

Occurrence of RB- tumor suppressor gene overexpression in woman suffering with cervical carcinoma in mid Euphrates

Elhamjwad kadhem¹, Azhar Emran Althahab²

¹College of education of Girl, University of Kufa, Kufa, Iraq

²College of science, Department of biology, University of Babylon, Hilla, Iraq

Abstract : The retrospective research was designed as immunohistochemical study to demonstrate the expression state of tumor suppressor genes (RB) in (56) formalin-fixed, paraffin embedded cervical tissues were included: 27 with malignant cervical carcinoma (CC) and 16 with benign cervical tumors, 13 apparently healthy cervical tissues were used as a control group. The age of these individuals (patients and control groups) ranged between 23 and 73 years. They were collected from the pathological archives of teaching laboratories at many different private histopathological laboratories in Babylon, AL-Najaf, Kerbela, AL-Qadisiya, during the period from April 2015 to January 2016. After sectioning of these cervical biopsies and staining by hematoxyline and eosin, a final definitive histopathological diagnosis was done by a consultant histopathologist. The obtained results are summarized as follows: The mean age of the patients with cervical carcinoma (54 ± 11.22 years) was higher than the mean age of the benign group (38.8 ± 9.85 years) and the mean age of those females in the group of healthy control (35.5 ± 8.64 years). There are significant differences ($p < 0.05$) between different groups according to age. The well differentiated grade of CC constituted 52%, whereas those with moderately and poorly differentiated grades CC constituted 37% and 11% respectively. Over expression of RB - TSG was detected by IHC in 59.3 % of cervical cancer cases and in 43.8% of benign cervical tumor group, while none of control group showed RB- over expression. A high percentage 43.6% showed of cervical cancer have a moderate score (score II). Followed by 37.5% and 18.8% were found to have low score (score I) and strong score (score III), respectively. While, in benign cervical tumor group, the highest percentage 57.1% were found to have moderate score (score II) and 28.6%, 14.3% have strong score (score III) and low score (score I) respectively.

The highest percentage of RB protein expression it was found within poorly differentiated that have 100% (3 out of 3 cases). Followed by 60% (6 out of 10 cases), 57.1% (8 out of 14 cases) within moderately, well differentiated respectively.

Keywords: RB- tumor, gene overexpression, cervical carcinoma, mid Euphrates.