



HISTOPATHOLOGIC SPECTRUM OF RENAL TUMOURS: A RETROSPECTIVE STUDY

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ABSTRACT

Introduction: RCC is the 13th most common malignancy worldwide. Renal neoplasms include wide spectrum of entities both in adults and in children, with few rare tumours. **Aims and objective:** This study was done to determine the histopathologic spectrum of nephrectomy specimens. **Materials and methods:** A retrospective study of nephrectomy specimens was carried out in a tertiary care hospital over a span of one year. 35 biopsy samples were subjected to histopathological examination. **Results:** Biopsies comprised of 04(11.42%) benign cases and 31(88.57%) malignant cases. Male to female ratio was 1.33:1. Mean age of presentation was 42 years. Clear cell RCC was the most common malignant tumour in our study. Wilms tumour was the commonest tumour in children. **Conclusion:** The present study highlights importance of histopathological examination to find the true nature of the nephrectomy specimens.

KEYWORDS : biopsy, kidney, clear cell renal cell carcinoma, Wilms tumour.

INTRODUCTION:

RCC is the 13th most common malignancy worldwide. In the Asian population, the incidence ranges between 1.1 and 6.0/100,000 population.¹ Renal neoplasms include wide spectrum of entities both in adults and in children, with few rare tumours. Renal neoplasms can arise from the different components of the renal parenchyma, which includes the tubular epithelium, interstitial tissue and from primitive elements²

MATERIALS AND METHODS:

A retrospective study of nephrectomy specimens was carried out in a tertiary care hospital over a span of one year in which 35 renal biopsies were evaluated. All the biopsy samples were immediately put in 10% neutral buffered formalin followed by conventional tissue processing and embedding. Five micron thick sections were cut and slides were prepared. Each section was stained with Haematoxylin and Eosin stain and studied. Slides were examined by consultant pathologist under light microscope. The lesions were histologically categorized as benign and malignant.

RESULTS:

Among the 35 nephrectomy biopsies, 20 (57.1%) were males and 15 (42.8%) were females with a male to female ratio of 1.33:1. Age of the patients ranged from 01 – 80 years. Mean age of presentation was 42 years. The youngest patient was a 01 year old male with Wilms tumour and the oldest patient was 76 year female with Clear cell Renal cell carcinoma. Majority of patients (76%) presented with flank pain with hematuria. Biopsies comprised of 04(11.4%) benign cases and 31(88.5%) malignant cases. Malignant renal tumours outnumbered the benign tumours in our study with Clear cell RCC being the most common malignant tumour in adults as shown in figure 1

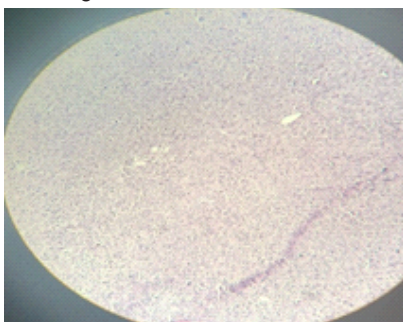


Fig 1: Clear cell carcinoma.

Wilms tumour was the most common malignancy in paediatric age group as shown in figure 2

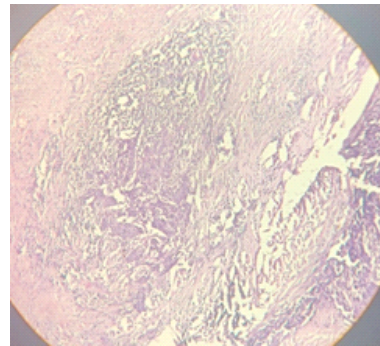


Fig 2: Wilms tumour

Table 1: Histopathological findings in Renal biopsies

LESIONS	NO OF CASES	PERCENTAGE
BENIGN		
Papillary adenoma	02	5.71
Oncocytoma	02	5.71
MALIGNANT		
Clear cell RCC	14	40.0
Papillary RCC	05	14.2
Chromophobe RCC	02	5.71
Wilms tumour	09	25.7
Squamous cell carcinoma	01	2.85
TOTAL	35	100

DISCUSSION:

Renal lesions are the uncommon lesions encountered in clinical practice. Male to female ratio was 1.33:1 in our study which was consistent with the previous studies. In the present study, the frequency of malignant cases was higher than benign lesions, as is seen in the study done by Rafique M.³ Clear cell RCC was the most common malignant tumour in our study. This was consistent with the study done by Ghalayini IF.⁴ Wilms tumour was the commonest tumour in children which was consistent with the study done by Adamson AS et al.⁵

CONCLUSION:

The present study highlights the importance of histopathological examination to find the true nature of the lesion. Histopathological study of nephrectomy specimens is

the most important method in early diagnosis and deciding the final course of management.

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