The utility of Ki67, CK20 and mutant p53 in urothelial carcinoma in Kuwait

Anwar Al-Banaw and Jumana Al-Ramzi
Kuwait University, Kuwait

Introduction: Pathological stage and grade are important parameters for determining the diagnosis and prognosis of urothelial carcinomas. However, this method for interpretation of tumors deemed insufficient due to the heterogenous nature of urothelial carcinomas. Therefore, the utilization of some immunohistochemical markers have been used to improve the criteria. Although some studies have demonstrated an association with certain markers, others using similar markers have been less convincing. In Kuwait, the diagnosis of urothelial carcinoma still depends on interpretation of hematoxylin and eosin staining. Thus, including reliable immunohistochemical markers will help confirm the diagnosis and aid in the prognosis of the disease.

Aim: The aim is to correlate the immunohistochemical expression of CK20, Ki67 and mutant p53 in relation to grade and stage of urothelial carcinoma in a randomly selected Kuwaiti population sample.

Methodology: A total of 60 paraffin wax embedded samples (TURBT samples) were collected from 60 patients, which consisted of stages; Ta, T1 and T2, were all immunostained by using Ki67, CK20 and mutant p53 antibodies.

Results: According to the statistical analysis, there was a statistical significance association with Ki67 positive expression with grade and stage. In addition, a statistical significant association of CK20 diffused expression was observed with grade and stage. A statistical significant association was also observed with positive expression of mtp53 with grade, but no association was found with stage.

Conclusion: Overexpression of Ki67 and aberrant expression of CK20 prove to be useful in immunohistochemical tools for predicting prognosis of the disease. Overexpression of mtp53 demonstrated its significance in grade but remains controversial.

Biography
Anwar Al-Banaw is a Professor at Kuwait University, Department of Medical Laboratory. His articles are published in several journals. He participated in many medical conferences and his research work is appreciated by several organizations.

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