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Concurrent chemo-radiotherapy in relapsed Extranodal NK/T cell Lymphoma, nasal type: a case report

DUYGU KAÇKA MD PhDc[1], AFERDITA UKIMERAJ [1], VIOLA ÇAVOLLI MD PhDc [1], SHEMSEDIN SADIKU MD PhD [1,2], KALTRINA HODA[1],ENDRIT UKIMERAJ [3], ILIRIANA ALLOQI TAHIRBEGOLLI MD PhD [1,4]

[1] Hematology Clinic, UCCK, Pristina, Kosovo [2] Faculty of Medicine, University of Prishina, Pristina, Kosovo
[3] UCCK, Pristina, Kosovo [4] Heimerer College, Pristina, Kosovo

INTRODUCTION

Extranodal NK/T-cell lymphoma, nasal type, is a rare subtype of non-Hodgkin lymphoma, characterized by a universal association with Epstein-Barr virus (EBV) and disfiguring clinical presentations [1,2,3].

The disease is more prevalent in Asian countries 4. It often affects adults and is more common in men than in women. Most patients with extranodal NK/T-cell lymphoma are of nasal type, which is localized in the upper aerodigestive tract [3]. They commonly present as a nasal mass, nasal obstruction, or nasal bleeding. Other clinical presentations include hoarseness, dysphagia, halitosis, airway obstruction, and dysphonia. Bone marrow involvement is not a common initial presentation.

AIM

Describing a rare subtype of non-Hodgkin's lymphoma and emphasizing the importance of radiotherapy in its treatment.

METHOD

This poster presentation is a case report type, the data were extracted from the patient history registers of our clinic and were analysed accordingly.

CASE PRESENTATION

A 46- years- old female patient, is referred to our clinic in 2019, as a histopathology result from a mass taken in her right orbital region revealed extranodal NK/T cell lymphoma, nasal type. Nasal obstruction, right tear duct obstruction, swelling and deformity around her right eye were noted.

The immunohistochemistry showed **positive markers for CD45+, CD8+, CD56+, with Ki-67 proliferative index around 70%.** Routine biochemical and hematological parameters were as following: ESR 25, hemoglobin level: 12.5 g/dl, platelet count 195, 000, negative Coombs tests, insignificant peripheral blood smear. On abdominal ultrasound no enlarged organs or any enlarged lymph node was noted. The decision to begin three cycles of **DeVIC chemotherapy** protocol was made to be followed with radiotherapy.
After chemotherapy cycles completion, a PET CT was done. High FDG uptake in the left nasal cavity with maximal SUV of 5.7 and both tonsils with maximal SUV of 9.6 were described. The radiotherapy was not carried out due to low levels of FDG uptake in analyzed tissues.
However, in May 2021, her disease **relapses** and she experiences again the same complaints. A biopsy from the mass is repeated and again the histopathology examinations resulted as **Extranodal NK/T cell lymphoma of a nasal type with the following immunohistochemistry findings: CD45+, CD8+ and CD56+.** Head MR described a heterogeneous cystic mass on T2 Flair images in right nasal cavity extending to the ethmoidal and maxillary sinus regions with 38x20mm dimension compressing the surrounding tissues.
In April 2023, our patient was readmitted in our clinic as she had malaise, weakness, and diarrhea. A severe pancytopenia was noted on her complete blood count, to be followed by high ESR rate, increased CRP and procalcitonin levels. Antibiotics, blood products and other symptomatic therapy was given. Fever, convulsions followed clinically. Blood culture, urine culture and tests for COVID 19, Influenza virus A and B were taken. She resulted positive for COVID 19 and was transferred in the Infectious Disease ward. As pancytopenia persisted even after the viral infection was cleared, we repeated a bone marrow biopsy and a secondary myelofibrosis was found histopathologically. Our patient continues to be in a state of disease remission.



Photograph of patient taken with her permission after first time diagnosed with Extranodal NK/T Lymphoma, nasal, type

DISCUSSION

Extranodal NK/T cell Lymphoma is a rare subtype of non-Hodgkin lymphoma. Genetic abnormalities, EBV infection, and tumor microenvironment have been shown to play significant roles in the molecular pathogenesis of extranodal NK/T-cell lymphoma [5,6].

The therapeutic approach of extranodal NK/T-cell lymphoma is based on several factors, such as the age of patients, the extent of disease, potential toxicities, and survivorship.
For this disease the treatment of choice combines radiotherapy with chemotherapy. From our own experience chemotherapy alone is insufficient to ensue disease remission. DeVIC/RT treatment modality was seen to have success in treating this disease state.

CONLUSIONS

From our own experience chemotherapy alone is insufficient to ensue disease remission in extranodal NK/T cell lymphoma. Radiotherapy should be part of treatment regimens no matter the disease stage.

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