



## A CASE OF NON-HODGKIN LYMPHOMA (NHL)

### General Medicine

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### ABSTRACT

It is a group of disorders which include all types of lymphomas except the Hodgkin lymphoma. Lymphomas are the type of cancer that develops from lymphocytes. The predisposing factors for the occurrence of lymphomas include Immunocompromised status, auto-immune disease, H pylori infection, Hepatitis C, Obesity, EBV infection. The present case is an example of the patient presenting with fever of longstanding duration and ultimately diagnosed to be NHL.

### KEYWORDS

#### INTRODUCTION-

NHL is most common between the age group of 65-75 years. The signs and symptoms of NHL vary depending upon its location within the body. Symptoms may be in the form of enlarged lymph nodes, fever, night sweats, weight loss, tiredness. Some other symptoms like bone pain, chest pain or itchiness may also be present. These NHL may be slow growing or fast growing. Lymphomas in the skin may cause lumps which are itchy, red or purple. The enlarged lymph nodes may be felt as lumps. Brain lymphomas may cause weakness, seizures or personality changes.<sup>1</sup> The associations as per the causes may be as follows-

- EBV- Burkitt's lymphoma, Diffuse large B-CELL lymphoma
- HTLV- Adult T-cell lymphoma
- H pylori- Gastric lymphoma
- HHV-8- Primary effusion lymphoma, Multicentric Castleman Disease
- HCV- Splenic marginal zone lymphoma, Lymphoplasmacytic lymphoma, Diffuse large B-cell lymphoma
- HIV Infection- NHL as AIDS defining cancer
- Chemicals- PCBs, Diphenylhydantoin, Digoxin, Phenoxyherbicides
- Medical treatments like radiation and chemotherapy
- Genetic Diseases- Klinefelters disease, Chediak-Higashi syndrome, Ataxia-telangiectasia syndrome
- Autoimmune disease like Sjogren's syndrome, Celiac disease, Rheumatoid arthritis, SLE
- Bone trauma and microfractures associated with diffuse large B-cell lymphoma
- Implants of hard metals or silicone associated with anaplastic large cell lymphoma
- Genetic component.<sup>2</sup>

#### CASE REPORT-

A 50 years old male presented to the OPD of the Dept of Medicine at KCGMC, Karnal with chief complaints of-

#### Fever for the past 2 months

In history of present illness, the patient was alright 2 months back when he started having fever which was of moderate grade and was more in the evenings and nights. It was associated with chills and occurred daily. There was also a history of night sweats associated with fever.

There was history of weight loss recently.

There was no history of cough or burning micturition or pain abdomen. There was history of lumps present in the both inguinal regions and left axilla. These lumps had been enlarging over time and were non-painful.

Patient also gives history of generalized weakness and bodyaches.

There was no history of any bleeding tendency.

There was history of loss of appetite.

There was no history of melena or haematemesis.

In the past history and family history, there was nothing significant.

In the personal history, the patient was smoker for the past 10 pack years. He was non-alcoholic. Diet was mixed. Sleep was normal. Habits were normal.

On general physical examination, the patient was conscious, cooperative, and lying comfortably in the bed. The BMI was 22. The patient was febrile with a temperature of 101°F. The pulse rate was 110/min, regular, normal volume, normal character, no radiofemoral delay, peripheral pulses were well felt, equal both sides, condition of the vessel wall was normal. The respiratory rate was 22/min, abdominothoracic. The blood pressure was 120/70 mmHg in the right arm, supine position. Pallor was present. Icterus, cyanosis, clubbing, edema were absent. JVP was not raised. There was bilateral inguinal and left axillary lymphadenopathy palpable which was nontender, rubbery, mobile, about 1 cm in diameter.

On examination of abdomen system, there was hepatosplenomegaly.

The examination of Cardiovascular system, Respiratory system, CNS were normal.

A provisional differential diagnosis of Lymphoma, Tuberculosis, HIV was made.

