Immunoscore in Urothelial Carcinoma As a Prognostic Predictor and its Relation to Grading and Staging

Presented by

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Demonstrator of Anatomic Pathology

Faculty of Medicine, Fayoum University

A Thesis

Submitted for Partial fulfillment
Of
the Msc. Degree in Anatomic Pathology

Anatomic Pathology Department
Faculty of Medicine

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ABSTRACT

Background: Cancer progression is affected by the host immune response, which is represented by immune cell infiltrates. The distribution of (CD3+) and (CD8+) lymphocytes have been used to establish an Immunoscore (IS), which is a reliable prognostic factor in colon cancer, but in bladder carcinoma is at an early stage of exploration.

Objectives: This work aimed to correlate Immunoscore (IS) in urothelial carcinoma with different prognostic clinicopathologic parameters.

Methods: Forty cases of paraffin sections diagnosed with bladder urothelial carcinoma, collected from Nasser institute for treatment and research. Cases were stained for CD3 and CD8 immunohistochemical stains, CD3+ and CD8+ cells were measured in tumor center and invasive margin. The correlations evaluated between IS and clinicopathological parameters of urinary bladder carcinoma.

Results: There was an inverse correlation between IS and tumor staging. No statistically significant relation between IS and other studied prognostic clinicopathologic parameters including (Patients' age, sex, tumor size, site, histological type, gross appearance, multifocality, nodal stage, histological grading, vascular or perineural invasion).

Conclusions: Immunoscore is correlated with tumor progression in urinary urothelial carcinoma reflecting the immunoediting in the microenvironment niche due to tumor progression.

Keyword: urothelial carcinoma, Immunoscore, CD3+, CD8+, immunohistochemistry.