Case report

Incidental finding of rare mucinous carcinoma of renal pelvis in post nephrectomy specimen of pyonephrotic non-functioning kidney

ABSTRACT- Primary mucinous adenocarcinoma of renal pelvis is very rare and difficult to diagnose(d) preoperatively due to lack of specific symptoms and radiological findings. We are reporting a case of 52-year old man diagnosed with pyonephrosis with renal stonewho underwent percutaneous nephrostomy (PCN) initially later on open simple nephrectomy was diagnosed primary mucinous adenocarcinoma of the renal pelvis in histopathology. Post op serum CEA and CA19.9 levels were normal. By assessing a literature review we recommend that careful history taking, tumor markers and CT scans may improve the diagnostic accuracy

INTRODUCTION- The transitional cell carcinoma of renal pelvis is a common subtype, which accounts 90% of cases.[1] Renal pelvis adenocarcinoma accountsfor less than 1% cases which is subclassified as tubulovillous (71.5%), mucinous (21.5%) and papillary non-intestinal (7.0%).[2,3] Primary mucinous adenocarcinoma of renal pelvis is rare and often discovered accidentally by nephrectomy. First reported in 1960 and till date fewer than 100 caseshave been reported.[4,6]. It is related to chronic irritation such as stone, infection, inflammation and obstruction.[5] It is difficult to diagnose before surgery without characteristic symptoms or specific radiological features. Also, because of its rarity, no standard treatment protocols has been proposed. We are reporting a case of mucinous adenocarcinoma of renal pelvis presented with feature of calculus and pyonephrosis.

CASE PRESENTATION- Fifty btwo (52) years old male patient presented to our hospital with Leftt flank pain and fever for 20 days. On examination vital stable, Haemoglobin/Total

Leucocyte Count/Serum Creatinine were 9.3g/dl /13k/µl and 1.01lakh/µl, Ultrasonography abdomen- s/o pyonephrosis with multiple renal stone with perinehric collection. CT urography(Fig 1)- LT kidney multiple calculus with grossly dilatedpelvicalyceal system (PCS) with mild perinephric collection , no contrast excretion. RT kidney normal. Patient underwent percutaneous nephrostomy (PCN) and 500ml purulent fluid was drained. PCN kept for 2 weeks later on underwent DTPA scan which showed non-functioning same kidney. We performed an open simple nephrectomy via flank approach.(Fig2) He was diagnosed as renal pelvis primary mucinous adenocarcinoma in histopathology report.(Fig3)

