

COLOVESICAL FISTULA- A RARE COMPLICATION OF EARLY MUCINOUS SIGNET RING CELL CARCINOMA OF COLON- A CASE REPORT

Pathology

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ABSTRACT

Colovesical fistulas (CVFs) are very rare complications of abdominal and often difficult in diagnosing. CVFs commonly occur in males. Rectovaginal fistulas on the other hand are commoner in females of the colorectal malignancy. Approximately 10% of all colorectal carcinomas are mucinous carcinomas, characterized by extracellular mucin. Mucin accumulates intracellularly in these tumours, which differentiated into signet ring cell. CVFs originate from colon adenocarcinomas as seen in aggressive and advanced colon cancers. In most cases CVFs contribute severe physical complications, patients end up with a close death. This case report presents a case of a female patient who was admitted to the hospital because of complaints of pain abdomen, faecoluria, hematuria and loss of appetite. The imaging results revealed a diffuse circumferential thickening of sigmoid colon with intramural extension and fistulous communication between bladder and sigmoid colon. Biopsy from lesion revealed Mucinous adenocarcinoma. In conclusion MAC and SC are rare subtypes of colorectal cancer with a worse prognosis than classical adenocarcinoma. These tumor entities have different biological behavior. These patients require intensified adjuvant therapy due to high rate of local and distant recurrence. Hence awareness of this subtype is important for closer follow up of patient.

KEYWORDS

Mucinous adenocarcinoma, Colovesical fistulas, signet cell, faecoluria, hematuria

INTRODUCTION-

Colorectal cancer is second among women and third among men^[1]. Overall incidence of colorectal carcinoma has declined over the past few years due to screening by colonoscopy in patients.^[2] Colo-vesical fistulas (CVFs) are rare medical emergency and complications of diverticulitis, abdominal cancer, or Crohn's disease. Malignant tumors, that grow rapidly in the abdominal or pelvic cavity, are responsible for approximately 20%-30% of CVFs^[3]. More frequently, CVFs arise from colon adenocarcinomas but may also occur as a consequence of neoplasms in other pelvic organs^[4,5]. Mucinous adenocarcinoma and Signet ring cell carcinoma demonstrate aggressive biological behavior due to high frequency of microsatellite instability, altered E-cadherin and β -catenin expression and amplification of Bcl-2.^[4] This article presents a case of a patient with colovesical fistulas a late manifestation and a rapid course of an advanced colon cancer.

CASE HISTORY-

22-year-old female presented to Surgery OPD, with complaints of pain abdomen for 6-7 months, faecoluria, hematuria, and loss of appetite for 15 days. CECT revealed diffuse circumferential thickening of sigmoid colon with intramural extension and fistulous communication between bladder and sigmoid colon. Serum CEA level was raised (26ng/ml). First, biopsy came from the representative lesion shows mucinous adenocarcinoma.

Grossly the received tumor specimen colovesical segment of intestine measuring 12cm in length. External surface shows an ulcerated growth measuring 4x4cm. Cut section shows an ulceroinfiltrative growth reaching up to serosa. (figure I)

Figure 1-External surface shows an ulcerated growth



Microscopically, it revealed signet ring cell carcinoma of colon with moderately differentiated adenocarcinoma in junctional area with mucinous adenocarcinoma. (figure II, III, IV) Intracellular and extracellular mucin is PAS positive. (figure V, VI)

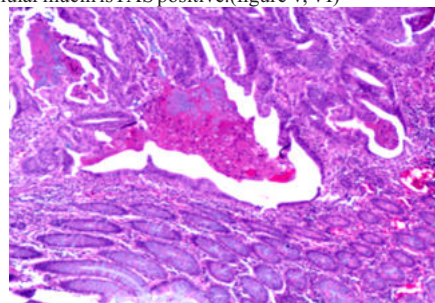


Figure II. Moderately differentiated adenocarcinoma in junctional area.

