Incidental finding of a renal cell carcinoma: A case report

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ABSTRACT
A 50 year old Indian foreman male presented with a painless swelling over the right iliac spine, which was diagnosed as a subcutaneous lipoma. Upon routine physical examination a silent left loin mass was defected. The patient denied any symptoms of the disease, with clear past medical history, apart from smoking of 10 cigarettes per day for the previous 30 years. Abdominal ultrasound, CT scan and MRI has supported the diagnosis of Renal cell Carcinoma (RCC). All investigations were normal, and metastatic workup was negative. Radical nephrectomy was done through an anterior approach, which was followed by uneventful postoperative period.

Key words: renal cell carcinoma, lipoma, abdominal ultrasound, inferior vena cava

INTRODUCTION

Renal Cell Carcinoma (RCC) is the commonest type of malignant kidney tumor and accounts for more than 90% of all renal tumors[1]. RCC represents about 3% of all adult cancers and account for 1 – 2% of all cancer deaths[2]. The disease is characterized by lack of early warning signs, diverse clinical manifestations and resistance to chemotherapy and radiotherapy. Surgery plays the major role in the treatment.

CASE REPORT

A 58 year old male presented with painless lipoma over the right anterior upper iliac spine (Figure 1). Abdominal examination revealed a vague mass in the loin and the left hypochondrial areas. The patient was otherwise healthy with clear past medical history.

Routine hematological and metabolic panel was performed. Hb was 14.5mg/dl, total WBC count 6,800, platelet count 213,000, Blood Urea 27mg, IDL and Serum createnine 1.05, Serum Calcium 9.7mg mg/dl, and ESR 11. Liver panel and coagulation profile were normal.

Abdominal ultrasound showed a large soft tissue mass in middle upper left kidney.

Abdominal CT-scan after oral contrast, before and after IV contrast showed a soft tissue mass of 9 x 7.2 x 10cm size arising from the middle third of the left kidney with extension into the perinephric fat pushing the left hemidiaphragm, multiple small cysts in the lower third of left renal cortex and no calcification

Renal loin and artery were normal, and the IVC was clear with infrarenal transposition (the IVC crossing the midline to the right at the level of left renal hilum). The contralateral kidney and other intraabdominal organs were normal.

MRI of the abdomen confirmed the CT findings but with clear paraortic area.

No distant metastasis was detected.

Medical, cardiology and anesthetic consultations were done.

The decision was to perform radical nephrectomy via anterior approach, and consent for surgery was obtained. Three pints of A+ ve packs RBCS were prepared.

Operative findings and procedure

Intraabdominal exploration was undertaken. The liver and spleen were clear. No intraperitoneal metastasis and no par aortic lymph nodes were observed. The left colon was mobilized medially up to the splenic flexure.

The tumor extended into the perinephric fat, pushing the left hemidiaphragm and spleen. Full mobilization of the tumor was

done with separation of the diaphragmatic, splenic and mesocolic adhesions (Figures 1, 2 & 3)

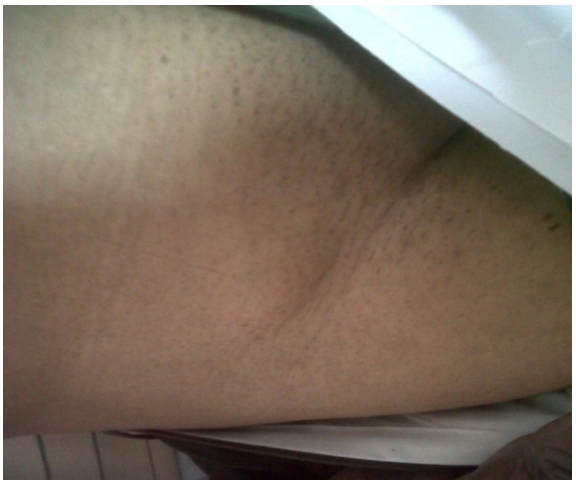

Figure1. Lipoma over the right iliac spine

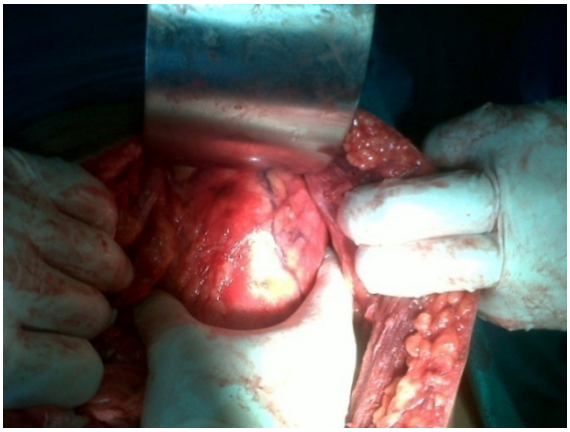

Figure 2. Assessment of the tumor

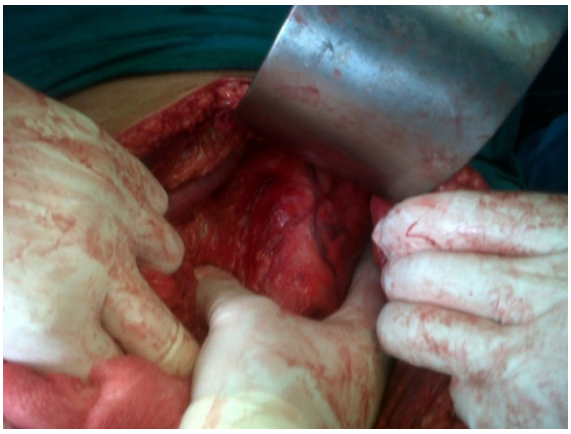

Figure 3. Mobilization of the tumor

In supine position and under GA extended left paramedian incision was done. Full Vascular pedicle was controlled and the left kidney suprarenal gland, the ureter, Greta's facia and perinephric fat resected. (Figures 4 & 5)

