

Relationship between clinicopathologic, histomorphometric and immunohistochemical prognostic parameters in renal cell carcinoma

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Aim: To determine significance of clinicopathologic, immunohistochemical and histomorphometric prognostic parameters in renal cell carcinomas (RCC) and to reveal the relationship between each other.

Material and method: Ninety cases diagnosed as RCC have been examined in terms of clinicopathologic prognostic parameters. Then, immunohistochemical cyclin D1, ki67, p27, p53, CAIX monoclonal antibodies applied. Positive staining cells in unit area have been counted on digitally taken photographs by NEO image analysing program V.2.0 on PC. Furthermore, mean nuclear diameter of tumor cells have been determined on photos by using the same image analysing program on PC. All results have been compared with each other and relationship between clinicopathologic, histomorphometric and immunohistochemical prognostic parameters have been evaluated statistically.

Results: Fuhrman nuclear grade positively correlated with perinephric fat invasion, increased macroscopic tumor size, increased mean nuclear diameter, but negatively correlated with CAIX expression. High cyclin D1 expressions have been found in clear cell tumors than chromophobe and papillary type tumors. Ki67 and CAIX expressions have been detected to be higher in clear cell tumors than chromophobe tumors. In papillary type tumors, p53 expression has been found to be higher than chromophobe tumors. Increased cyclin D1 and p27 expressions were related to better prognosis. Mean nuclear diameter has increased with renal capsular invasion and perinephric fat invasion.

Conclusion: We have found significant relationship between clinicopathologic parameters and immunohistochemical markers. Additionally, histomorphometric findings based on mean nuclear diameter has significant relationship with some clinicopathologic parameters and has correlated with Fuhrman nuclear grading system.

Biography

Dr. Zeliha Esin Celik has graduated from Selcuk University Meram Faculty of Medicine, Konya, Turkey, in 2011 as pathology resident. She has made a study as graduate thesis researching relationship between prognostic parameters of renal cell carcinoma including histomorphometry and immunohistochemical markers. Dr. Celik instituted pathology laboratory at Bitlis State Hospital in November 2011. Her areas of interest are urological and endocrinological pathology.

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