



## AN UNUSUALLY LARGE RENAL CELL CARCINOMA RESECTION: A GENTLE GIANT

### Oncology

<b>M D Ray</b>	Associate Professor, Department of Surgical Oncology, BRAIRCH, AIIMS, New Delhi 110029, Delhi, India
<b>Ashutosh Mishra</b>	Senior Resident, Department of Surgical Oncology, BRAIRCH, AIIMS, New Delhi 110029, Delhi, India.
<b>Praveen Royal Mokkalpati</b>	Senior Resident, Department of Surgical Oncology, BRAIRCH, AIIMS, New Delhi 110029, Delhi, India.
<b>Bharat Bhushan Khurse</b>	Senior Resident, Department of Surgical Oncology, BRAIRCH, AIIMS, New Delhi 110029, Delhi, India.
<b>Sunil Kumar</b>	Associate Professor, Department of Surgical Oncology, BRAIRCH, AIIMS, New Delhi 110029, Delhi, India.

### ABSTRACT

A 66 year-old had a mass from right kidney. Lung masses with spiculated margins were noted suggestive of metastases. Radical nephrectomy and right pulmonary metastasectomy in first stage followed by left metastasectomy four weeks later was done. Specimen was 17 x 16 x 15cm and weighed 5.018kg. Metastasectomy specimens were negative for malignancy. This case is being reported to add to the notoriety of unusual and unpredictable behaviour of renal carcinoma. It was a mass that would deter the boldest of surgeons and yet was complacent inside the kidney. Endemic prevalence of TB throws many a red herring.

### KEYWORDS:

#### INTRODUCTION:

Renal cell carcinoma is a great mimic among the malignancies so much so that it is called an intern's tumor. However, there is also another part of the spectrum where the malignancy just grows and grows pushing boundaries but never crossing them. We herein report a case with such a presentation that would deter many surgeons considering an upfront surgical approach and risk writing off the patient labelling them "bad tumor biology". It is being reported to join the database of precedent cases to provide a case for exploration in such presentations.

#### CASE REPORT:

A 66 year-old gentleman presented with heaviness in the right side of the abdomen for two months. Clinical examination revealed a huge, seemingly fixed mass occupying the right side of the abdomen in the right hypochondrium, lumbar, iliac regions and the umbilical as well as the hypogastrum (figure 1). USG abdomen showed a heterogenous mass in the right kidney with areas of necrosis. MR urography revealed a 14 x 15 x 15 cm mass with solid and cystic/hemorrhagic components with maintained fat planes with the adjacent structures and the IVC. The patient presented to our center after 1 month of completion of this evaluation in a multitude of other hospitals. A fresh imaging was done. CECT abdomen, pelvis and chest was done and a well encapsulated 16 x 16 cm heterogeneous mass was noted displacing the adjacent structures (figure 2). Multiple subcentimetric spiculated nodules were noted in the bilateral lung fields suggestive of metastasis. He was planned for "Cytoreductive surgery" in view of the stage IV nature considering the imaging results. The huge mass and the possibility of metastases in the right lung prompted a right thoracoabdominal approach. The diaphragm was cut circumferentially in the early part of the procedure and the liver was retracted into the thorax to create room for us to operate. There were a number of adhesions with the right colon. IVC was identified and vascular control was obtained but the renal pedicle was not accessible. The tight space required our approach to move bit by bit from all the directions focused towards the pedicle. A right radical adrenal sparing nephrectomy was done along with right pulmonary metastasectomy. The tumor on cut section measured 17 x 16 x 15 cm and weighed 5.018kg (figure 3). The post op histopathology report revealed a papillary renal cell carcinoma – type I with Fuhrmann nuclear grade I. It had an intact capsule with no infiltration into the perinephric fat. Seven nodes that were harvested and the right pulmonary metastasectomy specimens were negative for malignancy. The patient was counselled regarding the possibility of the left sided

lung nodules being negative as well and was operated with his consent. Left pulmonary metastasectomy specimens were also negative for malignancy placing him under Stage II (T2bN0M0). He has been placed on active surveillance and his follow up of 13 months has been uneventful.