#### The Investigations done showed-

Hb of 8 gm%, TLC-4,500/mm<sup>3</sup>, Platelet count- 1.1 lac/mm<sup>3</sup>, RBS of 124 mg%, ECG was normal, Chest X-ray showed slight elevation of the right hemidiaphragm, Bilateral hilar enlargement, Urine examination was normal, LFT showed AST/ALT of 88/64 U/lt and RFT was normal.

CT Abdomen showed mild hepatosplenomegaly with extensive abdominopelvic and bilateral inguinal lymphadenopathy- likely malignant- ? Lymphoma.

CT Chest showed evidence of left axillary lymphadenopathy ? malignant, mild basal atelectasis with few atelectatic bands in bilateral lower lobes (right > left).

Blood culture was sterile. Dengue serology was negative.

FNAC done from the inguinal lymph node showed NHL.

Patient was started on treatment in the form of IV fluids, and other symptomatic treatment in the form of Inj PCM, Antibiotics.

The patient was then referred to the higher centre for further treatment after a diagnosis of NHL was made.

#### DISCUSSION-

Lugano classification based on older Ann Arbor system is used for the staging of NHL.

It has stages I to IV with/without Extranodal involvement

Stage I- Lymphoma is in only one lymph node area or lymphoid organ such as tonsils (I).

Cancer found in only one area of single organ outside of lymph system (IE).

Stage II- Lymphoma in two or more groups of lymph nodes on the same side of (above or below) the diaphragm (II).

Lymphoma in a group of lymph nodes and in one area of nearby organ (II E).

Stage III- Lymphoma in lymph node areas on both sides of the diaphragm.

Lymphoma in lymph nodes above the diaphragm as well as in the spleen (III E).

Stage IV- Lymphoma has spread to at least one organ outside the lymph system such as bone marrow, liver or lung (IV).

The diagnosis is based on the physical examination, routine blood tests, urine examination, imaging studies, lymph node biopsy, bone marrow examination, lumbar puncture, other tests depending upon the cause.<sup>3</sup>

#### **The treatment modalities include-**

Chemotherapy

Radiotherapy

Stem cell transplantation

The most common chemotherapy used is R-CHOP regimen (Rituximab, Cyclophosphamide, Doxorubicin, Vincristine and Prednisolone). It is given in cycles.

Radiotherapy is reserved for the early stage disease (Stage I or II). It may be combined with chemotherapy in more advanced lymphomas.

Stem cell transplantation of two types i.e. Autologous and Allogenic stem cell transplantation may be used to treat NHL cases in remission or those who relapse after treatment.<sup>4</sup>

#### **CONCLUSION-**

This case demonstrates that one of the important causes of the long standing fever is Lymphoma. So, the classical Pel-Ebstein pattern of fever with other associated features of lymphomas should be looked for.

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#### **REFERENCES:-**

1. Somigliana E, Viganò P, Parazzini F, Stoppelli S, Giambattista E, Vercellini P (May 2006). "Association between endometriosis and cancer: a comprehensive review and a critical analysis of clinical and epidemiological evidence". *Gynecologic Oncology*. **101** (2): 331-41.
2. Subik, M. Kristina; Herr, Megan; Hutchison, Robert E.; Kelly, Jennifer; Tyler, Wakenda; Merzianu, Mihai; Burack, W. Richard (November 2014). "A Highly Curable Lymphoma Occurs Preferentially in the Proximal Tibia of Young Patients". *Modern Pathology*. **27** (11): 1430-1437.
3. Arnold S Freedman, Lee M Nadler (2000). "Chapter 130: Non-Hodgkin's Lymphomas". In Kufe DW, Pollock RE, Weichselbaum RR, Bast RC Jr, Gansler TS, Holland JF, Frei E III (eds.). *Holland-Frei Cancer Medicine* (5th ed.). Hamilton, Ont: B.C. Decker. ISBN 1-55009-113-1.
4. Pinzone MR, Fiorica F, Di Rosa M, Malaguarnera G, Malaguarnera L, Cacopardo B, et al. (October 2012). "Non-AIDS-defining cancers among HIV-infected people". *European Review for Medical and Pharmacological Sciences*. **16** (10): 1377-88.