CASE REPORT

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A Case Report on Follicular Lymphoma

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ABSTRACT

Follicular lymphoma is one type of cancer which belongs to Non Hodgkin lymphoma [NHL], in which the lymphatic system would affect the most. The lymphatic system plays a key role in immune system as it provides protection to the body in order to fight from infections and diseases. Generally the lymphocytes are categorized into 2 types such as B-lymphocytes and T-lymphocytes. B- cells works by producing specific type of antibodies which mainly helps to fight against specific type of microorganism but in other type the infected host cells will be killed directly by the T- cells and further activates other immune cells which may produce cytokines and helps in the regulation of immune system. Follicular lymphoma belongs to B-cell lymphoma in which there is an alteration of normal B cell into cancerous B cell. In the follicular lymphoma we can notice an amplification of lymph nodes due to atypical, unconstrained growth and proliferation of malignant B cells and further spread to other body tissues and organs. Follicular lymphoma is considered to be the prototype of indolent lymphoma which can be marked by slow progression and increased response to the therapy. As most of the patients gradually developing resistance to disease over time, there is an transformation of indolent lymphoma to an aggressive subtype, in which there would be a poor outcome to the therapy as there is a reduced sensitivity to the chemotherapy.

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INTRODUCTION

Follicular lymphoma is referred to be the second most common subtype of Non Hodgkin Lymphoma [NHL] which may constitutes about 35% of all lymphoma in the United States [1].

Causes: The exact cause beneath the follicular lymphoma is unknown but certain factors may include such as genetic, environmental and immunologic factors. Genetically greater than 25% of people who have follicular lymphoma, there is an alteration of gene called E2H2. Other genes which may include are MLL2, EPHA7, and TNFRSFI4. Generally, there is an over expression of one gene known as BCL-2 as there is a genetic translocation of chromosome no.14 and chromosome no.18. Due to the over expression of these chromosomes, there may be over production of protein byproduct of BCL-2 gene which involves in the inhibition of one process called as apoptosis. Hence the cells doesn't undergo apoptosis as there is an over expression, it tends to the further development of cancer [2]. In most of the patients, there is a widespread of disease and to be considered as incurable. According to WHO, there is an FL grading system based on disparate proportions of centroblast as indolent and aggressive. Grade 1,2 and 3A are basically categorized as indolent disease which is slowly progressive in nature and may contain < 15 centroblast per HPF and grade 3B is categorized as aggressive

lymphoma which may contain >15 Centroblasts per HPF(3). During the transformation of follicular lymphoma from indolent to aggressive, there would be some histological and morphological changes such as DLBCL which may include expeditious progression of lymphadenopathy, extra nodal diseases outside the marrow, increased serum lactate dehydrogenase and to a lesser extent hypercalcemia [3].

Clinical features of follicular lymphoma may includes:

1. Enlarged lymph nodes in the neck region, underarms etc. which may vary in sizes.
2. Weight loss
3. Shortness of breath.
4. Night sweats.
5. Abdominal pain or swelling.
6. But in some patients, the primary symptoms are more subtle and are related to slow progression of lymph nodes in deeper regions, typically in infra diaphragmatic territories which includes retroperitoneum, the mesenteric or the ileac regions [4].

CASE REPORT

A male patient of age 67 years was reported to oncology department with chief complaints of neck pain, progressive swelling weight loss, nausea and vomiting associated with shortness of breath and fatigue. O/E C/C, PS2, generalized Lymphadenopathy+, CVS and RS: NAD, P/A: soft, spleen+ NS: no FND. Lab investigations were performed such as Complete blood count, RFT, Immuno-histochemistry, CECT scan of abdomen represented in Figure 1, CECT scan of neck represented in Figure 2, histopathology examination. CT scan of neck shows that there is a bilateral cervical lymphadenopathy level 4, CT scan of abdomen reveals the bilateral inguinal lymph nodes-lymphadenopathy, and the impression of immuno-histochemistry found that there is a Mature B cell Lymphoma(Follicular lymphoma), histopathological report shows that there is a Cervical lymph node-features suspicious of NON-HODGKINS LYMPHOMA, and the CT scan of neck reveals that there is a bilateral axillary lymphadenopathy and hemoglobin was found to be 8gms/dl. Based on lab investigations and the clinical data, the physician confirmed that the patient was suffering from Follicular Lymphoma stage IV. The FLIPI score of the patient was found to be at high risk. For this condition, the patient was treated with Inj Rituximab 375mg/m2-500mg and Inj. Bendamustine 100mg/m2-100mg as main therapy and T. Zofer 4mg for 2 days as supportive therapy.

