Role of computed tomography in the preoperative diagnosis of clear cell renal carcinoma

Ameet Jesrani
Sindh Institute of Urology and Transplantation, Pakistan

Background: Renal cell carcinoma (RCC) accounts for 3% of all human malignant tumors. The behavior of RCC apparently depends on its subtype. CT scan can provide detailed information about the tumor itself and regarding its precise extension. The pre-histological diagnosis of clear cell renal carcinoma could be made with more precision based on CT scan features and would ultimately play a major role in the prognosis and management of the disease.

Objective: The objective of this study is to determine the diagnostic accuracy of computed tomography in the diagnosis of clear cell renal carcinoma taking histopathological findings as gold standard.

Methods: Total 100 patients of both genders had renal masses diagnosed on ultrasound with age between 28-82 years were included. Mean age was 55.2+1.8 years. All patients underwent contrast enhanced CT scan. Based on CT scan features, a pre-surgical diagnosis of histological subtype of RCC, clear cell renal carcinoma was made. The patients were followed by nephrectomy. The diagnostic accuracy of CT scan was determined.

Results: The male to female ratio was 3.2:1.0. Out of total study subjects, 85.0% patients turned out to be renal cell carcinomas and among these, 40 (47%) were right sided and 45 (53%) were left sided. Amongst these, 72 (84%) were clear cell carcinoma, 9 (11%) were papillary cell carcinoma, 4 (5%) were chromophobe cell carcinoma. No collecting duct, medullary or unclassified renal carcinoma was found. The rest of 15 (15%) renal masses which were diagnosed as Non RCC. The mean size of tumor was 12.75 cm. The sensitivity, specificity, and diagnostic accuracy of CT scan were 89.0%, 72.7%, and 86.0% respectively.

Conclusion: The CT scan was helpful in diagnosing clear cell renal carcinoma. The most valuable parameter was the degree of enhancement of clear cell renal carcinoma with other parameters playing supplemental role.

Biography
Dr. Ameet Jesrani teaches in the field of radiology. He has done his Fellowship in the field of Radiology from College of Physicians And Surgeons Pakistan. He has worked in the field of Research and has multiple article Publications. He is also the author of Book “Role of Computed Tomography In Bronchogenic Carcinoma” to help the students. He is the Citizen of Karachi, Pakistan.

ameet.jesrani@yahoo.com