

Primary Mucinous Adenocarcinoma of Urinary Bladder: A Rare Case Report

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ABSTRACT

A 60 year old male, chronic smoker and alcoholic since 30 years came with complaints of gross hematuria since 2 days. Clinically he was alright. CT scan showed a bladder mass reaching outside the serosa with no nodal involvement. Wide local excision was done with partial cystectomy. Growth was found on the dome of the bladder and was sent for histopathology. Sections showed tumour cells arranged in papillary pattern and lined by pseudostratified tall columnar epithelium filled with mucin and goblet cells at places. Intervening stroma shows abundant extracellular mucin, areas of necrosis and tumour cells showing malignant features with few areas with signet cells. Mucosal margins were also involved. Case diagnosed as Well differentiated mucinous Adenocarcinoma- Bladder.

Keywords: Mucinous Adenocarcinoma, Bladder, Signet ring cells

Introduction

Bladder carcinoma is the ninth most common cancer worldwide. Urothelial carcinoma accounts for 90-95% of bladder while squamous cell carcinoma and adenocarcinoma account for 3% and 2% respectively.^[1] Mucinous adenocarcinoma with signet ring cells is an even rarer histologic variant of adenocarcinoma. Cystoscopy and CT scan are the effective diagnostic investigations with histopathology being the gold standard investigation.^[2,3]

Case Report

A 60 year old male, chronic smoker and alcoholic since 30 years and a known case of hypertension and ischaemic heart disease came with chief complaints of gross hematuria since 2 days. No other clinical symptoms were noted and the patient was clinically alright. On per rectal examination prostate was normal. Serum calcium, alkaline phosphatase and lactate dehydrogenase levels were normal. CT scan showed a bladder mass reaching outside the serosa with no nodal involvement. Wide local excision was done with 2 cm mucosal margins with partial cystectomy. A growth seen on the dome of the bladder and was sent for histopathology. We got a single soft grey –white tissue mass measuring 9x10cm. External surface was covered with peritoneum with congested blood vessels. Cut surface showed a single solid white firm to hard exophytic growth measuring 4cm at the dome of the bladder not extending to the peritoneal surface.

Sections showed tumour cells arranged in papillary and glandular pattern (figure 1). The glands were lined by pseudostratified tall columnar epithelium with goblet

cells at places and filled with mucin. Intervening stroma had abundant extracellular mucin, areas of necrosis and lymphoplasmacytic inflammatory infiltrate. Individual tumour cells were columnar showing high N:C ratio, hyperchromasia, coarse chromatin and intracellular mucin. Few areas showed signet ring cells (figure 2) and denuded tumour. Mucosal margins were involved by tumour floating in pools of mucin (figure 3) The case was diagnosed as well differentiated Mucinous Adenocarcinoma- Bladder

Discussion

Primary mucinous adenocarcinoma of bladder is a rare and aggressive malignant tumor accounting for 0.5 to 2 % of all vesical tumors.^[4] It is thought to arise as result of progression from mucinous metaplasia to mucinous adenoma and then mucinous adenocarcinoma. The most common presenting symptoms are hematuria, suprapubic pain and voiding difficulties. Primary bladder adenocarcinoma are divided into urachal and non-urachal adenocarcinoma respectively based on their location, the later being the most common.^[5] Based on morphology it is classified as follows adenocarcinoma not otherwise specified, colonic type, mucinous, signet ring cell, clear cell type, hepatoid and mixed type.^[6] The prognosis depends on the stage of disease, 5 year survival of 70 -100 % in patients with tumor confined to bladder, however less than 30 % present at early stage. Diagnosis is made on cystoscopy, urinary cytology and transurethral resection of bladder (TURBT). Surgery is the main stay of treatment.

Conclusion

Cystoscopy and CT are important investigations in the diagnosis of bladder cancer. However, histopathology