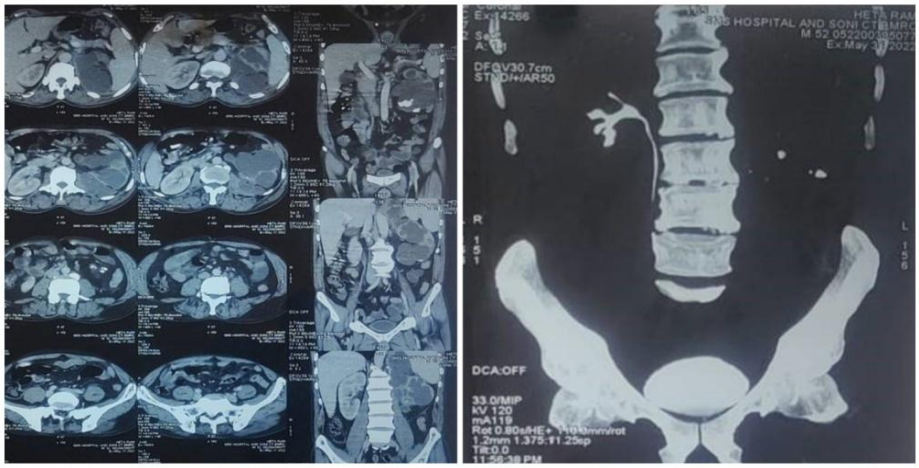

Fig.1.- CECT Abdomen & Urography -LEFT DILATED PCS WITH CALCULUS & PERINEPHRIC COLLECTION WITH NON EXCRETION OF CONTRAST

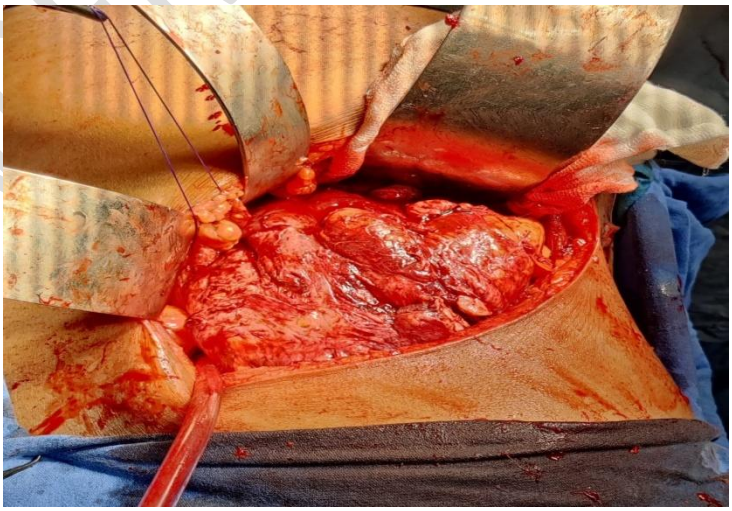

Fig2.-INTRA-OPERATIVE IMAGE OF NEPHRECTOMY

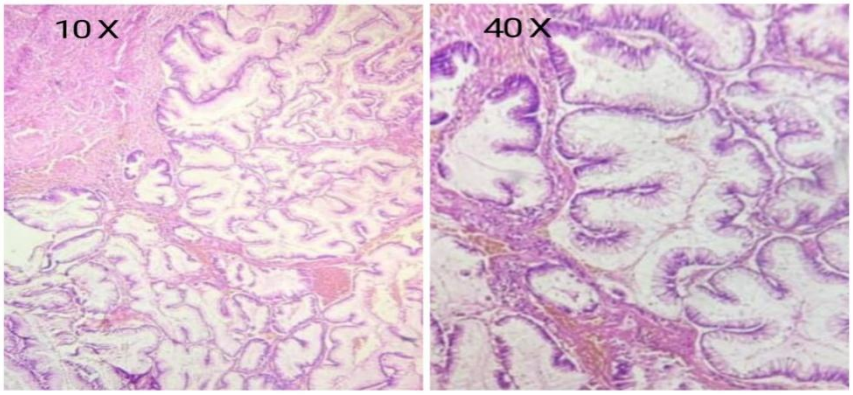

Fig3.-HPE IMAGE -WELL DIFFERENTIATED MUCINOUS ADENOCARCINOMA OF RENAL PELVIS STAGE- pT3NxMX(AJCC2017)

FOLLOW UP- Post operative patient underwent serum CEA and CA19.9 levels which were normal levels Patient refused for chemotherapy and presently on regular follow up

DISCUSSION- Mucinous adenocarcinoma of renal pelvis is rare disease, discovered mainly in Asian population. Most adenocarcinomas are of high grade and invasive at presentation. No proper specific protocols has been proposed for renal mucinous adenocarcinoma. Early radical surgery appears to be the best option however the misdiagnosis with benignrenal tumor, cyst or pyonephrosis may lead to delayed treatment and serious consequences [7].CEA and CA19-9 may act as independent markers for prognosis and recurrence, however there can be normal in some cases[8]. The images of CT and MRI are not specific and almost confirmed accidentally in pathological specimen. The standard of care is radical nephroureterectomy. The role of adjuvant chemotherapy and radiotherapy is controversial. These tumour are aggressive and has a poor prognosis. Early diagnosis is an important with preoperative CEA levels, CT scan and high level of suspicion help in diagnosis and treatment.

CONCLUSION- Primary mucinous adenocarcinoma of the renal pelvis is difficult to diagnose preoperatively. Thus, the patient usually have prolonged stone impaction with associated hydronephrosis or pyonephrosis. We should keep high suspicion. Early operation is the most effective therapy.

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