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Low-grade Appendiceal Mucinous Neoplasm (LAMN): Description of an uncommon entity

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Background: Low-grade appendiceal mucinous neoplasm (LAMN) is an uncommon tumor of the appendix with attendant risk of serious complications [1]. It can present with abdominal pain and distention, vomiting, a palpable mass, intestinal obstruction, weight loss, and sometimes intussusception. Other uncommon forms of presentation include hematuria, ureteral obstruction, hydronephrosis, and urinary tract infection [1].

Case presentation: A 47-year-old female presented with three days of constant dull right upper and lower quadrant abdominal pain associated with nausea, vomiting, and bloating. She had a similar episode two months prior with intermittent right lower quadrant pain, nausea, and vomiting for two days. There was associated low-grade fever. On examination, she had mild tenderness in the right lower quadrant with no guarding or rebound tenderness. Laboratory investigations showed only leukocytosis. Computed tomography scan of the abdomen done revealed a dilated fluid-filled appendix measuring 1.8 cm in diameter. Laparoscopic appendectomy was done and histopathological examination of the specimen showed features consistent with a low-grade mucinous neoplasm of the appendix with acellular mucin dissecting the muscularis and serosa. Histology did not show peritoneal spread but patient still had post-operative clinical and radiologic follow-up with no adverse event reported.

Conclusion: Low-grade appendiceal mucinous neoplasms are lesions of the appendix that can rupture and lead to pseudomyxoma peritonei with risk of mortality. If it is confined to the appendix, surgical management will suffice with clinical follow-up and imaging if the margins involve acellular mucin or neoplastic epithelium.



Figure 1: Gross photograph of the appendix showing involvement of the serosa with mucin.

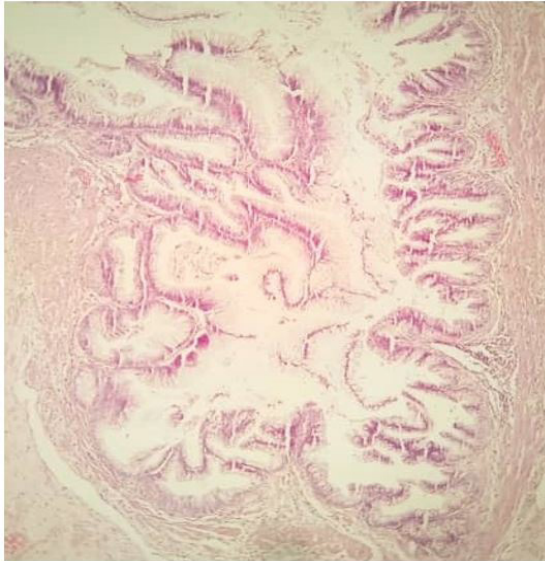


Figure 2: Photomicrograph showing villous and flat proliferation of mucinous epithelial cells originating from the appendiceal lumen. Lesional cells demonstrate abundant apical mucin with elongated nuclei and low-grade nuclear atypia. Haematoxylin and eosin stain. X400 magnification.

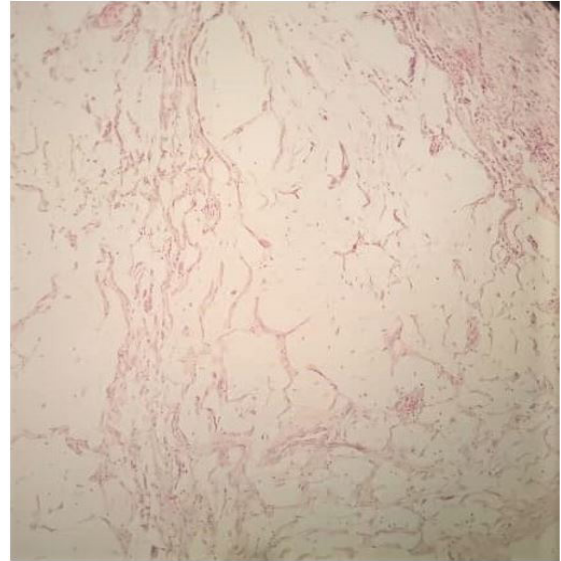


Figure 3: Photomicrograph showing extravasated mucin pools in the muscularis propria and serosa of the appendix. Haematoxylin and eosin stain. X400 magnification.

References

1. Wang AS, Ismael HN, Parikh J, Modesto VL. Low-Grade Appendiceal Mucinous Neoplasm: A Case Series. *Cureus*. 2022; 14(9):e28755.