Well Localized Huge Renal Cell Carcinoma

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Introduction

Despite the fact that our understanding of the oncobiology has expanded tremendously over the last decade, surgical extirpation remains the only effective means of curing renal cell carcinoma (RCC). Outcome in individual patients is determined by three factors viz. 1) biological behavior of the tumor, 2) host respose; 3) treatment offered[1]. Identification of prognostic markers thus becomes important in the long term management of RCC. Among other pathological staging parameters, size of the tumor is an important factor. Bell, in 1950[2] was first to point out importance of size in relation to metastases. We are presenting a case of RCC renioved in radical nephrectomy, weighing 5 kg and measurig 20x15x20 cms which was entirely intracapsular without any evidence of local or distant metastasis.

Case Report

A 72 year old gentleman, referred to the Urologic service of this hospital for evaluation of a slowly growing mass on the right side of the abdomen. He first noted its presence about four years ago but since there was no other symptom he did not seek any professional advice.
On examination of his abdomen a mass was palpable extending from the hypochondrium to the right iliac fossa. Umbilicus was pushed to the left and the mass seemed to be crossing the midline. Ultrasound showed a mass originating from the right kidney measuring 15x17 ems. CT scan confirmed the above finding and noted a heterogenous mass measuring 19x12x22cms, extending from T12-L-4 (Figure 1).

