Research Paper

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Incidental finding of Mucinous Adenocarcinoma of Appendix in a patient operated for cholecystectomy: a rare case report

Medical Science

KEYWORDS : Cholecystitis, Mucinous adenocarcinoma, Appendix.

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ABSTRACT

Introduction: Adenocarcinomas of the appendix are rare tumors of the gastrointestinal tract, with a frequency of 0.2% - 0.5% of all intestinal malignancies and 4% - 6% of all neoplastic lesions of the appendix. Mucinous adenocarcinomas of the appendix are even rarer. They primarily present as acute appendicitis or as a palpable mass in right lower abdomen.

Case presentation: An elderly 50 year, diabetic male came to surgical OPD of JNMC with pain in right upper abdomen for 1 month and constipation for 3 days. Abdomen showed generalized tenderness. USG and CECT showed mucocoel and 3 cm stone on gall bladder. A provisional diagnosis of acute cholecystitis was made and the patient was operated. On exploration of abdomen during cholecystectomy, appendix was seen distended with mucin to 8 cm × 4.5 cm in size. Gall bladder, appendix and 2 periileal lymph nodes 0.5 cm. each was sent for histopathological analysis. Histopathological features of gall bladder showed chronic cholecystitis. The appendix showed features of mucinous adenocarcinoma and lymph nodes were positive for metastasis. The diagnosis mucin secreting adenocarcinoma of appendix with metastasis to periileal lymph node was made.

Conclusion: Mucin producing adenocarcinomas of the appendix are a category of rare cancers of the gastrointestinal tract. Although at present they are a well-studied pathologic entity but their preoperative, clinical and histopathological diagnosis is often a challenge. The case was very interesting because provisional diagnosis was acute cholecystitis, but the incidental finding was mucin secreting adeno carcinoma of appendix with metastasis to peri ileal lymph node.

MANUSCRIPT:

Introduction: Epithelial tumors of the appendix are not frequent and might be benign (adenomas) or malignant (adenoca rcinomas).[1,2]Adenocarcinomas of the appendix are rare tumors of the gastrointestinal tract, with a frequency of 0.2% - 0.5% of all intestinal malignancies and 4% - 6% of all neoplastic lesions of the appendix.[3,4]Mucin-producing cystadenocarcinomas/ mucous adenocarcinomas, and non-mucin producing/ colonic type adenocarcinomas are included in this category.[1,2]They primarily present as acute appendicitis or as a palpable mass in right lower abdomen.[4] Mucinous adenocarcinoma usually tend to produce pseudomyxoma peritonei and do not show metastatic spread until late in the disease process. In contrast adenocarcinoma of colon and rectum rarely result in pseudomyxoma-peritonei and frequently metastasize even if mucinous and well differentiated.[5]We report a rare case of mucinous adenocarcinoma of appendix with metastasis to peri-ileal lymph node in a 50 years male presenting as acute appendicitis.

Case presentation

An elderly 50 year, diabetic male came to surgical OPD of JNMC with pain in right upper abdomen for 1 month and constipation for 3 days. There was no history of loss of appetite and weight loss. Abdomen showed generalized tenderness. USG and CECT showed mucocoel and 3 cm stone on gall bladder. A provisional diagnosis of acute cholecystitis was made and the patient was operated .The gallbladder was 12x3 cm with atrophic mucosa and single mixed 3 cm.stone. On exploration of abdomen, appendix was distended with mucin to 8 cm × 4.5 cm in size and mucosa at places partially ulcerated. There was no ascites or peritoneal implants. Gall bladder, appendix and 2 periileal lymph nodes 0.5 cm. each was sent for histopathological analysis. Histopathological analysis of gall bladder showed chronic cholecystitis. The appendix was distended with mucin and the lining epitheium was wavy, multilayered 10-15 cells thick with focal proliferating glands and ulceration. Nuclei were basal, elongated, hyperchromatic large, overlapping, with increased and atypical mitotic figures. Chromatin was coarsely granular. Cells showed cytoplasmic mucinous vacuoles. Mucin also filled the lumen of appendix. The mucinous malignant glands invaded muscularis mucosa. Out of 2, one periileal lymph node showed metastatic malignant mucin secreting glands and mucin pools replacing almost half of the lymph node. The diagnosis of mucin secreting adenocarcinoma of appendix with metastasis to periileal lymph node was made. The patient was referred for colonoscopy for further line of treatment

Discussion

Adenocarcinoma of the appendix is extremely rare. At our institute in one year (jul.2013–jun.2014) 90 appendicectomy specimens were analyzed. This was the only case of primary mucinous adenocarcinoma of appendix which presented as acute cholecystitis. In 15 to 20% of cases a second malignancy in the gastrointestinal tract is associated with the disease.[6] Malignancy of the appendix are never suspected preoperatively and seldom intraoperatively, the diagnosis being usually made at histopathological examination of the surgical specimen or as an incidental finding .[2] From treatment and prognostic stand point the distinction between benign mucinous lesions and mucinous adenocarcinoma of appendix is of great importance.On histopathology, invasion of the appendiceal wall by the atypical glands and identification of epithelial cell in any intra peritoneal mucinous collection, if present are the feature of malignancy.[7]Mucinous type has a better prognosis than non-mucinous/colonic type of lesion. The traditional treatment for mucinous adenocarcinoma confined to the appendix is Right hemicolectomy.[8]But in case of intra-abdominal metastasis the treatment consists of aggressive debulking followed by adjuvant chemo radiotherapy along with it.[9] The prognosis of mucinous adenocarcinoma depends on the grade of malignancy of the mucinous tumor and success of debulking surgery to remove all the tumors that have metastasized into the abdomen.

