

HIGH INCIDENCE OF RENAL CELL CARCINOMA IN PATIENTS WITH HISTORY OF DIABETES

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There is evidence that the incidence of solid tumors is markedly increased in patients with diabetes. The precise role of diabetes in increasing the risk of developing cancer remains unclear. In the current study, we investigated the association between diabetes and renal cancer. A single-center retrospective analysis of 473 patients who underwent nephrectomy for RCC from 1994 to 2009 with complete clinical data was performed. Of the 473 cases with RCC, we identified 120 patients (25.4%) with a history of diabetes. The incidence of RCC in diabetic patients was higher in female (53.3%) than male (46.7%) subjects and significantly higher in Hispanic (75%) compared to White (19.2%) and Other Ethnic (5.8%) backgrounds. At diagnosis, 40% of diabetic RCC patients were 50-59 years of age, 22.5% with 60-69 years old and 19.2% with 40-49 years old. Diabetes was significantly associated with clear cell type histology (92.0%), whereas 6.2% and 1.8% were papillary and chromophome types, respectively. Higher levels of HgA1C (average of 8.1) were associated with advance tumor stage in RCC diabetic patients. Our findings suggest that females with a history of diabetes at higher risk for the development of clear cell RCC compared to males. In addition, RCC diabetic patients with higher HgA1C were at risk for the development renal cancer. This is the first report of clinical and histopathological features of RCC associated with diabetes. These results may have implications in determining the diabetic patient's risk of harboring a clear cell RCC and in subsequent treatment recommendation.