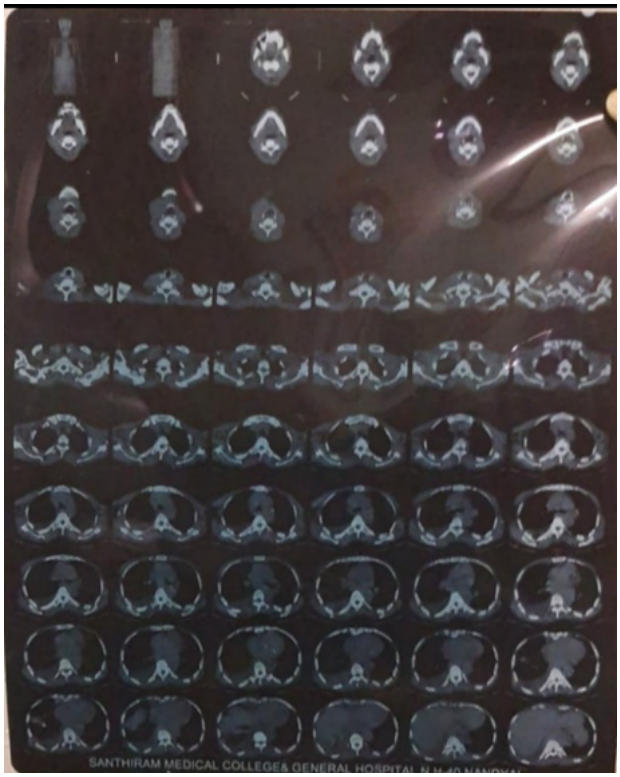

Figure 1: CT scan of chest

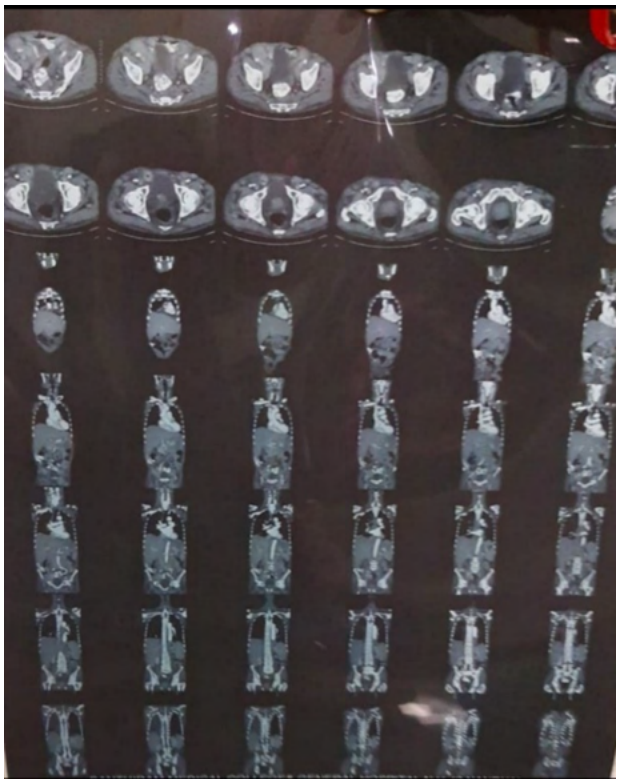

Figure 2: CT scan of neck

DISCUSSION

The treatment is generally based on 2 factors mainly, which may include the aggressiveness of tumor and age and general health of the patient. By the time the patients are diagnosed with follicular lymphoma, majority of the people have vast spreading of the disease. Hence the aim of the treatment is to delay the relapse condition and relieving from symptoms. Chemotherapy effectively act against cancer cells and may improve the patient quality of life. The usage of the anti-CD20 monoclonal antibody Rituximab for the treatment of advanced stage follicular lymphoma has been changed the treatment approach to patients with disease condition. The combination of Rituximab and Chemotherapy may be effective with respect to treatment outcome. Determination of risk category and prognosis can be measured by FLIPI (Follicular Lymphoma International Prognostic Index) which is used to predict the disease behaviour. This system categorise the follicular lymphoma into 3 categories such as low risk, intermediate risk and high risk. FLIPI is based on five factors mainly such as age, Lactose dehydrogenase, stage, no. of nodal sites involved and the stage of the disease. Age > 60 years, stage(III - IV), hemoglobin level < 12gms/dl, no. of nodal sites involved > 4,LDH elevated. Now the patient FLIPI score was found to be at high risk. At the time of its assessment, there was no establishment of Rituximab as the first line treatment for follicular lymphoma.

CONCLUSION

Follicular lymphoma is a type of disease which includes both the tumor genome/epigenome and tumor infiltrating cells. Some patients who are suffering with Follicular lymphoma are at high risk of occurrence of death which may include the patients who have high FLIPI score, recurrence within 2 years of therapy, who are experiencing histologic transformation and under the age of 60 years at the time of diagnosis.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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