**ESTABLISHING ETIOPATHOGENESIS IN EBV ASSOCIATED MALIGNANCIES USING CHROMONOMIC IN SITU HYBRIDIZATION**

**Epstein–Barr Virus (EBV) discovered in 1964 is a ubiquitous human herpes virus that infects more than 90% of the world-wide population & 1% develops disease. This led the world Health Organization to classify EBV in 1997 as a tumor virus.**

**Epidemiologic, molecular, and immunologic evidence links Hodgkin lymphoma to EBV infection.**

**EBV is the epitome of B lymphotropic viruses, but the spectrum of tumor association extends to TNYC malignancies, various types of carcinoma & smooth muscle tumors.**

**The entities & the characteristics patterns of EBV gene expression leisional tissues are associated with the following conditions as illustrated in Table 2.**

**Patterns of EBV Gene Expression in Normal and Lesional Tissues**

<table>
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<th>Tissue</th>
<th>Characteristic Patterns</th>
<th>Table 2: Morphological, Immunohistochemical &amp; CISH analysis</th>
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| EBV viral load testing has been incorporated into routine care of patients with Hodgkin’s disease.** The initial link of EBV infection to NPC was the discovery of elevated titres of EBV antigens in patients with Hodgkin’s disease.** This was not expected and is an important point that should be kept in mind in the discussion. The current review and analysis of EBV-related malignancies with a focus on NPC and Hodgkin’s disease will provide new insights into the role of EBV in the development of these diseases.**

**In Hodgkin’s disease, the bulk of viral genomes are found in mononuclear form, indicative of residual infection of the tumour cells has occurred before clonal expansion.**

**Conclusions:** EBV appears to persist throughout the course of Hodgkin’s disease and is also found in multiple sites of Hodgkin’s disease.** In our study too we were able to demonstrate EBV infection by ISH and EBV in the tissues of the patients.**

**Objective:** The objective was to establish etiopathogenesis in EBV associated malignancies reported in our laboratory by using the gold standard test i.e. CISH for EBV.**

**Materials and Methods:** We performed CISH on EBV cases of different malignancies in the year 2013. The cases included were selected from the files of the institute. The cases were chosen for consideration and electron microscopy technique was used for EBV viral load & for treatment using EBV targeted oncologic therapies.**

**Aim:** As a robust Indian surgical pathology referral laboratory with a significant number of malignancies involving EBV, we decided to analyse EBV transcripts in the reported associated malignancies.**

**Results:** The presence of certain nuclear acid sequences in cells or tissues can be detected by in situ hybridization using labeled DNA probes. The hybridization results in duplexes that are detected by a specific photodetector object with the labeled DNA probe.**

**Discussion:** The initial link of EBV infection to NPC was the discovery of elevated titres of EBV antigens in patients with Hodgkin’s disease.** This was not expected and is an important point that should be kept in mind in the discussion. The current review and analysis of EBV-related malignancies with a focus on NPC and Hodgkin’s disease will provide new insights into the role of EBV in the development of these diseases.**

**Conclusion:** EBV appears to persist throughout the course of Hodgkin’s disease and is also found in multiple sites of Hodgkin’s disease.** In our study too we were able to demonstrate EBV infection by ISH and EBV in the tissues of the patients.**

**References:**


