

**PREVALENCE OF EPSTEIN- BARR VIRUS IN CERVICAL
CARCINOMA****Rushdi S. Fadhil***

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Researches (ICCMGR).**ABSTRACT**

The human herpes virus Epstein-Barr (EBV) is clearly associated with African Burkitt's lymphoma and the undifferentiated form of nasopharyngeal carcinoma, although its role in oncogenesis is still poorly defined. Recently EBV has been implicated in other types of lymphomas, as well as in some non lymphomatous neoplastic processes. It's possible association with human cervical carcinoma has been investigated here .The present study included (40) patients having cervical carcinoma with age ranged (40–70) years, where histopathological sections reviewed .A second group regarded as control group complained of healthy women , (40) women with age

ranged (40 -70) years. ELISA technique had been used to detect about IGg of VC Ag and E Ag of EBV. We identified that EBV- IgG were non-significant ($p > 0.05$) in compared with control group . The non-significant association between EBV and cervical carcinoma that we have found further strengthens the suggestion that cases of cervical carcinoma should be increase and assessed for EBV status by PCR technique because its more specific and more sensitive test than ELISA technique.

KEYWORDS: EBV, EIISA, virus , cervical carcinoma.**INTRODUCTION**

Lymphoepithelioma-like carcinomas (LELC) have been reported in many sites, including nasopharynx, where it usually occurs, salivary gland, thymus, stomach and uterine cervix.^[1] LELC of the uterine cervix accounts for only 0.7% of all primary malignant neoplasms at this site in women.^[2-3] It appears to have a better outcome than the other neoplasia of the uterine cervix , so it is important to differentiate LELC from poorly differentiated squamous cell carcinoma and lymphoproliferative disorders of the cervix.^[4] It has been studied that cervical

LELC may be related to Epstein-Barr virus (EBV) infections in Asian women.^[4] An infection plays probably a role as an oncogenic agent, because EBV genomes have often been identified in the cervical cells.^[4] Human tumors have been attributed to both human herpes virus.^[5] (Kaposi's sarcoma, primary effusion lymphoma, and Castleman's disease) and to EBV (Burkitt's lymphoma, nasopharyngeal carcinoma, and Hodgkin's and non-Hodgkin's lymphomas).

Although herpes viruses are ubiquitous in nature, humans serve as the only natural host for EBV. It is now known that EBV infects 90% of the world's.^[6] Cervical carcinoma consider as once important problem in Iraq ,than in this preliminary study, we studied the incidence of antibodies to EBV antigens in adult patients (women) with cervical carcinoma.

MATERIAL AND METHODS

In this study 40 patients with cervical carcinoma with age ranged (40 -70) years that were treated by both chemotherapy and radiotherapy. Histological subtype of the disease was reviewed by examining their histopathological slides. A control group was taken from 40 healthy women who complained from non malignant disorders with age range from (40-70) years was also included in this study. Blood samples were obtained from each group put in clot activator tubes. The following test (VCA IgG and EA IgG) were performed using enzyme linked immunosorbent assay (ELISA) the tests were done according to the instructions of the kit provided by cortex diagnostics.

RESULTS

40 cervical carcinoma patients and 40 case from healthy women as control were studied in ICCMGR. The system of this study was planned to be series cervical cancer study. The cervical carcinoma patients interviewed and a detailed questionnaire was completed. The data requested included the age, Social state and Smoking.

Table : Comparison between patient and control

| Group of study | No. | EBV (+veIgG) | % | EBV(-veIgG) | % |
|-------------------------|-----|--------------|-----|-------------|------|
| Patient | 40 | 3 | 7.5 | 37 | 92.5 |
| Control | 40 | 0 | 0 | 40 | 100 |
| Total | 80 | 3 | 3.7 | 63 | 96.3 |
| P.value = 0.077 ,D.F =1 | | | | | |

Table (1) shows 3 patients out of 40 patients were positive EBV (IgG) which represented (7.5%), while non positive (IgG) in control group where p-value equal 0.077 with non significant differences.

DISCUSSION

This study showed that there were no occurrence of studied viral infection (EBV) among cervical carcinoma patients and this study compatible with study made by (N. Kohrenhagen, 2007), they showed no relationship between LELC of the uterine cervix with EBV infections in a Caucasian woman. As the balance of EBV persistence, virion production, and immune control is well evolved, the vast majority of the world's population tolerates lifelong EBV infection with no adverse health consequences. However, EBV has been linked to the etiology of several cancers, including African Burkitt lymphoma, in which it was initially described^[7]; Hodgkin, AIDS, and nasal NK/T-cell lymphomas; post-transplant lymphoproliferative disorder; nasopharyngeal carcinoma (NPC); lymphoepithelioma like squamous cell malignancies; gastric adenocarcinoma; and leiomyosarcoma.^[8,9] EBV is believed to play an active role in their development for several reasons.^[7] The incidence of LELC in the uterine cervix is higher in Asia and represents 5.5% of all cervical neoplasms there⁽⁷⁾. It is suggested that ethnic and geographic factors might have an effect in developing LELC, because lymphoepitheliomas of the nasopharynx are also more frequent in Asian than in the Caucasian women.^[10]

From the mentioned results there is a non-significant association between EBV and cervical carcinoma. Further studies using PCR technique or immunohistochemistry are highly indicated because its presence may have significant impact on prognosis and response to therapy.

CONCLUSION

The present study revealed no correlation found between EBV and cervical carcinoma patients.

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