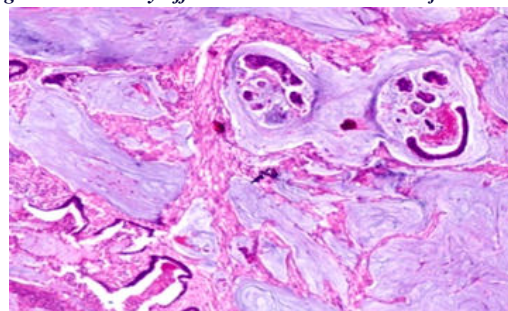


Figure III. Malignant cells in pool of extracellular mucin

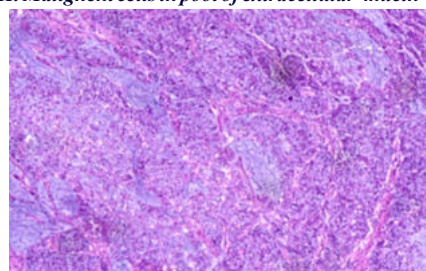


Figure IV. Tumor cells with Signet Ring Cells intracellular mucin

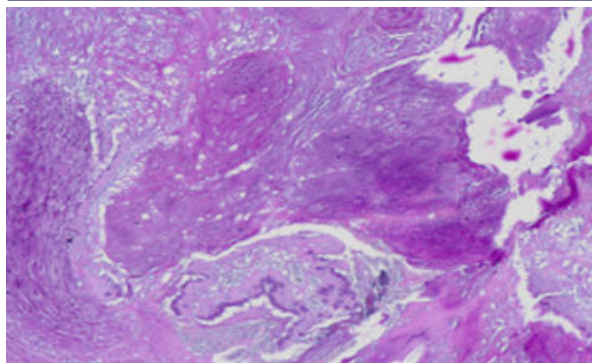


Figure V. Extracellular PAS positive mucin

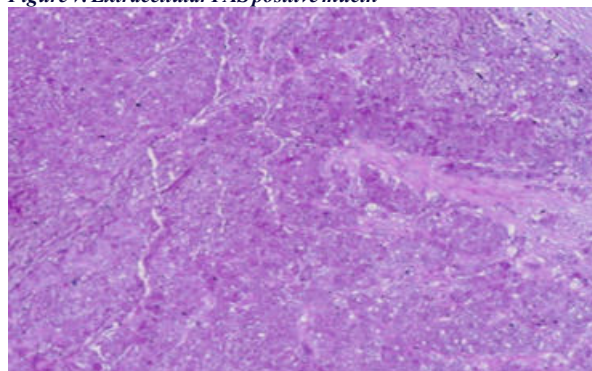


Figure VI. PAS positive intracellular mucin

DISCUSSION-

10% of colorectal carcinomas are Mucinous carcinoma(MAC) with large amounts of extracellular mucin^[5]. In some cases mucin also accumulates intracellularly, resulting in signet ring cell morphology and called as mucinous carcinoma with signet ring cells^[4]. When intracellular accumulation of mucin resulting in Signet Ring Cell(SC) are also present constituting a significant tumor volume, these are termed as mixed Mucinous-Signet Ring Cell Carcinoma.^[5] Mixed tumors should be differentiated from Signet Ring Cell Carcinoma with extremely poor prognosis.^[6] MAC and SC do not represent consecutive steps of de-differentiation but evolve from different genetic pathways.^[7]

This patient experienced an unexpectedly rare late complication of a very advanced colon cancer. She must have had some alarming symptoms before the admission to the hospital, but they were not troublesome enough to make her run to hospital. The bothering problems started from the perforation of the tumor and the formation of a fistula that caused a misleading urine passage through the digestive tract causing faecoluria, hematuria. Mucinous carcinomas with signet ring cell differentiation presented with significantly worse prognosis.

CONCLUSION-

MAC and SC are rare subtypes of colorectal cancer with a worse prognosis than classical adenocarcinoma. These tumor entities have different biological behavior. These patients require intensified adjuvant therapy due to high rate of local and distant recurrence. Hence awareness of this subtype is important for closer follow up of patient.

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