Conclusion:

The case was very interesting because provisional diagnosis was acute cholecystitis, but the incidental finding was mucin secreting adenocarcinoma of appendix with metastasis to periileal lymph node. Therefore exploration of abdomen as a Pandora's Box and histopathological examination of all appendicectomy specimens is mandatory to rule out the rare malignant pathology.

case report. Tumori. 2008;94:596–599.

Legends of Figure:

Fig.1 (a,b,d) Invasion of muscle layer of Appendix by malignant mucinous glands.

Fig. 1 (c) Multilayering of malignant cells with hyperchromatic, large, overlapping nuclei.

Fig. 2 (a) Ulcerated gall bladder mucosa with lymphocytic infiltrates: chronic cholecystitis.

Fig. (b,c,d) Lymph node showing malignant mucin secreting glands and pools of mucin.

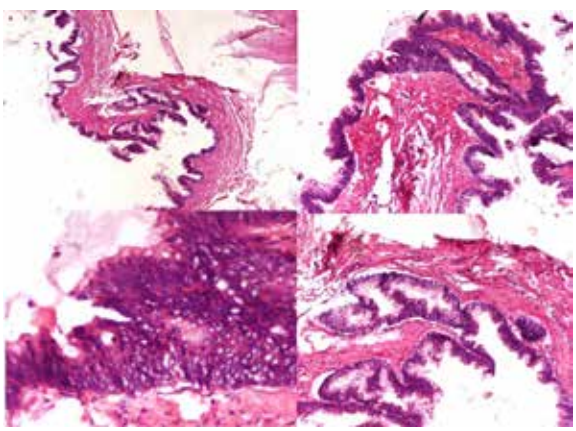


Figure 1

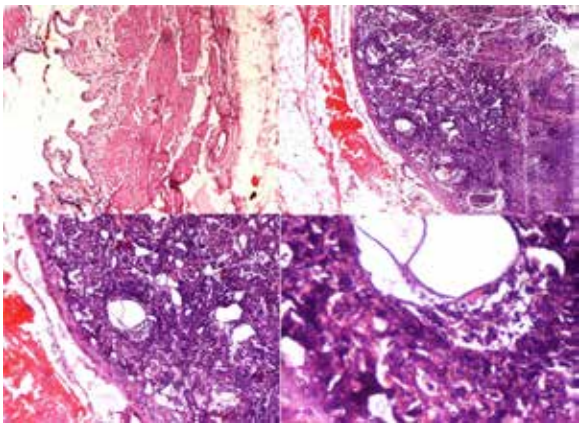


Figure 2

REFERENCE

1. Pickhart PJ, Levy AD, Rohrmann CA, Kende AI: Primary Neoplasms of the Appendix: Radiologic Spectrum of Disease with Pathologic Correlation. RadioGraphics 2003, 23(3):645-662. | 2. McCusker M, Cote TR, Clegg LX, Sobin LH: Primary malignant neoplasms of the appendix, a population-based study from the surveillance, epidemiology and end-results program, 1973-1998.Cancer 2002, 94(12):3307-3312. | 3. Hananel N, Powsner E, Wolloch Y: Adenocarcinoma of the appendix: an unusual disease.Eur J Surg 1998, 164:859-862. | 4. Cortina R, McCormick J, Kolm P, Perry RR: Management and prognosis of adenocarcinoma of the appendix.Dis Colon Rectum 1995, 38(8):848-852. | 5. Carr NJ, Emery TS, Sobin LH (2002).Epithelial neoplasm of theappendix and colorectum. Arch Pathol Lab Med 126(7):837–841 | 6. Lee J, Gardiner KR, Wilson BG (1996) Incidental mucinouscystadenocarcinoma of the appendix. Postgrad Med J 72(843):55–56 | 7. Rutledge RH, Alexander JW. Primary appendiceal malignancies: rare but important.Surgery. 1992;111:244–250. | 8. Lo NS, Sarr MG. Mucinous cystadenocarcinoma of the appendix. The controversy persists: a review. Hepatogastroenterology. 2003;50(50):432–437. | 9. Topkan E, Polat Y, Karaoglu A. Primary mucinous adenocarcinoma with chemotherapy and radiotherapy. A case report. Tumori. 2008;94:596–599. |