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# Concentration levels of il -10 and tnf-α 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 and 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-α cytokines was performed via Enzyme linked immunosorrbent 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 ± SE) concentration in cervical secretions of patients with HPV DNA positive and negative states and control group were 88.73 ± 16.90 pg/ml, 24.00 ± 2.84 pg/ml and 8.27 ± 0.59 pg/ml respectively with significant differences ($p<0.05$), while levels of TNF-α in cervical secretion of the studied groups were 12.18 ± 3.49 pg/ml, 9.90 ± 0.73 pg/ml, and 7.90 ± 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 ± 16.90 pg/ml) were significantly higher than in the sera (13.69 ± 2.41 pg/ml) ($p<0.05$), while the levels of TNF-α in their cervical secretions (12.18 ± 3.49 pg/ml) was slightly raised than in their sera (11.5 9 ± 3.14 pg/ml) with non significance differences.

**Conclusions:** A raised levels of both IL-10 and TNF-α in secretions of HPV D NA positive women with different cervical lesions were detected. However, the observed higher levels of IL-10 than TNF-α 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-α.

## Biography

Husham 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 and consultant in Microbiology & Immunology and has published more than 25 papers in reputed journals and has been serving as scientific reviewers of many local and international medical journals. In addition he has a Fellowship of ISC, Infection, Cancer, Immunology Advisory Board Member (EUROMDnet) (Belgium), Membership of World Stroke Organization, Membership of Metabolomics (USA), and Membership of American Association of Science & Technology with more than 20 participations in international scientific meetings all over the world.

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