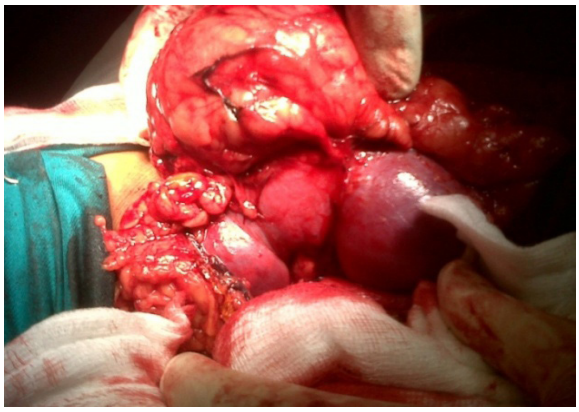

Figure 4. Extraction of the tumor

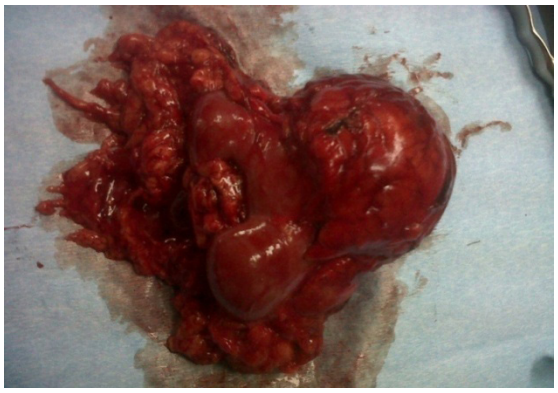

Figure 5.The resected specimen (the left kidney, the tumor, suprarenal gland and fascia of Gerota)

Haemostasis was secured, the left kidney bed irrigated with normal saline, and a tube drain was inserted. The peritoneal layer lateral to the left colon was closed.

The abdomen was closed in layers.

The estimated blood loss was 400 ml, and no blood transfusion was required.

The patient went through an uneventful recovery period and was discharged on the third postoperative day.

Histopathology report

The specimen contained the left kidney (10 x 5 x 4cm) with a large mass at the mid and upper portion of left kidney (10 x 7.5 x 9 cm) covered by the perinephric fat. RCC of clear cell type

Grade 2 (Fuhrman Nuclear Grade);

Pathological stagesT2,PNX, PMX'; Clear resection margins; Absent large vessel invasion; Intermediate lymphatic invasion; Left adrenal gland is uninvolved by the tumor; Two renal cysts

The patient was followed up for 18 months. He is doing well and required no treatment by the Oncologist.

DISCUSSION

RCC is characterized by diverse clinical manifestations and may remain clinically occult for most of its course. The classic presentation of flank mass, pain and haematuria is only present is 10% of patients, which indicates advanced disease.

The disease may manifest itself with paraneoplastic syndrome or non-metastic hepatic dysfunction (Stauffer syndrome)

The histological types are: Clear cell (75%); Chromophilic (15%); Chromophobic (5%); Oncocytoma (3%); Collecting duct (2%).

Fuhrman Grading system is based on the nuclear characteristics and has significant prognostic value. It comprises Grades 1, 2, 3 and 4[3].

Staging of renal cell Carcinoma[2,4]

Stage I - Tumor diameter less than 7 cm and limited to the kidney

Stage II - Tumor diameter > 7cm and limited to the kidney

Stage III - Tumor of any size with lymph node metastasis with or without prerenal fat and large vein involvement; no distant metastasis

Stage IV - Tumor involving the prerenal fat and fascia with lymphatic involvement and with presence of distant metastasis to the lung, bone or brain

The etiological factors of RCC are: Cigarette smoking; Obesity; Hypertension; Drugs: long term use of non-aspirin NSADS and phenacetine; Patient on dialysis; Renal transplant recipient; Genetic factors – Von Hipple – Lindau (LHL) symptom [(Hereditary papillary renal cell CA (HPRCC), Familial renal oncocytoma, Hereditary RCC].

The following need to be considered in the differential diagnosis of RCC: Renal abscess; Angiomogolipoma; Lymphoma (NHL); Acute or chronic pyelonephritis; Renal cysts;Wilm's tumor; Oncocytoma; Renal adenoma; Metastasis from other organs; Sarcoma; Renal infarction.

Management of RCC: radical nephrectomy is still the main option in the treatment and nephron spearing surgery has been used in selected case. RCC is an immunogenic tumor and spontaneous regressions have been reported. Many immune modulators like interferon, interleukin, BCG vaccine and nonmyeloablatine allogenic peripheral blood stem transplantation have also been tried[4-5].

CONCLUSION

The presentation of this patient may be quiet challenging to the surgeon since a painless lipoma is a very common disease and very rarely indicates an associated serious medical problem. Yet a high index of suspicion and the correct clinical approach may be helpful in detecting a silent killer disease.

ACKNOWLEDGEMENT

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