A STUDY ON THE SPECTRUM OF LYMPHOMA AT SBMCH (A TERTIARY CARE CENTRE) - A RETROSPECTIVE STUDY

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ABSTRACT
Lymphoma is a proliferative disorder which arises in discrete lymphoid tissue mass. The malignant lymphomas can be divided into two major categories: Hodgkin lymphoma and all the others, which, for lack of a better term, are known collectively as non-Hodgkin lymphomas [1,2,3,4,5]. This is a retrospective study done at the department of pathology, SBMCH, Chennai, India. Mixed cellular variant of Hodgkin's lymphoma was found to be common. Lymphocyte rich & lymphocyte depleted variant of Hodgkin's disease was relatively rare in our study. There was a high incidence of primary nodal Hodgkin's lymphoma in the younger age group.

KEYWORDS: Lymphoma, Prevalence, distribution of lymphomas.

INTRODUCTION
Lymphoma is a malignant condition in which there is transformation of normal cells in lymphoid tissue to neoplastic cells. It is of two separate entities, known as Hodgkin’s lymphoma & Non Hodgkin’s lymphoma. Both differ histologically, clinically & also response to treatment. In 1990 of all cancers worldwide, lymphomas was ranking twelve with a male predominance compared to occurrence in females [6].

This is a Hospital based study which usually gives good information on epidemiology. Hence a retrospective study is carried out to determine the incidence of the various types of lymphoma.

MATERIALS AND METHODS
Histopathological description & immunohistochemical detail from cases diagnosed as lymphoma over the years 2013 to 2016 were retrieved from the histopathology records of our hospital. We categorized the cases based on diagnosis & variants as various subtypes of Hodgkin's lymphoma and non-Hodgkin's lymphoma.

RESULTS
Table 1 summarizes the yearly distribution of cases of lymphoma.
Fig.1 shows case distribution of 13 cases of lymphoma. Figure 2 shows case distribution of 8 cases of Hodgkin's disease. Figure 3 shows case distribution of 5 cases of Non-Hodgkin's lymphoma.

Table 1: Yearly distribution of cases diagnosed.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NO. OF CASES</th>
</tr>
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<tbody>
<tr>
<td>2013</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
</tr>
<tr>
<td>2016</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13</td>
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Figure 1: DISTRIBUTION OF LYMPHOMA.

Figure 2: DISTRIBUTION OF VARIANTS OF HODGKINS LYMPHOMA.

Figure 2: DISTRIBUTION OF SEVERITY OF NON HODGKINS LYMPHOMA.
DISCUSSION

From Table 1, the number of cases diagnosed as lymphoma was high in the year 2014, 4 cases. This does not prove a relativity to incidence, as India is still a developing nation and the awareness of the patients to reach the hospitals for treatment of illness. All the cases of lymphadenitis that attend our institution are first studied by FNAC technique to attain a probable diagnosis and treatment is started on its basis. The most common cause of lymphadenitis is due to Mycobacterium tuberculosis, while lymphoma is a lymphoproliferative condition which is a rare entity.

Figure 1 shows the distribution of various types of lymphomas that have been reported. The number of cases that were diagnosed as Hodgkins disease is 8, while only 5 cases were diagnosed as non Hodgkins lymphoma. This shows that comparatively the incidence of Hodgkins disease is high.

Figure 2 is a representation of the distribution of histological variants of Hodgkins lymphoma. 5 cases showed the histological pattern of mixed cellularity and 2 cases showed a picture of nodular sclerosis, 1 case showed a lymphocyte predominant pattern.

Figure 3 represents the distribution of cases based on histological criteria of severity of non-Hodgkins lymphoma.

Hodgkin's lymphoma

Hodgkin lymphoma (HL) is characterized by a heterogeneous cellularity comprising a minority of specific neoplastic cells—the Hodgkin cells and the Reed-Sternberg cells—and a majority of reactive non-neoplastic cells.9

Epidemiologic studies indicate a relationship with infectious mononucleosis (IM), which is associated with a fourfold increased risk for the subsequent development of HL (20).

Among the total number of lymphomas cases diagnosed, Hodgkin's disease makes a greater number. The Malaysian proportion of Hodgkin's disease is 14% of the total, as compared to 38% of 545 cases and 59% of 376 cases.9 All of the major subtypes of Hodgkin's disease is recorded in the Indian population. The figures in this series are insufficient to indicate relative incidence.

Immunohistochemistry of the following markers shows positivity CD15+, CD30+, CD45- CD20/-+, CD79a/-+/ PAX 5+/-, Fascin +/-, CD3+.

Non-Hodgkin's lymphoma

A difference in relative incidence of the subtypes of non-Hodgkin's lymphoma in this series is noted as compared to data from literature. Even though the case numbers are not large there is a difference in proportion of low grade lymphomas to those of high and intermediate types.10,11,12,13

Lymphomas termed low grade are either nodular lesions or, when diffuse, are made up of well differentiated small lymphocytes or plasmacytoid small lymphocytes. In nodular lymphoma the only type that is not of low grade is the one composed of large follicular cells.

Mature B-cell neoplasms comprise over 90% of NHLs worldwide.14 In North America and Europe, B-cell lymphomas represent all follicular lymphomas (FLs) and 80% to 90% of diffuse lymphomas, whereas in Asia, T-cell lymphomas are more common.15 These are distinguished by cell type and growth patterns. The B-cell origin of lymphomas can be identified by immunostaining with monoclonal antibodies (M Abs) specific for B-cell markers such as CD19, CD20, CD22, and CD79a.

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