**ABSTRACT**

Background: Hodgkin’s lymphoma is a cancer of the immune system accounting for less than 1% of cancers worldwide. EBV, the Epstein-Barr virus, is a lymphotropic virus that infects B lymphocytes. The EBV genome remains latent in infected cells, but the lymphatic system, affecting one’s ability to fight infection. This review focuses on young adults between 15-35 years and after the age of 50. Although Hodgkin’s lymphoma has not confirmed risk factors, it has been suggested that Epstein-Barr virus may increase an individual’s risk of developing Hodgkin’s lymphoma. Epstein-Barr virus, best known for causing infectious mononucleosis, has been linked to other types of immune system related cancers as well.

Objective: A review of the literature was done to assess the evidence regarding the association between Hodgkin’s lymphoma and Epstein-Barr virus in young adults.

Methods: A structured literature review was conducted to find evidence of an association between Epstein-Barr virus and Hodgkin’s lymphoma. Peer-reviewed articles were collected from SCOPUS, using the keywords “Epstein-Barr”, “Hodgkin’s Lymphoma”, “female” and “young”. Articles were accessed to meet inclusion criteria through publication date, language, and title and abstract scope.

Results: The literature search revealed that there is an association between a positive Epstein-Barr virus infection and Hodgkin’s lymphoma in young adults. Studies indicate differences in EBV infection were found on adults diagnosed with Hodgkin’s lymphoma. The literature search included a storage association in certain geographical regions around the world.

Conclusion: The literature provides evidence of an association between Hodgkin’s lymphoma and Epstein-Barr virus in young adults. Further studies are necessary to study the degree of association, specifically targeting young adults between 15-35 years, as Hodgkin’s lymphoma peaks in this age group.

**INTRODUCTION**

How is Epstein-Barr virus (EBV) related to Hodgkin’s lymphoma (HL)? Although EBV has not confirmed risk factors, it has been suggested that EBV may increase an individual’s risk of developing HL [2]. Studies show that the EBV infection may be a prevalent infection, mainly among young adults, varying from 18-100% in different countries [4].

What is Epstein-Barr virus? EBV, a virus among the herpes virus family, has been historically seen as a possible causative agent of HL at HL patients. EBV has been implicated in various types of cancer and autoimmune diseases, due to its impact on the immune system [5]. EBV is a ubiquitous virus, with an estimated 90% of individuals worldwide infected. EBV is a ubiquitous virus, characterized by a high incidence in undeveloped countries and has a male predominance [4].

Research question: Is there an association between Epstein-Barr virus and the diagnosis of Hodgkin’s lymphoma in young adults?

**METHODS**

**RESULTS**

**TABLE 1. Results from Structured Literature Review | 30**

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Study Title</th>
<th>Population</th>
<th>Primary Findings</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort Study</td>
<td>Chen et al. (1997)</td>
<td>497 patients in Connecticut, USA</td>
<td>EBV does not play a role in the HL</td>
<td>4.5</td>
</tr>
<tr>
<td>Cohort Study</td>
<td>Dallal et al. (2016)</td>
<td>81 participants</td>
<td>No increase in EBV positivity among younger HL patients</td>
<td>4.0</td>
</tr>
<tr>
<td>Case-Control Study</td>
<td>Gleason et al. (2003)</td>
<td>208 patients (125 young and 83 patients</td>
<td>EBV infection was associated with younger age</td>
<td>4.5</td>
</tr>
<tr>
<td>Cohort Study</td>
<td>Koh et al. (2012)</td>
<td>159 participants</td>
<td>Out of the 43 patients, 10% had EBV associated disease</td>
<td>3.75</td>
</tr>
<tr>
<td>Case-Control Study</td>
<td>Lee et al. (2012)</td>
<td>58 patients (7-20 years old)</td>
<td>EBV was associated with the presence of HL</td>
<td>3.5</td>
</tr>
<tr>
<td>Case-Control Study</td>
<td>Qiu et al. (2012)</td>
<td>39 total</td>
<td>Out of the 27 patients, 98% did not exhibit EBV</td>
<td>4.4</td>
</tr>
<tr>
<td>Retrospective Cohort</td>
<td>Sousa et al. (2010)</td>
<td>97 patients</td>
<td>EBV+ HL is associated with younger age</td>
<td>3.25</td>
</tr>
<tr>
<td>Systematic Analysis</td>
<td>Thomas et al. (2002)</td>
<td>Not stated</td>
<td>Several studies suggested EBV is associated with HL</td>
<td>4.5</td>
</tr>
<tr>
<td>Cohort Study</td>
<td>Vassallo et al. (2001)</td>
<td>78 patients</td>
<td>EBV was detected in 50% of patients</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**METHODS**

**DISCUSSION**

In conclusion, this structured literature review revealed that there is a large distribution in the association between EBV and HL. The studies range from a positive association to 100% [2] association of positive EBV and HL in young adults.

Positive EBV association with lower survival rates, relative to patients with negative EBV in patients with HL [5].

Other factors, such as less socioeconomic status and living in a developing country contribute to an increased association between positive EBV and HL in young adults [1, 6-10].

The literature reveals that there may be a stronger association between positive EBV and HL in older adults, relative to younger adults [1].

Although EBV is not a confirmed risk factor of HL, it is clear that there is an association between EBV and HL. Other risk factors may contribute to an increase in the decrease in the association.

**REFERENCES**