



## SQUAMOUS CELL CARCINOMA KIDNEY: A RARE CASE PRESENTATION

### Pathology

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### ABSTRACT

Tumours arising from the kidney are mostly either adenocarcinoma from the renal parenchyma or transitional cell carcinoma from the renal pelvis. Clear cell carcinoma is the most common type of renal malignancy followed by papillary carcinoma and others. A squamous cell carcinoma arising from the kidney is a rare occurrence and constitutes less than 1% of all urinary tract neoplasms. We in our case report present a case of squamous cell carcinoma arising from renal pelvis.

### KEYWORDS

Squamous cell carcinoma, kidney, urothelial malignancies.

Tumours arising from the kidney are mostly either adenocarcinoma from the renal parenchyma or transitional cell carcinoma from the renal pelvis. Clear cell carcinoma is the most common type of renal malignancy followed by papillary carcinoma and chromophobe carcinoma. A squamous cell carcinoma arising from the kidney is a rare occurrence and constitutes less than 1% of all urinary tract neoplasms.<sup>[1]</sup> Squamous cell carcinoma in kidney mostly arises from renal pelvis. Chronic irritation of urothelium is presumed to be a cause of squamous metaplasia with subsequent malignant progression to squamous cell carcinoma. The causes of chronic irritation are some irritants, inflammation or infectious processes. Kidney stones are the main carcinogenic risk factor. Other predisposing factors include: chronic phenacetin and other analgesics consumption, pyelonephritis and chronic renal infectious processes, radiation therapy, vitamin A deficiency, exogenous and endogenous chemicals (Arsenic).<sup>[2]</sup> We represent a case of 45year old male patient presenting with pain abdomen and later diagnosed as squamous cell carcinoma kidney.

### CASE REPORT

A 45year old male presented with complaints of pain abdomen, haematuria and few episodes of vomiting for few days. A complete abdominal examination and ultrasound was done which showed a renal mass. The patient was operated and nephrectomy specimen was send to our pathology department. The specimen measures 14x11x8cm. on cut section there is loss of corticomedullary differentiation and a grey white growth is seen at pelvicalyceal end measuring 7x6x5cm. Grossly tumour is involving the capsule. Microscopy shows a cellular tumour with tumour cells arranged in nests. Individual tumour cell have vesicular nuclei, prominent nucleoli and moderate amount of eosinophilic cytoplasm. Individual cell keratinization and keratin pearls are seen (figure 1, 2). The adjacent urothelium of pelvicalyceal system is showing features of squamous metaplasia and dysplasia.

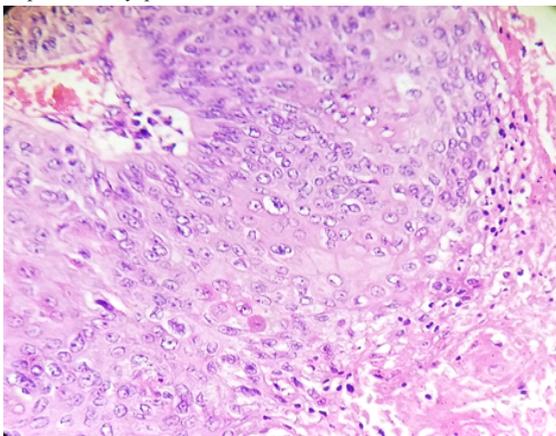


Figure 1 (400x, H&E)

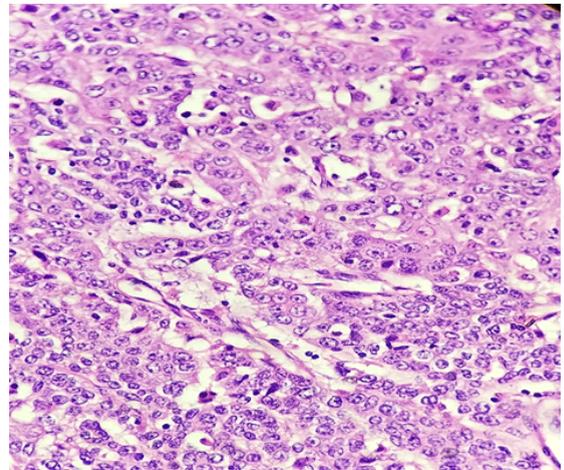


Figure 2 (400x, H&E)

### DISCUSSION

Primary Squamous Cell Carcinoma (SCC) is a rare entity and accounts for only 0.5% to 15% of all urothelial malignancies.<sup>[3]</sup> In general, these tumours are highly aggressive in nature and are usually present at an advanced stage when detected and have a poor prognosis when compared to the other upper urinary tract malignancies.<sup>[4]</sup> Chronic irritation, inflammation, and infection induce squamous metaplasia of the renal collecting system, which may progress to dysplasia and carcinoma in some patients. Li MK et al in their study reported incidence of coexisting renal stones in 100% of cases.<sup>[5]</sup> Lanjewar et al reported a case of primary SCC of the kidney that had no calculus or whereas most cases are associated with calculus.<sup>[6]</sup> A most common age group of presentation is 50 to 70 years. However, there have been cases without any apparent etiological factors.<sup>[7]</sup> The definitive diagnosis is made at histopathology. The histologic hallmarks are pearl formation, intercellular bridges and keratotic cellular debris similar to those of SCC at any other site. The treatment approach includes nephrectomy generally combined with chemotherapy. Surgery is not necessary when there are distant metastases. Radiotherapy, chemotherapy or immunotherapy could be adopted, but the effect is limited and no survival benefit has been demonstrated.<sup>[8]</sup> Renal SCC usually presents at an advanced stage. Because of advanced stage at presentation, the prognosis is generally poor. The prognosis is dismal with a 5-year survival rate of less than 10%.<sup>[9]</sup>

### CONCLUSION

Primary squamous cell carcinoma of Kidney is a rare entity. The diagnosis of squamous cell carcinoma of the renal pelvis is usually unsuspected due to the rarity and inconclusive clinical and radiological features. Most of the patients are diagnosed at an advanced stage and are with poor outcome. We in our case report presented a case of this

rare tumour arising in renal pelvis.

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