Medical Journal of the
Islamic Republic of Iran

Volume 14
Number 4
Winter 1379
February 2001

Original Articles

CLINICAL FEATURES AND TREATMENT OUTCOME IN 26 CASES WITH Ki-1 (CD30) POSITIVE ANAPLASTIC LARGE CELL LYMPHOMA

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ABSTRACT

In order to present the clinical features and outcome of patients with Ki-1 positive lymphoma and also the role of treatment modalities in this type of malignant disease, twenty-six patients with peripheral lymphadenopathy and a biopsy-proven diagnosis of Ki-1 positive lymphoma referring to the Radiation Oncology Department during a seven year period were treated with chemotherapy and radiotherapy according to the stage of the disease and after about 3 years of follow-up the outcome was evaluated.

After an initial complete remission for a few months, most patients in advanced stages and a few cases in early stages developed recurrence for whom chemotherapy was started. The majority achieved remission again. After 3 years of follow up 18 of 26 patients were alive with no evidence of disease.

As the behavior of this lymphoma is related to initial stage of disease rather than to Ki-1 expression, radiation therapy may be an acceptable modality adjunctive to chemotherapy in patients with such lymphomas, particularly in those with localized disease for getting better disease control.
MJIRI, Vol. 14, No. 4, 307-309, 2001.

INTRODUCTION

The Ki-1 (CD30) antigen characterizes a series of non-Hodgkin's lymphoma (NHL) predominantly showing anaplastic large cell morphology and frequently involving lymph nodes, usually of T-cell phenotype,with distinctive morphologic and immunologic features.[1,2]

In this presentation, the clinical manifestations and treatment outcome of 26 patients who have been treated with systemic and/or localized modalities and followed in the Radiation Oncology Department of Shiraz University of Medical Sciences are discussed.

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PATIENTS AND METHODS

During 1991-1997 sixteen males and ten females whose ages ranged from 11 to 57 years presented with peripheral lymphadenopathy who were diagnosed as Ki positive lymphoma. They presented with cervical, supraclavicular, axillary, mediastinal, and abdominal lymphadenopathy. Three cases presented with chest wall mass and ipsilateral axillary lymphadenopathy. The chest wall mass had been excised and reported as soft tissue sarcoma, but after further review and immunohistochemical study Ki-positive lymphoma was confirmed.[3]

Bone marrow aspirations were negative but CSF cytology for one patient was reported to be positive, while she was complaining of severe headache. Only one of

them was symptomatic with high temperature and the others had no constitutional symptoms. No remarkable finding was present in the past and family history of our patients.

Clinical staging showed five patients in stage one (I), seven of them in stage two (II), thirteen in stage three (III) and one in stage four (IV) (Ann Arbor classification).

They were referred to the Radiation Oncology Department for treatment. Chemotherapy was started for all. The regimen that was given was CHOP (cyclophosphamide 600 mg/m^2, adriamycin 40 mg/m^2, vincristine 1.5 mg/m^2, prednisolone 40 mg P.O. for 10 days). Those in stages I and II received 3 courses (each course 3 weeks apart) and when the lymph nodes had regressed, radiation with mantle ports was started. They received 4000 cGy in 5 we
with CNS involvement MBACOD (methotrexate 50 mg, bleomycin 15 mg, adriamycin 50 mg, cyclophosphamide 1000 mg, vincristine 2 mg and dexamethasone 10 mg for 5 days) was started. This case also received radiation to the whole cranioaxis up to 2400 cGy and 180 cGy per fraction in 3 weeks.

RESULTS

All patients' lymph nodes disappeared after one to three cycles of chemotherapy and all cases got complete remission when chemotherapy and radiotherapy were accomplished. Eight cases in stages III and the case in stage IV and three cases in early stages (I & II) developed recurrence within 14 months in the lower jugular lymph nodes, chest wall, axillary area and CNS.

Chemotherapy with BCHOP (bleomycin + cyclophosphamide + adriamycin + vincristine + prednisolone) was started for all of them who had developed recurrence. Nine of the patients regained remission completely and two of them revealed partial response.

The patients were followed for at least three years (7-36 months) and this follow up showed that out of twenty-six patients, eighteen were alive with no evidence of disease after 3 years.

DISCUSSION

Anaplastic large cell lymphoma (CD30 / Ki-1) is a subtype of non-Hodgkin's lymphoma that frequently involves the peripheral lymph nodes, a finding that was present in our patients and also in the literature.[2,4-7]

This type of lymphoma represents a high-grade malignancy with rapid progressive clinical signs and symptoms and a high degree of anaplasia and pleomorphism of malignant cells with frequent mitosis.[2,5,8,9] In the past this type of lymphoma has been confused with solid tumors, including anaplastic carcinoma and melanoma.[10]

Although the majority of cases present with lymphoid involvement, extra-lymphoid (stomach, larynx, brain) involvement is not uncommon.[11,12] This type of lymphoma is considered to be a systemic disease and usually localized treatment can not be helpful for such patients, so systemic treatment in the form of combination chemotherapy with various types of regimens[16-19] has been suggested as the cornerstone of treatment modalities. Radiation therapy as a primary modality of treatment has not been settled[12,13] although we used it as a main modality in our early stage patients. The survival rate of the patients studied is in keeping with literature reports regarding prognosis of high-grade lymphomas.[1,14] The findings suggest that the clinical behavior of this lymphoma is more closely related to initial stage of disease than to Ki-1 expression.[1] Therefore, it can be concluded that radiation therapy may be an acceptable modality adjunctive to chemotherapy in patients with such a type of lymphoma, particularly in those with localized disease for getting better disease control.

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