Case Reports

Renal Carcinoid Tumour

Z. Ahmad, N. Yaqoob, S. Muzaffar, A. S. Hussainy, S. H. Hasan
Department of Pathology, The Aga Khan University Hospital, Karachi.

Although carcinoid tumour is a common tumour in several sites, it is a very rare primary tumour in the kidney. Approximately 40 cases of renal carcinoid tumour have so far been reported in the literature. Only 1 case of primary renal carcinoid tumor has been reported from Pakistan.[1]

Case Report

A 43 year old female presented to her local physician with a vague history of left flank pain, abdominal discomfort and haematuria. She was investigated and ultrasonography demonstrated a large mass in the left kidney. Left nephrectomy was performed. The specimen consisted of a kidney measuring 12.5 x 7.8 x 5.8cms. On sectioning, part of the kidney was replaced at the lower pole by a tan coloured circumscribed mass measuring 7.5 x 6.5 x 5.3 cms. Foci of necrosis and haemorrhage were also seen (Figure 1).

Histopathological examination showed a neoplasm composed of tubules and acini lined by cells with uniform round nuclei and pink cytoplasm (Figure 2). Occasional mitoses were seen. The sections were stained with a panel of monoclonal antibodies using the PAP technique. The tumour cells showed positivity for Chromogranin, Neuron Specific Enolase, Synaptophysin, Vimentin, Cytokeratins MNF and CAM 5.2. Sections from hilar blood vessels and ureteric margin of excision revealed no evidence of tumour. There was no pathological evidence of extra renal spread of the tumour. Invasion of the perirenal fat was not seen. Eight months after surgery, the patient is alive and well. Postoperative imaging studies performed six months after surgery showed normal right kidney and no evidence of metastases in lungs, liver and the abdominal organs. There was no evidence of para-aortic lymphadenopathy or ascites.

Discussion

It is important to recognize renal carcinoids and to differentiate them from conventional and papillary renal cell carcinomas. Renal Carcinoids usually give rise to vague and nonspecific signs and symptoms. Overt endocrine disturbances including Carcinoid Syndrome are uncommon.[2] These tumours are usually well circumscribed, tan to yellow, solid fleshy tumours with areas of haemorrhage, necrosis and cystic degeneration. Mean size is 9 cms (2 to 30 cms in greatest dimension). They are histologically similar to carcinoid tumours occurring at other sites of the body. Tumour cells are arranged in nests and sheets and there is a well vascularised stroma, which may be important in diagnosis.[3] Nuclei are usually round and uniform. Mitoses and vascular invsion are uncommon.[4] Immunohistochemically, tumour cells are positive for Neuron Specific Enolase, Chromogranin, Synaptophysin, Serotonin, Somatostatin, Pancreatic polypeptide and Glucagon.[2,5] Distant metastases may develop in 1/3rd of the tumours and several patients have died of the tumour.[2,6] Histological features usually do not predict outcome. However, in one study[2] those tumours which metastasized and led to the death of the patients, showed more mitotic activity and nuclear pleomorphism. Mitoses were very scanty in our case and there was no nuclear pleomorphism. Moreover, vascular invasion or invasion of perirenal fat was not seen. This places our tumour into a favorable prognostic category.

References

1. Kazi JI, Mubarrak M, Hashmi A. Renal carcinoid tumour: a case report. J Nephrol Urol Transplant 2002;3:22-3.
2. Raslan WF, Ro JY, Ordonez NG, et al. Primary carcinoid of the kidney: immunohistochemical and ultrastructural studies of five patients. Cancer 1993; 72:2660-6.
3. Gaudin PB, Rosai J. Florid vascular proliferation associated with neural and neuroendocrine neoplasms: a diagnostic clue and potential pitfall. Am J Surg Pathol 1995;19:642-52.
4. Unger PD, Russell A, Thung SN, et al. Primary renal carcinoids. Arch Pathol Lab Med 1990;114:68-71.
5. Goldblum JR, Lloyd RV. Primary renal carcinoid: case report and literature review. Arch Pathol Lab Med 1993;117:855-8.
6. Cauley JE, Almagro UA, Jacobs SC. Primary renal carcinoid tumor. Urology 1998;32:564-6.