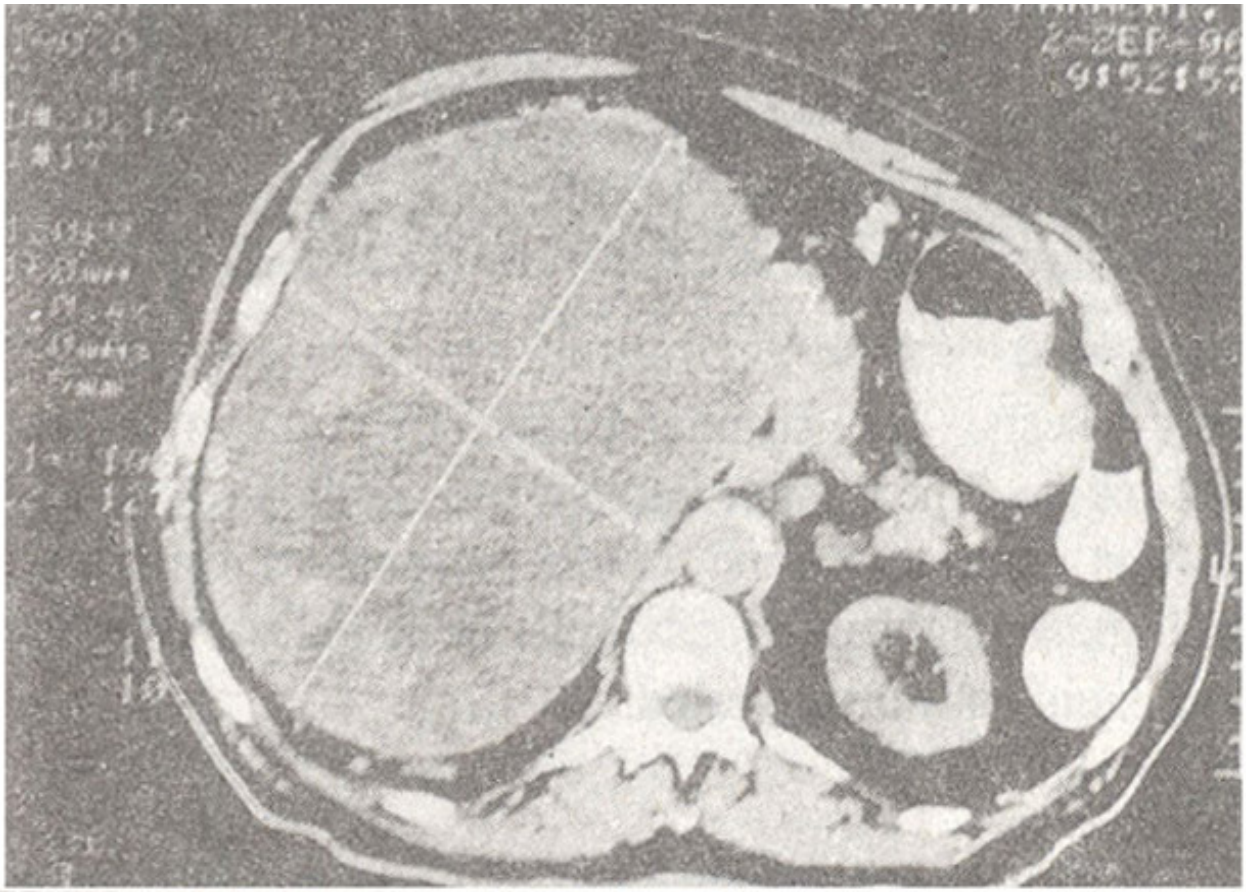

Figure 1. CT scan showing a huge mass arising from right kidney, part of the kidney is visible too. There is no evidence of lymphadenopathy, great vessels are displaced to the opposite side.

It was found to be displacing the bowel loops, aorta and IVC to the left. There was no evidence of lymphadenopathy. perinephric fat plane involvement. Liver was also clear of metastasis. A US guided biopsy of the mass was performed because a mass of this size was showing no evidence of malignancy. This complicated the issue as the histopathologist reported back that the fine needle aspiration biopsy only contained acellular necrotic debris and there was no evidence of malignancy. Tc 99m MDP bone scan was negative for distant bony metastases and chest x-ray for any metastatic lesion in the lungs. Radioisotope renogram showed good functioning left kidney and non-functioning right kidney. The split renal functions were 100 and 00% for left and right kidneys respectively.

Radical nephrectomy was performed via a transpentoneal midline incision. A mass related to the right kidney was removed weighing 5 kgs. and measurign 20x15x22 ems (Figure 2).

Figure 2. Radical nephrectomy specimen showing a huge mass arising from the kidney, remanats of which are visible at 9 clock. Three artery forceps indicating the position of the renal artery, vein and ureter also seen in the picture.

There was no gmss violation of the capsule. Perinephric fat and nodal tissue were also free of metastatic involvement. No tumourthrombus was noted in the renal vein.
Histopathologists later reported that it was moderately differentiated renal cell caivinoma with a papillary and tubular pattern and eosinophilic cytoplasm. There was a small focus of clear cells. Adrenal gland was clear of metastatic involvement. The capsule was intact and lymph nodes free of any metastatic lesion.

Discussion

It has been convincingly proved in the literature that patients with tumors that are organ confined and are completely extirpated surgically have a far better outcome[3] than those with nodal or distant metastases[4]. Though many investigators have pointed out the relationship between size and prognosis but none have conclusively related the two. Many investigators, however, have stated that larger tumors are more likely to metastasize. Bell, 1950[2] in a large study reported that metastases is seen in 11% of tumors less than 5 cms, whereas 85% of tumors greater than 10 cms metastasize and only 4.7% tumors under 3 cms do so. Medeiros[6] studied the relationship between the size of the tumor and overall 5 year survival. He reported that tumors under 10 ems differ remarkably from tumors larger than 10 ems in their 5 year survival ($p>0.01$ and $p<0.05$). Giuliani[6] similarly pointed difference in the 5-year survival

of 83.5%, 50% and 0 between small (under 5cm), moderate[5-10] and larger(cms) size tumors respectively. The case that we prcscnted has a very large sized tumor without any evidence of regional and distant metastases. Although microscopic metastatic foci undetectable by present day tools can not be excluded and only long term follow up will be able to tell us if he has been truly cured by radical nephrectomy. This is also a case in point confirming the long held belief that RCC behaves differently in different patients.

References

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