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Letter to Editor

Surgery Section

# Bilateral Multi-Focal Sporadic Papillary Renal Cell Carcinoma: A Unique Surgical Challenge

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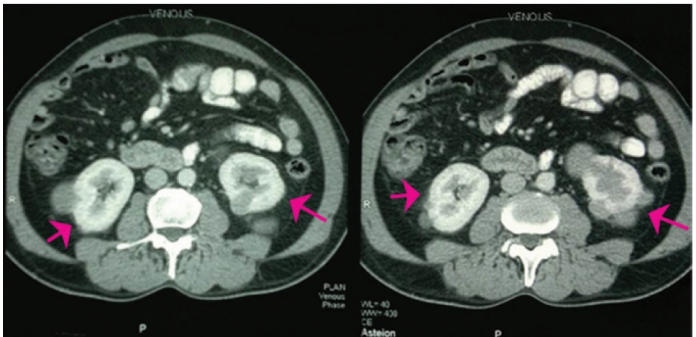
Sir,

A 53-year-old male presenting primarily for bilateral inguinal hernia had an incidentally detected large left renal mass. His haemogram was normal. Contrast-Enhanced Computed Tomography (CECT) revealed bilateral multi-focal hypodense renal masses suggestive of bilateral Renal Cell Carcinoma (RCC) without dissemination [Table/Fig-1,2]. His renal functions were normal on nuclear scintigraphy. Subsequently, he underwent bilateral staged nephron-sparing surgery (NSS) successfully. Histopathology showed papillary variant (type 1) of RCC on either side. The patient remains healthy on regular follow-up over the last five years.

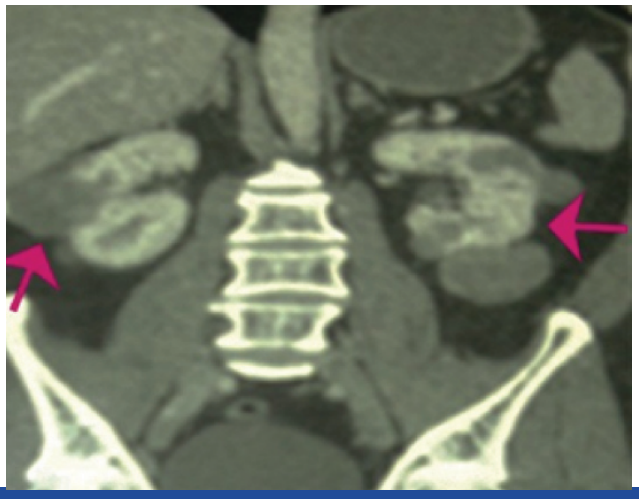
Although generally correlated with familial cancer syndromes (particularly the Von Hippel-Lindau syndrome), bilateral RCCs are rare (3-5%) in the epidemiology of the disease [1]. Like in our case, majority are incidentally detected on imaging studies performed for other purposes [2]. Bilateral RCC greatly challenges the surgeons for striking a delicate balance between oncological principles *vis-à-vis* exploiting renal function to circumvent Renal Replacement Therapy (RRT).

Amongst all pathological sub-types of RCC, papillary variant accounts for 5-15% [2]. It is a slow-growing neoplasm with a relatively favorable prognosis [3]. It is further classified into two broad categories depending on the type of cells noted on the histopathological examination. Type-1 variant has singular cell layer with scanty pale cytoplasm, lesser propensity for dissemination and hence a better prognosis than type 2 having high-grade nuclei and eosinophilic cytoplasm [4]. Abdominal CECT remains the most preferred imaging modality for evaluating their clinical staging and operability [2].

Intending to achieve $R_0$ resection in bilateral RCC, three diversified approaches are considered prudent: 1) Bilateral radical nephrectomy with RRT followed by renal transplantation at a later date; 2) Unilateral radical nephrectomy with contra-lateral NSS; and 3) Bilateral NSS. Amongst them, bilateral NSS is desirable it offers better quality of life and survival benefits akin to those of unilateral tumours [1,2]. It may be accomplished concomitantly or in a staged manner. Considering its higher dissemination propensity and better cancer-specific survival, staged NSS is prioritized for the patient with greater kidney tumour load. This acquires some time not only for designing options for contra-lateral side but also for recuperation of the operated kidney [5]. Though tumours with < 3 cm size do qualify for a vigilant "enucleation", partial nephrectomy is deemed essential for those with > 3cm size [5]. In any case, the ischemia time critically dictates the ultimate outcome pertaining glomerular filtration [5]. Moreover, at the background of many on-going major clinical trials, the precise role of recently developed targeted/immune-therapies for sporadic papillary RCCs remains elusive, even today [5].




**[Table/Fig-1]:** Abdominal CECT (Transverse section). It depicts bilateral multi-focal hypodense renal masses suggesting RCC *(arrows)*. Note the brightly enhancing nephrograms (preserved renal functions), absence of caval tumour thrombus and dissemination signifying operability.



**[Table/Fig-2]:** Abdominal CECT (Coronal section). It confirms the multifocality and absence of loco-regional spread (arrows).

In summary, treating bilateral RCC is a unique surgical challenge that necessitates accurate tailoring of available surgical choices. Bilateral NSS that protects the renal functions without compromising the oncological principles tenders better "quality" and "quantity" of life to these unfortunate individuals.

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