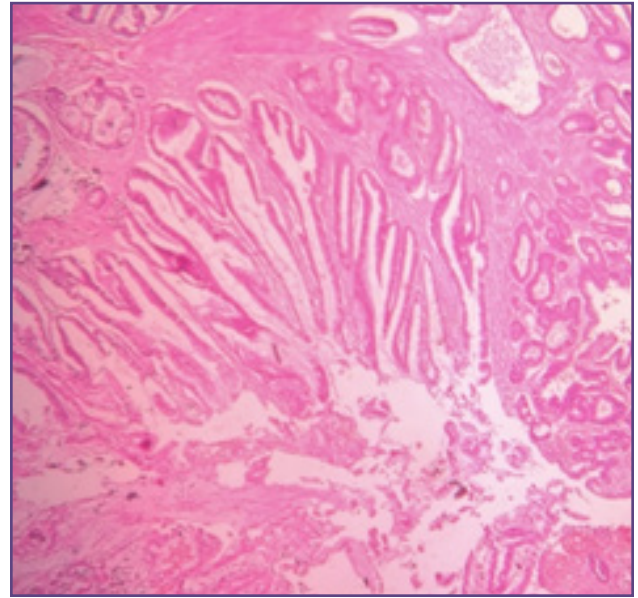
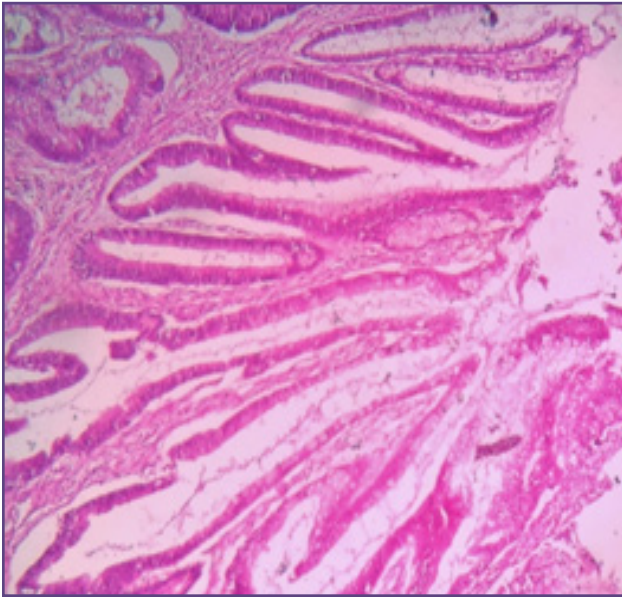


Fig. 1 : Tumour cells arranged in a papillary pattern. (H&E 40x) and (H&E 10x)

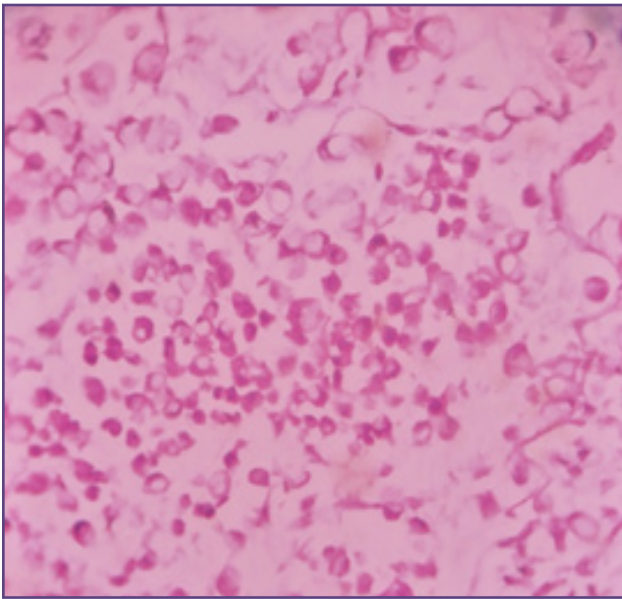


Fig. 2 : Signet ring cells seen (H&E 40x).

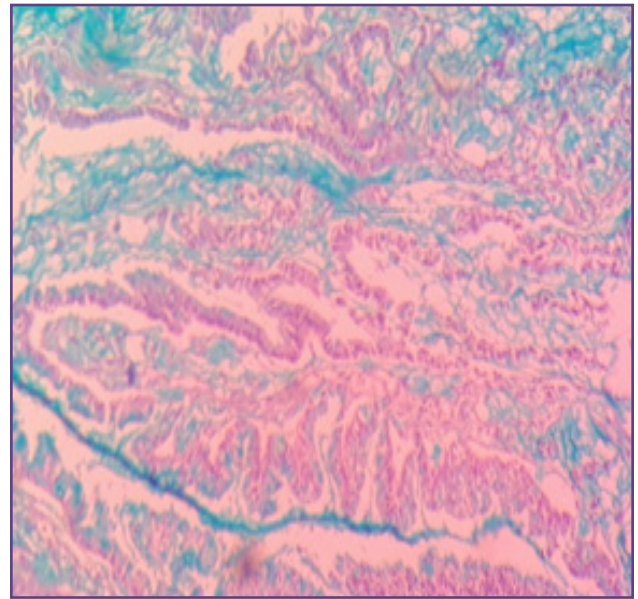


Fig. 3: Alcian Blue stain showing extracellular and intracellular mucin.

is the gold standard for diagnosis of primary mucinous adenocarcinoma of bladder. Additional information for mucinous cancers is obtained by special stains for mucin like Alcian blue and Periodic acid Schiff stains.

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