

عنوان مقاله:

Prognostic Significance of Substance P and Neurokinin-1 Receptor in Bladder Cancer

محل انتشار:

مجله گزارش های بیوشیمی و زیست شناسی مولکولی، دوره 11، شماره 3 (سال: 1401)

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خلاصه مقاله:

Background: Bladder cancer is one of the most common genitourinary cancers with significant mortality. Finding reliable tumor markers and potential drug targets can improve early diagnosis, prognosis, and more effective therapeutic protocols. Previous studies have reported the involvement of the substance P (SP)/neurokinin-1 receptor (NK-1R) system in cancers. The potential prognostic role and the interaction of SP and NK-1R in bladder tumor are yet to be elucidated. Methods: Serum samples from 22 primarily diagnosed patients with bladder cancer as well as 22 healthy controls were examined for SP level using ELISA method. Tissue distribution of NK-1R in tumor samples and their adjacent normal tissues was evaluated through immunohistochemistry. Results: Serum SP levels in patients with bladder cancer were higher than the healthy group ($p < 0.001$) and had a significant correlation with NK-1R staining intensity ($p < 0.001$), percentage of stained cells ($p < 0.001$), and NK-1R tissue distribution. Also, the immunoreactivity of NK-1R in cancer samples increased significantly without correlation with tumor characteristics. However, no significant association was found between SP and NK-1R levels with clinical characteristics including tumor size ($p = 0.33$), tumor

stage ($p= 0.29$), grade ($p= 0.93$), NK-1R staining intensity ($p= 0.53$), and percentage of stained cells ($p= 0.32$).
Conclusions: According to our findings, despite the lack of association between SP and NK-1R with clinical characteristics of bladder cancer, their serum levels were higher in patients with bladder cancer. Further studies are needed to confirm the potential prognostic role of SP and NK-1R in bladder cancer

کلمات کلیدی:

.Keywords: Biomarker, Bladder cancer, Neurokinin-1 receptor, Substance P, Prognosis

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