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Case report

Renal cell carcinoma

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ABSTRACT

Renal cell carcinoma is the most common neoplastic lesion of the kidney, accounting for approximately 85% of all renal neoplasms; the vast majority of these tumors are adenocarcinoma. Nephroblastoma (Wilms tumor) accounts for 5 to 6%, transitional cell neoplasms of the renal pelvis account for 7 to 8%, and the remainder are various sarcomas of renal origin. The diverse clinical signs and symptoms of renal cell cancer may challenge the most astute diagnostician. Previously known as " the internist's tumour," perhaps in the 1990's this tumour should be known as " the radiologist's tumour". More and more patients are discovered incidentally at the time of radiographic procedures such as ultrasound or CT scan for nonurologic problems. Grawitz, in 1983, observed a resemblance of small yellow adenomas of the kidney to adrenal tissue and suggested the possibility of adrenal rests. Based on this observation, Birch-Hirschfeld introduced the term hypernephroid tumours or hypernephroma. Since then, the conceptually incorrect term "hypernephroma" has been utilized to describe renal tumours. With the advent of electron microscopy, conclusive demonstration that renal cell carcinoma arises from proximal convoluted tubule cells has emerged. Therefore, renal cell carcinoma is the preferred terminology for this tumour. C.T. Scan is more sensitive than US or IVU for detection of renal masses. A typical finding of RCC on CT is a mass that becomes enhanced with the use of intravenous contrast media. In general, RCC exhibits an overall decreased density in Hounsfield units compares with normal renal parenchyma but shows a

heterogeneous pattern of enhancement or increased attenuation (slightly decreased from the surrounding parenchyma) when contrast is used. In addition to defining the primary lesion, CT scanning is also the method of choice in staging the patient by visualizing the renal hilum, perinephric space, renal vein and vena cava, adrenals, regional lymphatic, and adjacent, a CT scan of the chest is indicated. Patients who present with symptoms consistent with brain metastases should be evaluated with either head CT or MRI. Spiral CT with 3-dimensional reconstruction has become useful form evaluating tumors before enthrone-sparing surgery to delineate the 3-dimensionaal extent of the tumor and precisely outline the vasculature, which can aid the surgeon in preventing positive surgical margins (Holmes et al., 1977). Intra-operative ultrasonography is also often used to confirm the extent and number of masses in the kidney at the time of performing a partial nephrectomy.

Introduction

A 59 year old Libyan gentleman first developed low back pain 6 months ago. Due to progressive discomfort from his symptom, he sought medical advice 3 months ago. Several medical consultations and ultrasound investigations failed to arrive at a diagnosis. In October 2000 a CT scan of the abdomen showed a large left upper pole renal tumour with extra capsular extension. A Bone scan revealed multiple sites of increased skeletal uptake. On 25.10.2000 he underwent left Nephrectomy justifiably to relieve his pain. He had uneventful postoperative recovery.

Macroscopic examination of the tumour showed involvement of the entire upper half of the left kidney with extra capsular extension. Microscopically, this was a papillary tubular adenocarcinoma of the kidney with extensive renal parenchymal infiltration, perirenal fat infiltration, tumour was found to infiltrate the left renal vessels and tumour embolus was detected in both associated blood vessels and lymphatic. However, no metastasis was found in the submitted Lymph nodes.

For a second medical opinion, he presented himself yet another oncology department on 20-11-2000. On presentation his main symptom was persistent left loin pain radiating to the back of the leg. He also had s.o.b on exertion, loss of appetite and appeared to have lost 10kg since his surgery. Generally, he looked well.

On clinical examination: He was not anemic or icteric and remained afebrile. He had moderate tachycardia without tachypoenia. He was mildly hoarse. An IDL failed to reveal any laryngeal pathology. Chest and CVs were essentially normal. The Nephrectomy scar seems to have had healed well, without any subcutaneous nodularity. There was mild left loin tenderness and had no organomegaly. Neurological examination failed to demonstrate any focal lesion. His gait and gaze were all within normal limit. There was slight tenderness elicited on mid lumbar spines and on right lower ribs. His external genitourinary system, skin and it's integuments were within normal limit.

Radionuclide bone scan showed multiple sites of increased uptake, including L 3,4,5 vertebral bodies and right lower ribs. Skeletal X-Rays however, failed to show any osteolytic/ballistic lesion. Chest X-Ray was normal. He however had significant generalized osteoporosis.

His laboratory investigations included full haemogram, BUN, serum calcium and proteins, which are all within normal limit.

He was advised to take Brufen 400mg tabs x tid, Diazepam 2.5 mg tabs bid. He was given 3.6 mg of Zoladex subcutaneoulsy in the anterior abdominal wall at 3 weeks interval on 3 occasions. The last was being on 07-01-2001. There has been some subjective response, especially for progression of pain.

A CT scan of the abdomen and pelvis was carried out on 1st January 2001, showed a large recurrence at the left renal bed. Clinically he has also a large induration subcutaneously at the site of Nephrectomy scar. These two soft tissue recurrence are asymptomatic at present. There has been some progression of his hoarseness. A direct endoscopic evaluation showed no endolaryngeal or upper aero-digestive tract abnormality to account for his hoarseness. Left vocal cord mobility was slightly sluggish. A chest X-Ray remains normal. He received 1 unit of PBC due to anaemia (HB 9.2gm%). He also developed moderate painless swelling of left scrotal contents. US of scrotum confirmed this to be due to varicocele, most likely due to compression of renal vein at the left renal hilar region due to tumour recurrence. He also complained of loss of libido and erectile function.

Palliative radiotherapy to the Lumbo-Sacral region was given due to increasing symptom and deteriorating radiological appearance. He received 2000 cGy in 5 fractions to L2-S1 bodies between 13-17th January on telecobalt unit, with satisfactory symptomatic response.

Renal Cell carcinoma is a chemotherapy- resistant tumour showing no or marginal response to currently available chemotherapeutic agents. Even after applying sophisticated modern criteria of measuring response, all studies have so far failed to establish any acceptable benefit. The toxicities from chemotherapy or immunotherapy are formidable.

Upon the request of his family, he went for Germany on 21-01-2001 to get a third opinion concerning the further treatment of his locoregional relapsed renal cell carcinoma. His wt. declined (-10 kg) in the past months and he suffering from back pain due to the tumour mass and insufficient analgesic therapy. Palliative radiotherapy has been given in January to the tumour region and a pain reducing effect remains to be seen. He received monochemotherapy with Vinorelbin 20mg/m^2 on day 1,8,15 then a 2 weeks rest and a second cycle of chemotherapy. Routine pre-medication with Alizaprid, Dexamethason also given. The 1st dose of Monotherapy given on 09-02-2001 at Germany. He came back to Libya on 15-02-2001.

On 17th February 2001 he received the second dose of Monotherapy and the 3rd dose given on 24-02-2001 and we observed and found that he was in moderate condition.

From 27th February 2001 onwards started pricking pain in the site of operation and lose of appetite, Nausea, weakness, etc. etc. On 05-03-2001 started severe pain at the Rt. Loin and radiating to the Rt. leg and also pain and swelling at the Rt. Testis.

On 11th of March 2001 he became unstable condition and the temperature raised up to 38.8 deg c. and immediately admitted to the ICU. Due to anaemia (Hb. 6.4mg%) had given one unit of PBC and started IVF.

Lab. Investigations: Hb - 6.4mg%, GOT and GPT absolutely abnormal, Glucose 64mg%.

On 14-03-2001 the patient became very poor condition, but continued IVF and on 18th March, 2001 terminated.

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