#### DISCUSSION:

The treatment of renal cell carcinoma depends on the stage at diagnosis. The treatment of choice in localised renal cell carcinoma is surgery. It may be partial or total nephrectomy which is subject to other selection criteria. The approach to metastatic renal cell carcinoma, however, involves the usage of immunotherapeutics or the newer targeted agents like sunitinib and pazopanib. Two randomized trials conducted by the Southwest Oncology Group (SWOG), the European Organisation for Research and Treatment of Cancer (EORTC) and a retrospective analysis published by the International Metastatic Database Consortium support a cytoreductive surgery prior to initiation of medical therapy.<sup>[1-4]</sup> The results of phase III CARMENA trial are also still awaited in this regard. The five year survival rate in Stage I and II of renal cell carcinoma is usually between 75 to 95 percent contrasting against the median survival of little over an year in Stage IV. Now, here was a case which was thought to be stage IV because of the sheer size of the mass which makes the suspicious lung lesions look more likely as metastasis. Similar cases were reported in literature which were very large yet surprisingly benign in their behaviour (listed in the table 1)–

Of these two tumors were operated following preoperative embolization (Ballesteros et al, Matei Andreou et al).<sup>[5,9]</sup> Ballesteros et al, Guillaume et al and Uchida et al operated on renal cell carcinoma cases successfully.<sup>[5-7]</sup> Both Guillaume et al and Uchida et al reported a T2 carcinoma<sup>[6,7]</sup>. Amar et al reported a papillary type I renal cell carcinoma which was pT3a.<sup>[8]</sup> Ballesteros et al operated because of severe hematuria uncontrolled even post-embolization whereas Amar et al faced a mass that caused a fever and seemed to originate from the liver.<sup>[5,8]</sup> They operated it following aspiration. To our knowledge the case reported by Amar et al was the only type I papillary renal cell carcinoma with such dimensions as ours and yet be pT3a.

All these present a case for an exploratory laparotomy and possible cytoreductive surgery irrespective of the results of the RCTs being done to examine the role of surgery in stage IV renal cell carcinoma. This is especially true in TB endemic areas where lung lesions

mimicking metastases are dime a dozen. The patient is suddenly now placed in a lower stage and has undergone curative resection. Many a patient have benefitted from such wishful thinking of their doctors to give them the best chance.

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**CONFLICTS OF INTEREST**

There are no conflicts of interest.

**Table1**

S.no	Group and Year	Size	
1	Ballesteros et al in 2002 <sup>[5]</sup>	5.150kg	Hypernephroma operated following hematuria
2	Guillaume et al in 2003 <sup>[6]</sup>	31 x 31 x 10 cm	Clear cell RCC pT2
3	Uchida et al in 1998 <sup>[7]</sup>	3.900kg	T2 RCC
4	Amar et al in 2013 <sup>[8]</sup>	17 x 17cm	Papillary renal cell carcinoma type I
5	Matei Andreiou et al in 2009 <sup>[9]</sup>	30 x 29 x 27cm 11.7kg	Leiomyoma
6	Demos et al in 1988 <sup>[10]</sup>	27 x 20 x 15 cm 4.652kg	Oncocytoma
7	Stojanovic et al in 2013 <sup>[11]</sup>	16 x 14 cm	Oncocytoma
8	Banks et al in 2001 <sup>[12]</sup>	21 x 18 x 15cm 3.090kg	Oncocytoma
9	Kilic et al in 2003 <sup>[13]</sup>	20 x 15 x 10cm 2.680kg	Oncocytoma
10	Anastasiadis et al in 2010 <sup>[14]</sup>	16.5 x 13.9 cm	Oncocytoma
11	Wang et al in 2001 <sup>[15]</sup>	Two solitary fibrous tumors in two different patients 13 cm and 14 cm in the largest dimensions respectively	Solitary fibrous tumor

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