

### Answers to Medical Quiz

K S Ratnakar, MD\*

A1. The morphological differential diagnosis of this renal mass include:

- i) Adult Wilm's tumour
- ii) Undifferentiated urothelial tumour
- iii) Undifferentiated renal cell carcinoma
- iv) Medullary carcinoma
- v) Small Cell carcinoma

A2. Lymphoma

Wilm's Tumour

Small Cell Carcinoma

A3. Small Cell Carcinoma / PNET (Primitive Neuroecto-dermal Tumour of the kidney).

### DISCUSSION

Small cell carcinoma of the kidney and renal pelvis, fulfilling the criteria analogous to pulmonary tumours have been reported earlier. However, the number of cases are extremely few (kidney 4, renal pelvis 2). Several extrapulmonary locations are documented in the literature affecting pancreas, parotid, oesophagus, prostate, bladder and kidney.

Small cell carcinoma and PNET may not be used synonymously since embryological origin of cell differs. However, neural and neuroendocrine differentiation overlap. Morphologic kinship and chemotherapeutic responses with early dissemination of disease process may be similar to small cell carcinoma with grave prognosis. So far, authors reporting small cell carcinoma of kidney have not considered or carried out in vitro studies to rule out the possibility of PNET of kidneys. Neural crest cells are responsible for some neuroendocrine cells such as adrenal medulla and 'C' cells of thyroid. Earlier studies showed the presence of neurosecretory granules and long dendritic processes. They are akin to Kultschitzky type cells of the bronchial epithelium, which are the cells of origin of bronchial carcinoids and small cell (oat cell) carcinomas of the lung. All these lesions are positive for cytokeratins and Epithelial membrane antigen. Similar cells in kidney and other peripheral sites are well documented. Despite continued disagreement on its usage, it is possible to accept them to indicate a group of extracranial and extraspinal PNETs, which are positive for NSE uniformly.

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\* Consultant  
Pathology Department  
Salmaniya Medical Complex &  
Assistant Chief Editor  
Bahrain Medical Bulletin  
State of Bahrain