]. Here we present a mucinous cystadenoma of the appendix with low grade dysplasia in bulbous expansion of tip of appendix and mesoappendix with mucin deposition.

Corresponding Author: Thanga Saravanan B., Consultant General Surgeon, Department of General Surgery, Apollo Clinic, Valasaravakkam, Chennai, Tamil Nadu 600087.
E-mail: drthanga@icloud.com

Received on 25.10.2016, **Accepted on** 07.12.2016

Case Presentation

A 48 year old man presented with a three days history of abdominal pain with two episodes of non-projectile non bilious vomiting associated with fever. Examination revealed temperature of 100 Fahrenheit, and was not pale. His blood pressure was 140/90 mm hg; pulse rate was 98/minute, regular. Both lung fields were clear on auscultation. His abdomen was flat and rebound tenderness present in the right iliac fossa. The clinical diagnosis was acute appendicitis. Abdominal ultrasonography revealed a 7cm x 5cm x 3cm non septate, cystic mass in the right pelvis, and a normal liver architecture. ECG revealed sinus tachycardia. Complete blood count revealed leukocytosis with polymorphic predominance (Table 1). With no time to waste he was subsequently prepared for an appendicectomy.

Under spinal anesthesia on supine position Mcburney's incision was made and wound opened in layers. An inflamed appendix of size 10X3 cm with straw colored fluid in the reterocecal pouch was excised and sent for histopathology analysis (Figure 1,2). The wound was closed after achieving hemostasis. The histopathology report of the excised mass was reported as mucinous cys-tadenoma of the appendix with low grade dysplasia in bulbous expansion of tip of appendix and mesoappendix with mucin deposition with proximal lumen free of tumor cells. His postoperative clinical status was unre-markable, and he was discharged home on the 9th post-operative day.

Table 1:

Complete Blood Count	Result	units	Reference
Total count	16800	cells/cu.mm	4000-11000
Polymorphs	83.8	%	40-80
Lymphocytes	12.3	%	20-40
Monocytes	2.3	%	2-10
Eosinophil	1	%	1-6
Basophils	0.6 %		0-2

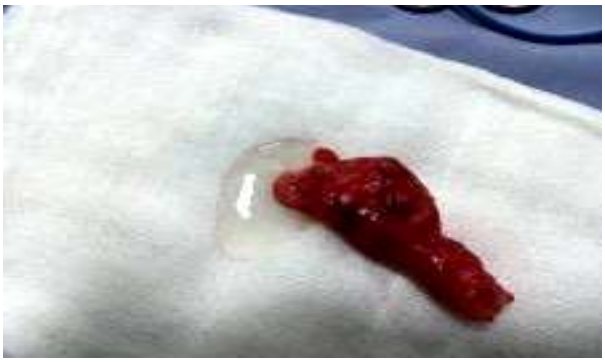

Fig. 1: Showing appendix with mucinous content

Discussion

Mucinous cystadenoma or mucocele is a rare tumor of the appendix associated with cystic dilatation [6,7]. Mucocele of the appendix denotes an obstructive dilatation of the appendiceal lumen due to abnormal accumula-tion of mucus, which may be caused by a retention cyst, mucosal hyperplasia, cystadenoma and cystadenocarcinoma [6, 8,9]. It is a rare entity found in 0.3% of appendiceal specimens with a slight female predominance and an average age at diagnosis of over 50 years [10, 11].

The understanding of the nature of appendiceal mucocele and its terminology has been greatly changed since the initial description of Rokitansky in 1842 and Higa et al in 1973 [12,13]. Clinical symptomatology of these patients are nonspecific. Abdominal pain is present in 64% of the patients and palpable ileocecal mass in 50% of them. Disease course is asymptomatic in 25% of the patients. Urinary infection and hematuria are often associated (20%) [14,15]. Intestinal obstruction caused by intussusception and intestinal bleeding are rare complications However, it may be diagnosed clinically from features of acute appendicitis. Our patient had no mass palpable however his symptomatology was suggestive of appendicitis.

Four Pathological Entities are Described from the Epithelial Characteristics:

1. Simple or retention mucoceles due to obstruction of the appendiceal outflow; usually by a faecolith, charac-terized by normal epithelium and mild luminal dilatation
2. Mucoceles with hyperplastic epithelium with mild luminal dilatation. These constitute 5%-25% of mucoce-les.
3. Mucinous adenoma/cystadenoma is the most com-mon form, accounting for 63%-84% of cases. These exhibit mostly epithelial villous adenomatous changes with some degree of epithelial atypia. There is marked disten-tion of the lumen up to 6 cm.
4. Malignant mucinous cystadenocarcinomas, represent 11%-20% of cases. These demonstrate glandular stromal invasion and/or presence of epithelial cells in the peritoneal implants.

