

The Coexistence of a NonHodgkin with a Hodgkin's Lymphoma or a Single Disease?

Mihăilă RG¹, Catana C², Vecerzan L², Morar S¹, Marchian S¹, Cernuşcă-Miţariu M¹

¹Faculty of Medicine, "Lucian Blaga" University of Sibiu, str Lucian Blaga, nr 2A, Cod 550169, Sibiu, Romania

²Emergency County Clinical Hospital Sibiu, b-dul Corneliu Coposu, 2-4, Cod 550245, Sibiu, Romania

*Corresponding Author:

Name: Romeo-Gabriel Mihăilă

Email: romeomihaila@yahoo.com

Abstract: The presence of symptoms and clinical signs of activity and extranodal determination of a lymphoma are sometimes in contrast with the result of histopathological examination which has showed a lymphoma with low degree of malignancy. This is also the case of the patient we present. The second histopathological examination and immunohistochemistry have determined that it was a nodular lymphocyte predominant Hodgkin's lymphoma associated with a diffuse large B cell nonHodgkin lymphoma. It is discussed the possible evolution of the first towards the aggressive lymphoma or the fact that both histopathological aspects may represent a spectrum of the same disease.

Keywords: ABVD, CHOP, Diffuse large B cell nonHodgkin lymphoma, Follicular nonHodgkin lymphoma, Immunohistochemistry, Nodular lymphocyte predominant Hodgkin's lymphoma

INTRODUCTION

In medical practice we find sometimes discrepancies between the histopathological diagnostic of a lymphoma with low degree of malignancy and its aggressive clinical evolution. This is the case of the Richter's syndrome, in which a chronic lymphocytic leukemia or a lymphocytic nonHodgkin lymphoma (aspect present in some lymph nodes) was transformed into an aggressive nonHodgkin lymphoma or in a Hodgkin's lymphoma (histological aspect which can be found in another lymph node – bigger in size). A nodular lymphocyte predominant Hodgkin's lymphoma (NLP-HL) may undergo a transformation into an aggressive lymphoma, as in the case of the patient that we will present. In every case, immunohistochemistry is essential for establishing the histological type. The fact that the same lymph node contains two types of lymphomas will be analyzed in the discussion chapter.

CASE REPORT

A 58 years old patient, from an urban environment, recently diagnosed with a lymphocytic follicular non Hodgkin lymphoma as a result of a left axillary lymph node biopsy, has been admitted in February 2011 for stadialisation and treatment. He presented: loss of appetite, weight loss (16 kg in 3 months), asthenia, sweating, predominant inspiratory dyspnea, coughing with mucous expectoration. He was afebrile, with axillar and cervical lymph nodes of about 2 cm in diameter, with ronflante rales in the right hemithorax, supple abdomen, painless, liver and spleen within normal limits. He also presented a small diffuse goiter and a hyperkinetic neurogenic syndrome.

Biologically: hypertriglyceridemia; its myelogram showed a granulomegacariocytic hyperplasia.

Abdominal ultrasound showed a normal sized liver, relatively homogenous; spleen with the long axis of 12.7 cm, homogenous, without lymph nodes or other pathological elements. Lung X-ray showed a left parahilar opacity, with present alveogram which could suggest a pneumonia during resorption at this level, and multiple nodular opacities net bounded, conglomerated within the left and right lob, which suggested the likelihood of secondary lung determinations; the middle mediastinum was enlarged by the presence of lymph node blocs. Chest CT-scan showed multiple bilateral lung tumor masses and mediastinal and axillary lymph node blocs. The electrocardiogram showed sinus tachycardia.

The diagnosis of follicular nonHodgkin lymphoma stage IIEB was established, with the reserve of the immunohistochemistry which was not complete.

He underwent a first round of polychemotherapy type CHOP treatment, after which his symptoms improved and his peripheral lymph node shrunk to 0,5 cm. After the second round his peripheral lymph nodes disappeared as well as his initially described tumor masses. He only had an enlarged middle mediastinum, pronounced bilateral peribronchovascular design, with reticular bilateral parahilar aspect.

