Mucinousadenocarcinoma of the kidney presenting as chronic discharging sinus

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ABSTRACT

Mucinous adenocarcinoma of the renal pelvis is a rare tumor constituting < 1 % of all tumors involving the kidney. We are presenting the case report of a 45-years-old female who presented with pus discharging sinus from the scar of previous surgery after 2 years of initial surgery. On CECT, the left kidney showed heterogeneous space-occupying lesion of size 10x6 cm. The patient underwent cytoreductive excision of mass followed by adjuvant radiotherapy. The patient was doing well and asymptomatic till 8 months of follow-up but after 8 months, she presented with recurrence and died after another 4 months. To our knowledge, none of the previous papers reported discharging sinus as a mode of presentation for mucinous adenocarcinoma of the kidney. The outcome of the patient with relevant literature is being discussed here.

Keywords: *Mucinous adenocarcinoma, Renal pelvis, Renal cell carcinoma, Sinus.*

Primary papillary mucinous adenocarcinoma is an uncommon primary epithelial tumor of the renal pelvis and ureter. Fewer than 100 cases of mucinous adenocarcinomas of the renal pelvis have been reported in the literature [1]. Primary mucinous epithelial tumors occurring in the kidney are thought to originate from the metaplasia of renal epithelial cells to glandular lesions [1].To our knowledge, none of the previous case reports of mucinous adenocarcinoma presented as chronic discharging sinus from the scar of previous surgery. Here, we report the case of mucinous adenocarcinoma of the kidney that presents as chronic discharging sinus.

CASE REPORT

A45-years-old female presented to us with complaints of seropurulent material discharge from the previous scar site in the left flank and intermittent dull aching pain for the last 6 months. It was not associated with hematuria, febrile episode or lower urinary tract symptom. She had a history of a marsupialization of cyst in the left kidney 2 years back. On examination, vitals were stable. The lump was the size of approximate a hand width. The lump was palpable in the left flank which was not moving with respiration and fixed to the underlying structures.

Routine blood tests and urine analysis were within normal limits. Examination of pus discharge suggested plenty of pus cells and no malignant cells. Ultrasound (USG) revealed space-occupying lesion (SOL) of 8x5 cm with mixed echogenicity in the left kidney. Contrast-enhanced computed tomography (CECT) was suggestive of enlarged left kidney (12.5 x 5.6 cm) with heterogeneous SOL (10x6 cm) located over the posteromedial aspect of pelvis infiltrating renal capsule and posterior abdominal wall, displacing kidney laterally and maintaining its contour (Fig. 1). Fine needle aspiration cytology (FNAC) from the mass was suggestive of a suppurative inflammatory lesion.

Hence with this diagnostic dilemma, abdominal exploration was planned which showed a huge mass of variegated consistency originating from the renal pelvis. The mass seemed to be malignant, so intraoperative frozen section biopsy was sent; which was suggestive of malignant tumor in the background of mucin secreting cell. Mass was friable and about 300 ml of mucopurulent material was removed. Growth was involving the posterior abdominal wall, so complete resection was not possible.

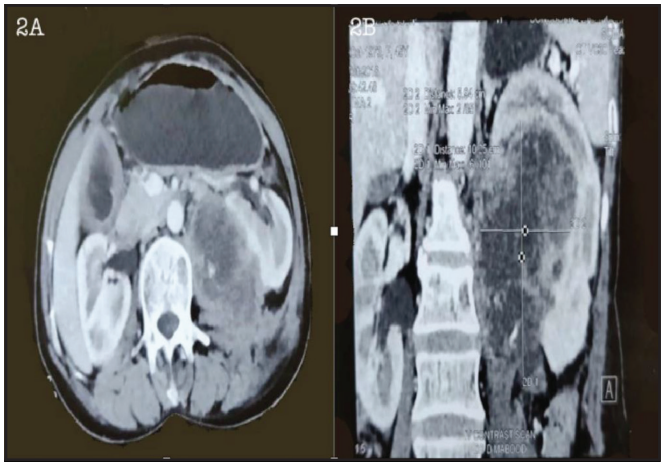

Figure 1: CECT of the kidney, ureter and urinary bladder (KUB) showing tumor involvement of the renal pelvis.