There is always the risk of rupture, either spontaneous or accidental, with consequent development of pseudomyxoma peritonei, which may present with features of in-testinal obstruction [6, 16].

There are no specific lab tests that could identify the lesion, the common lad tests like the complete blood count gives vague picture of infection. Radiology is of much more assistance in case of a mucinous cystadeno-ma. Sonography usually shows a cystic encapsulated le-sion with liquid content adjacent to cecum. CT/NMR scan shows a low density, encapsulated, thin-walled mass that does not contain contrast medium and communicates directly with the cecum. Fine needle aspiration biopsy is contraindicated because of great risk of pseudomyxoma dissemination [14,17].

Appendectomy is advised for focal or diffuse mucosal hyperplasia and cystadenoma when the appendiceal base is intact. Laparoscopic approach to cystadenoma of the appendix is safe if surgery can be performed without grasping the lesion and if the specimen is removed through the abdominal wall using a bag [14,18].

Conclusion

Here we present a rare case of mucinous cystadenoma of the appendix successfully managed.

References

1. Hibi K, Mizutani M, Imazawa M, et al: mucinous cystadenoma of the ap-pendix associated with muscular and neuromatous hyperplasia: report of a case. Nagoya J. Med. Sci. 2008; 70:35-40.
2. Minni F, Petrella M, Morganti A, et al. Giant mucocele of the appendix: Re-port of a case. Dis Colon Rectum, 2001; 44:1034–1036.
3. Rampone B, Roviello F, Marrelli D, et al. Giant appendiceal mucocele: Re-port of a case and brief review. World J Gastroenterol, 2005; 11:4761–4763.
4. rawford J. Tumors of the appendix. In Pathologic basis of disease, edited by Cotran R, Kumar V, Robbins S. 1994.p.824–825, 1994, Philadelphia Saunders.
5. Landen S, Bertrand C, Maddern GJ, et al. Appendiceal mucoceles and pseudomyxoma peritonei. Surg Gynecol Obstet, 1992; 175:401–404.
6. Alese OB, Irabor DO: Mucinous cystadenoma of the appendix: a case report. African Health Sciences 2010; 10(1):99 -100.
7. Lo RH, Kan PS. Appendiceal mucinous cystadenoma presenting as a porce-lain of appendix with myxoglobulosis- a rare cause of a right lower quadrant mass. Singapore Med J. 1998; 39:174-176.
8. Haritopoulos KN, Brown DC, Lewis P, Mansour F, Eltayar AR, Labruzzo C, Hakim NS. Appendiceal mucocoele: a case report and review of the literature. Int Surg. 2001; 86:259-262 PubMed .
9. Lee Y-T, Wu H-S, Hung M-C, Lin S-T, Hwang Y-S, Huang M-H. Ruptured appendiceal cystadenoma presenting as right inguinal hernia in a patient with left colon cancer: A case report and review of literature. BMC Gastroenterol. 2006; 6:32.
10. Zagrodnik DF 2nd, Rose DM. Mucinous cystadenoma of the appendix: di-agnosis, surgical management, and follow-up. Curr Surg. 2003; 60:341-343.
11. Zullo A, Botto G, Pastormerlo M. A case of appendiceal mucocele associat-ed with cancer of the colon. Minerva Chir. 1995; 50:1095-1098.
12. Rokitansky CF. A manual of pathological anatomy. Vol.2. English transla-tion of the Vienna edition (1842). Philadelphia: Blancard and Lea, 1855.p.89.
13. Higa E, Rosai J, Pizzimbono CA, Wise L. Mucosal hyperplasia, muci-nous cystadenoma, and mucinous cystadenocarcinoma of the appendix. A re-evaluation of appendiceal "mucocele". Cancer 1973; 32: 1525-1541.
14. Djuranovic SP, Spuran MM, Kovacevic NV. Mucinous cystadenoma of the appendix associated with adenocarcinoma of the sigmoid colon and he-patocellular carcinoma of the liver: Report of a case. World J Gastroen-terol 2006 March 28; 12(12): 1975-1977.
15. Minni F, Petrella M, Morganti A, Santini D, Marrano D. Giant mucocele of the appendix: report of a case. Dis Colon Rectum 2001; 44:1034-1036.
16. Dixit A, Robertson JHP, Mudan SS, Akle C. Appendiceal mucoceles and pseudomyxoma peritonei . World J Gastroenterol 2007; 13:2381-2384 PubMed.
17. Madwed D, Mindelzun R, Jeffrey RB Jr. Mucocele of the appendix: imaging findi Navarra G, Asopa V, Basaglia E, Jones M, Jiao LR, Habib NA.
18. Mucous cystadenoma of the appendix: is it safe to remove it by a laparo- scopic approach? Surg Endosc 2003; 17:833- ngs. AJR Am J Roentgenol 1992; 159:69-72.