

# Molecular & Cancer Biomarkers

September 15-16, 2016 Berlin, Germany

## Concentration levels of IL-10 and TNF- $\alpha$ cytokines in patients with HPV DNA positive and negative cervical lesions

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**Objective:** The present study was performed to assess the immune response in women with HPV DNA positive and negative cervical lesions.

**Methods & Patients:** Eighty women with cervical lesions (age range of 25-70 years) were studied. The lesions were cytologically classified into 4 groups: ASC-US (20), CINI (30), CINII-III (16), and cervical carcinoma (14), prior to HPV DNA detection. Estimation of IL-10 and TNF- $\alpha$  cytokines was performed via enzyme linked immunosorbent assay (ELISA) technique in cervical secretions and serum and PCR screening kits were utilized to detect HPV DNA on cervical smears.

**Results:** The detected levels of IL-10 (mean $\pm$ SE) concentration in cervical secretions of patients with HPV DNA positive and negative states and control group were 88.73 $\pm$ 16.90 pg/ml, 24.00 $\pm$ 2.84 pg/ml and 8.27 $\pm$ 0.59 pg/ml respectively with significant differences ( $p < 0.05$ ), while levels of TNF- $\alpha$  in cervical secretion of the studied groups were 12.18 $\pm$ 3.49 pg/ml, 9.90 $\pm$ 0.73 pg/ml and 7.90 $\pm$ 0.87 pg/ml respectively with non significant differences. The detected levels of IL-10 in cervical secretions of HPV DNA positive cases (88.73 $\pm$ 16.90 pg/ml) were significantly higher than in the sera (13.69 $\pm$ 2.41 pg/ml) ( $p < 0.05$ ), while the levels of TNF- $\alpha$  in their cervical secretions (12.18 $\pm$ 3.49 pg/ml) was slightly raised than in their sera (11.59 $\pm$ 3.14 pg/ml) with non significance differences.

**Conclusions:** A raised levels of both IL-10 and TNF- $\alpha$  in secretions of HPV DNA positive women with different cervical lesions were detected. However, the observed higher levels of IL-10 than TNF- $\alpha$  indicate down-modulation of tumor-specific immune response to HPV infected lesions via significant raised concentrations of the first cytokine than the second one. Therefore, this phenomenon seems to provide a tumor progressive microenvironment by the immunosuppressant properties of IL-10 with minimal antitumor activity of TNF- $\alpha$ .

### Biography

Husham Y M Ali Bayazed has completed his PhD from University of Mosul, College of Medicine. He is now Consultant at the Scientific Research Center, University of Zakho/Kurdistan Region, Iraq. He is specialist in Immunology and has published more than 25 papers in reputed journals and has been serving as Scientific Reviewer of many local and international medical journals. He has membership of World Stroke Organization, Membership of Metabolomics (USA) and Membership of American Association of Science & Technology.

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