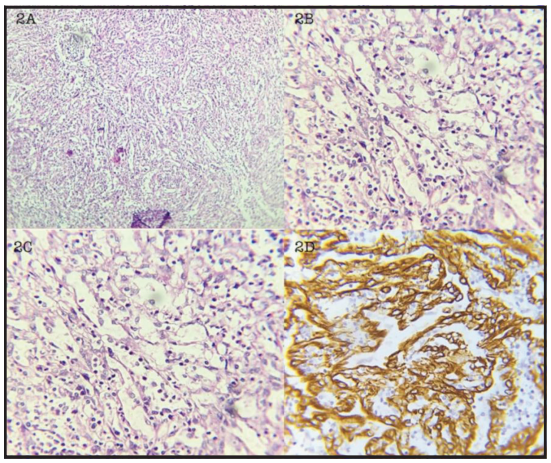

Figure 2: (A)H&E stain, x100, interconnected tubules with mucinous stroma; (B)H&E stain, x400, histopathologyshowing tubular formation merging with bland spindle cells; (C) IHC, x400, Cells showing CK7 positivity; (D) Special stain (Alcian blue), x400, mucinous stroma positivity.

Hence, we decided to proceed with the cytoreductive excision of mass along with excision of the left kidney and sinus tract.

Histopathology showed a metaplastic gland with a signet ring appearance in the background of abundant extracellular mucin (Fig. 2A, 2B & 2D). Immunohistochemistry (IHC) of tumor showed strong CK7 positivity (Fig. 2C). Immediate postoperative carcinoembryonic antigen (CEA) was within normal limits. The patient was referred to the radiotherapy department for adjuvant radiotherapy. She presented with recurrence after 8 months of this surgery and died after another 4 months.

DISCUSSION

A most common tumor arising from the renal pelvis is transitional call carcinoma similar to urinary bladder epithelium presenting as hematuria and passage of serpentine clots constituting 7% of all renal tumor [2]. Followed by squamous cell carcinoma, adenocarcinoma, verrucous carcinoma, sarcomatoid carcinoma and other rarer variety. Histologically adenocarcinoma is sub-grouped into three distinct patterns: papillary, mucinous and tubulovillous. [3]

The majority of the cases of mucinous adenocarcinoma reported from the Indian subcontinent were associated with long-standing obstruction due to stone or pelvi-ureteric junction obstruction [3]. To our knowledge, mucinous adenocarcinoma presenting as discharging sinus was never reported in any case report till date and also there is no associated risk mentioned previously; hence, other risk factors need to be evaluated. Ross and D'Amato presented a case report on mucinous adenocarcinoma in the horse-shoe kidney [4]. Shah VB and Amonkar presented a case report of mucinous adenocarcinoma presenting as pseudomyxoma peritonei [5].

All cases were diagnosed after the 4th decade and there is no correlation with sex [6]. These cases are associated with a huge collection of mucinousmaterial andthese tumorsare almost always high grade. Preoperative diagnosis is difficult in most cases, strong clinical suspicion and intraoperative frozen section biopsy can confirm the diagnosis. The standard treatment modality of these tumors is radical nephroureterectomy [1]. Most of the cases died within 2-3 after diagnosis [4]. Serum CEA can be used as a marker for recurrence as used in ovarian carcinoma [7].

CONCLUSION

Mucinous adenocarcinoma of the kidney is a rare variety. Usually associated with chronic irritation and or long term obstructionleading to metaplastic change but in our case, there is no such risk factor associated, so further studies are needed to understand its etiopathogenesis. The prognosis of these tumors is very poor.

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