

ROUNDCELL TUMOUR OF THE KIDNEY- A RARE ENTITY

Sravanthi Garlapati¹, Vyshnavi Bollam², Venkataram Reddy Kuchukulla³, Ramakrishnareddy Gaddam⁴

¹2nd Year Resident, Department of Radiology, SVS Medical College and Hospital, Telangana.

²2nd Year Resident, Department of Radiology, SVS Medical College and Hospital, Telangana.

³Professor and HOD, Department of Radiology, SVS Medical College and Hospital, Telangana.

⁴Professor, Department of Radiology, SVS Medical College and Hospital, Telangana.

HOW TO CITE THIS ARTICLE: Garlapati S, Bollam V, Kuchukulla VR, et al. Roundcell tumour of the kidney- a rare entity. J. Evid. Based Med. Healthc. 2019; 6(5), 315-316. DOI: 10.18410/jebmh/2019/64

PRESENTATION OF CASE

A 19 years old girl came to surgery outpatient department with chief complaint of pain abdomen since one month. On physical examination there was mild tenderness in left hypochondrium. She was advised further evaluation by routine investigations and special investigations like USG and CT abdomen.

USG Abdomen

Single well defined predominantly cystic mass lesion noted in left hypochondrium measuring approximately 12*9 cm causing mass effect on underlying left kidney, spleen and taking minimal flow on application of colour doppler.

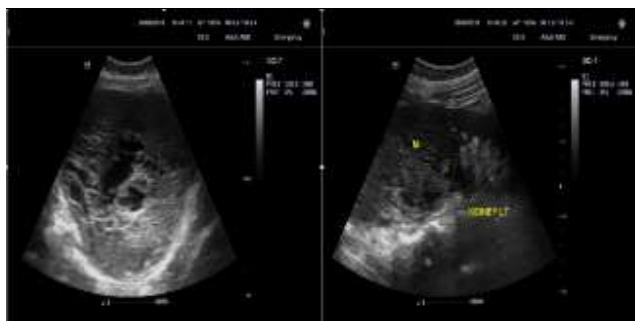


Image 1. USG Abdomen Showing Hypoechoic Mass Lesion in Left Hypochondrium

CECT Abdomen

- Single large well-defined hypodense mass lesion predominantly cystic with multiple solid components noted occupying left hypochondrium and left lumbar region. On post contrast above mentioned mass lesion showed mild peripheral enhancement and mild enhancement of solid components with large necrotic component measuring approximately 16*16*15 cms.
- Left adrenal gland is not visualised separately from mass lesion.

- Rest of the kidney showed normal enhancement and excretion of contrast except for compression of upper pole.

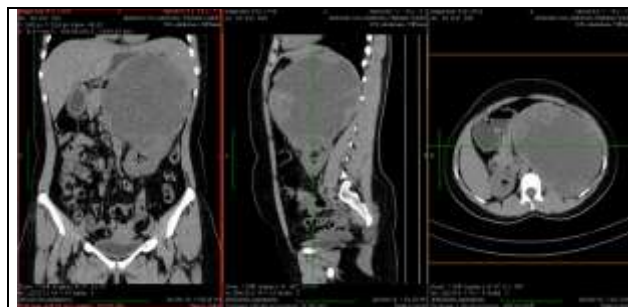


Image 2. Plain CT Abdomen Coronal, Sagittal and Axial Planes Showing Mixed Dense Lesion Predominantly Hypodense in Left Hypochondrium

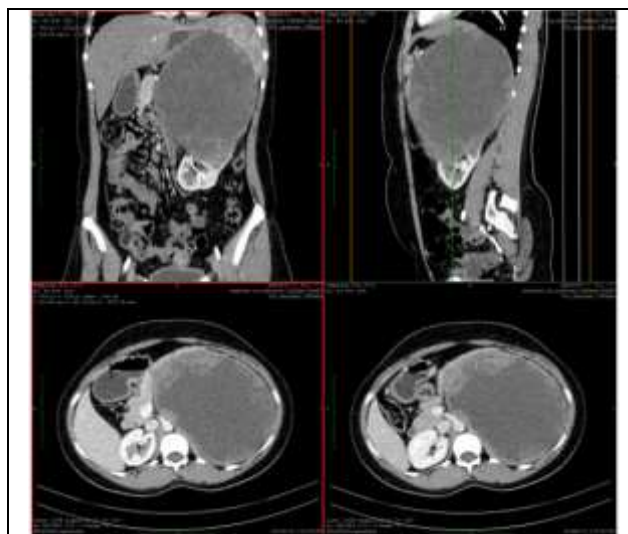


Image 3. CECT Abdomen Showing Mixed Dense Mass Lesion with Mild Peripheral Enhancement

DIFFERENTIAL DIAGNOSIS

- Wilms Tumour
- Neuroblastoma
- Renal Cell Carcinoma
- Malignant Lymphoma

PATHOLOGICAL DISCUSSION

Round cell tumours are rare malignancies affecting young adults,^{1,2} with male to female ratio 2:1 to 9:1, which is first described by Gerald and Rosai.³ These unusual tumours

Financial or Other, Competing Interest: None.
Submission 03-01-2019, Peer Review 05-01-2019,
Acceptance 26-01-2019, Published 04-02-2019.

