Incidental Finding of Low Grade Mucinous Appendiceal Neoplasm After Laparoscopic Appendectomy

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Introduction

Mucinous appendiceal neoplasms are a rare malignancy with diagnosis often obtained incidentally or intraoperatively as a result of surgical intervention for suspected acute appendicitis, accounting for 0.8-1.4% of appendectomy specimens. Approximately 50% of appendiceal tumors are neuroendocrine in nature and benign. Malignant appendiceal tumors can be classified based on histology, approximately 70% appearing as adenocarcinoma with the most common subtype mucinous (53%). Here we describe a case of a 36-year old female who presented with symptoms of acute appendicitis, underwent laparoscopic appendectomy, with pathology report significant for low-grade appendiceal mucinous neoplasm (LAMN).

Case Presentation

A 36 year old caucasian female presented to the emergency department with acute onset lower abdominal pain associated with nausea and chills. Past history was significant for hypertension and gastroesophageal reflux disease. She denied prior surgeries or colonoscopic evaluations. Her laboratory findings were significant for a leukocytosis of 12.2.

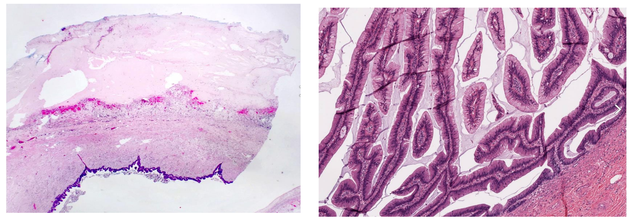


Figure 1. Histologic cross-sectional images. LAMN with extra-appendiceal mucin (left). Low grade epithelium in LAMN (right)

Case Presentation

Patient had a computed tomography of her abdomen and pelvis which revealed appendiceal dilation up to 9 mm with periappendiceal fat stranding. Patient was subsequently taken for a laparoscopic appendectomy. A diagnostic laparoscopy was performed noting the appendix which appeared dilated, non perforated and moderately inflamed. The appendix was subsequently stapled, removed, and the procedure completed shortly thereafter. The patient was discharged on postoperative day one in a stable condition.

Pathology report obtained a week later demonstrated a low grade mucinous appendiceal neoplasm confined to the tip, specifically with a 1.1 x 1.5 cm mucinous region with acellular mucinous deposits without evidence of perforation. The patient was subsequently counseled on this pathology finding and that it would not require immediate adjunctive intervention and therapies. She was recommended to undergo a colonoscopy evaluation which is still pending.

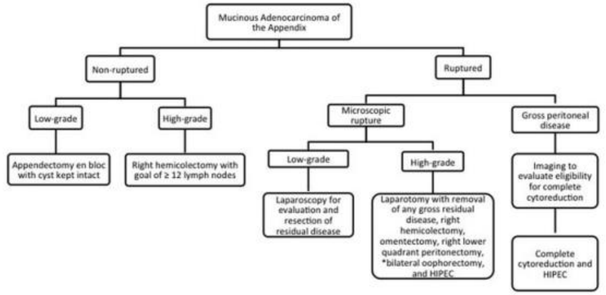


Figure 2. Algorithm for management of mucinous appendiceal adenocarcinoma

Discussion

Management of LAMNs is directed at prevention of rupture, seeding, and spread which can result is disseminated peritoneal adenomucinosis (pseudomyxoma peritonei). Low grade appendiceal mucinous neoplasms (LAMNs) are confined to the muscularis propria, and due to the incidental nature in which many are found, patients may present at more advanced stages of disease which may require further therapies involving hyperthermic intraperitoneal chemotherapy (HIPEC) and cytoreductive surgery (CRS). In the absence of periappendiceal involvement or nodal or peritoneal metastasis, appendectomy alone is considered adequate treatment.

Conclusion

Low-grade mucinous neoplasms of the appendix are typically found incidentally. CT imaging and ultrasonography provide useful tools for diagnosis in more advanced stage disease. Those who present without evidence of metastasis confer good prognoses.

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