After the 6th cycle of CHOP regimen the result of the hystopathological and immunohistochemical examinations of the initially biopsied lymph node, undertaken in another hematology service, arrived (examination that took excessively long) and it established the diagnosis of diffuse non-Hodgkin lymphoma, with large B-cells, CD 20+, with nodular growth pattern, rich in T lymphocytes, associated with a NLP-HL.

The patient continued the therapy with 2 ABVD cycles. Then, at the control of thoracic CT scan, we ascertained the absence of pathological lymph nodes in the examined region. He had pulmonary and underpleural bilateral micronodules (which required monitoring). The PET-CT did not show metabolically active lymph nodes or lung metastases. The oncology commission concluded that radiotherapy was not necessary at the time and recommended the supervision of its evolution. On further check-ups, for nearly 3 years he presented no symptoms, no lymph nodes which could be clinically or imagistically discovered. From biological point of view: discreet polyglobulia, which subsequently disappeared, and hypercholesterolemia which was treated. The basal bilateral lung micronodules were unaltered.

DISCUSSION

At the first hospitalization there was a discrepancy between the presence of clinical signs of activity and the histological type of follicular non-Hodgkin lymphoma. The immunohistochemistry examination could not be performed in our hospital, therefore the lymph node biopsy was sent to another university hospital. Lung radiological images suggested a lymphomatous determination but the parahilar opacity with present alveologram could not exclude a pneumonia in course of resorption. Moreover, lung lymphomatous determination can mimic other diseases. It was published just one case of cavitary lung lesions. Lung involvement is more often found in the Hodgkin's lymphoma than in the non-Hodgkin one [1].

A CHOP treatment was selected, as in the large cell lymphomas, on account of the possible lung involvement and clinical signs of activity. In the absence of immunohistochemistry, there were no reasons for the association of rituximab. The prompt response to chemotherapy excluded other possible etiologies of the pulmonary opacities.

The result of the immunohistochemical examination provided a bigger surprise than expected: two types of lymphoma. NLP-HL does not evolve with symptoms and clinical signs B in the early stages, but the large B cells non-Hodgkin lymphoma – yes; the last is often discovered in advanced stages and has a poor prognosis [2]. NLP-HL is a relatively rare disease: in

the United States there are about 500 new cases per year [3]; this type of lymphoma contains lymphohistiocytic cells which are positive for CD45, CD19 [4], CD20 (a hallmark of the disease) [4, 5], CD79a, BOB.1, Oct.2 and negative for CD30 and CD15 [4]. It is predisposed for relapse and transformation to aggressive B-cell lymphomas [4-6]. Recently, it was published an article which sustains the existence of a considerable hystopathologic overlap between some variants of NLP-HL (especially the diffuse form) and t cell/histiocyte rich large B cell lymphoma. In addition, the gene expression profiling of microdissected tumor cells of these two entities did not found clear and consistent differences. The markers expressed in these tumor cells were BAT3/BAG6, HIGD1A, and FAT 10/UBD. The authors concluded that the two lymphomas may be a spectrum of the same disease and that lymphoma microenvironment may be responsible by the differences in their clinical behavior [2]. The presence of the two lymphomas in the same lymph node from our patient did not exclude this possibility or may be the expression of the transformation of NLP-HL into a large B-cell non-Hodgkin lymphoma.

The second hystopathological examination accompanied by immunohistochemistry raised the issue of continuing therapy after the first 6 rounds of CHOP. Because in the widespread local and advanced forms of NLP-HL the treatment for classic Hodgkin's lymphoma is recommended [7, 8], the choice was to complete the chemotherapy with two ABVD cycles. The association of rituximab to the first line of chemotherapy or in the relapsed NLP-HL led to a median progression free survival of 3 years, but the maintenance therapy with rituximab did not prolong this period significantly in a recent study [7]. Possible relapses of NLP-HL are not excluded, in which case the association of rituximab to chemotherapy is indicated [7]. However the large B-cell non-Hodgkin lymphoma, who in general responds rapidly to chemotherapy, can also relapse. For relapses, autologous stem cell transplantation will also be considered [3]. A careful monitoring of the patients evolution will allow a replay of the treatment in time.

CONCLUSION

The coexistence of two types of lymphomas in the same lymph node can be the result of the evolution of a prior undiagnosed NLP-HL towards a large B cells non-Hodgkin lymphoma or is a hystopathological expression of a spectrum of the same disease.

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