Corresponding Author:

Dr. Vyshnavi Bollam,
Flat No. 104, Sri Srinivasa Homes,
Vysya Bank Colony, Old Bowenpally,
Secunderabad- 500011, Hyderabad.

E-mail: docvysh@gmail.com

DOI: 10.18410/jebmh/2019/64



primarily involve abdominal serosa and only few cases are reported with kidney as a primary site.^{5,6}

Clinical features are generally nonspecific and are diagnosed usually in later stages with wide spread metastasis but in our case patient presented with mass and pain abdomen. Ultrasonography is the initial diagnostic method of choice but if findings of ultrasonography are inconsistent then cross-sectional imaging like CT will be the next step for work up. CT with single post contrast phase i.e. portal venous phase is useful for evaluation.¹

On CT heterogeneous enhancement with few hypoattenuating areas which are suggestive of necrosis fibrosis and haemorrhage are seen.^{1,7}

Pathological analysis is definitely needed for confirmation of diagnosis.

Our histopathological diagnosis is round cell tumour but for further cell typing immunohistochemistry markers are required.

There is no specific standardized treatment, it is generally multimodal. Cases without extraperitoneal metastasis treated with pre and post-operative chemotherapy and post-operative radiotherapy, whereas cases with extra peritoneal metastasis are treated with chemotherapy alone.⁴

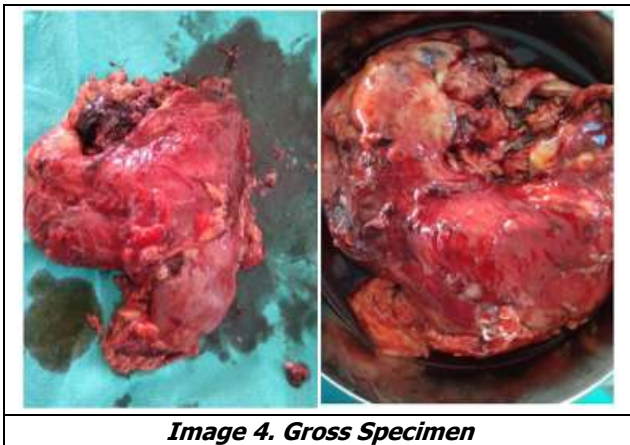


Image 4. Gross Specimen

Histopathology

Sections studied show tumour in sheets with intervening fibro myxoid stroma, vague rosettoid pattern with extensive areas of necrosis. Tumour cells are mildly pleomorphic, round to oval with scanty cytoplasm, nuclei with irregular contours, coarse chromatin, convoluted borders and inconspicuous nucleoli. No typical mitotic figures seen.

Possibilities

- Round Cell Tumour
- Ewing's/PNET
- Wilms Tumour
- Desmoplastic Round Cell Tumour

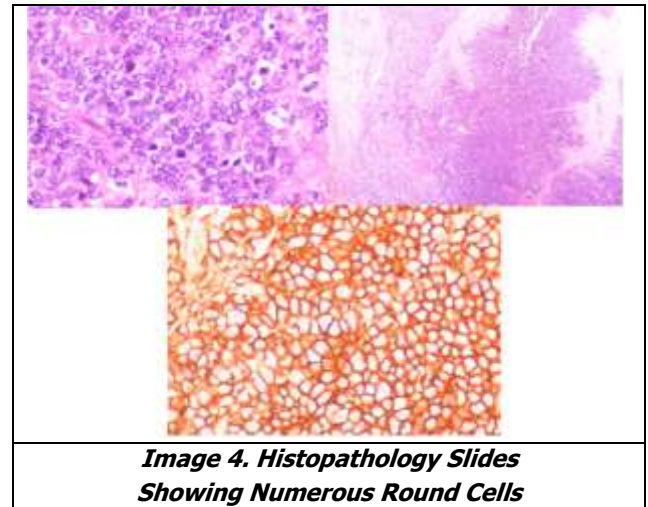


Image 4. Histopathology Slides Showing Numerous Round Cells

DISCUSSION OF MANAGEMENT

Left radical nephrectomy done and sent for histopathological examination.

FINAL DIAGNOSIS

Round Cell Tumour of Kidney.

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