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COMPARISON OF THE EFFICACY OF 3-WEEKLY CHOP WITH CHOEP FOR TREATMENT OF PATIENTS WITH AGGRESSIVE NON-HODGKIN'S LYMPHOMA.

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ABSTRACT… Objectives: To compare the efficacy of 3-weekly CHOP with CHOEP for the treatment of patients with aggressive Non-Hodgkin's Lymphoma. **Study Design:** Randomized control trial. **Setting:** Department of Medical Oncology, Jinnah Hospital Lahore. **Period:** From January 2016 to June 2016. **Material & Methods:** Conducted on 200 patients of biopsy confirmed aggressive non-Hodgkin's lymphoma. The cases were allocated into two groups by using random numbers table i.e. group A & B having 100 patients each. Group A received CHOP-21 regimen which is defined as cyclophosphamide (750mg/m2 intravenously), doxorubicin (50mg/m2 intravenously), vincristine (2mg i/v) & prednisone (100mg/m2 d1-5 PO). Group B received CHOEP-21 regimen which is defined same as CHOP-21 but with the addition of etoposide 100mg/m2 intravenously for day 1-3. Observation regarding efficacy was including all the number of cases in which complete remission of disease was noted one month after completion of chemotherapy. **Results:** The mean age of the patients in group A was 44.6±13.9 years and in group B was 45.6±11.5 years. In group A, 74 (74%) male and 26 (26%) female patients and in group B, 72 (72%) male and 28 (28%) female patients. In the distribution of patients by complete response after 6 cycles, in group A, 66 (66%) patients had complete response, 30 (30%) patients had partial response, 1 (1%) patient expired, 2 (2%) patients had progressive disease (shifted to salvage therapy) and 1 (1%) patient lost the follow up. In group B, 80 (80%) patients had complete response, 16 (16%) patients had partial response, 2 (2%) patients expired, and 2 (2%) patients lost the follow up. **Conclusion:** It is concluded from this study that viability was accomplished in a greater number of patients treated with CHOEP-21 than those treated with CHOP-21 in the management of patients with aggressive Non hodgkin's lymphoma.

Key words: CHOP, CHOEP, Complete Remission, Efficacy, Non hodgkin's Lymphoma, Partial Remission.

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INTRODUCTION

NHL is the malignancy of the lymphopoietic tissue, which incorporates the lymph nodes, spleen and different organs of the body which are part of body immune system. Most lymphomas begin in kind of white blood cells called Lymphocytes (B & T lymphocytes).[1]

Non hodgkin's lymphoma found in 4.6% of all cancers, being the fifth most common malignancy in females and the 6th in males. The frequency of NHL per 100000 people ascended from 8.8 (1972-1974) to 19.5 (2002-2006) in the United States. NHL has highest incidence rates in United States and the lowest rates are found in eastern and south Central Asia. As per the tumor registry from Punjab it is the second most common malignancy in males and 6th most common in females.[2,3]

Non hodgkin's lymphoma can be categorized by how quick the disease grow (low grade, intermediate grade, high grade). Burkitt's lymphoma and DLBCL are prototype of high grade lymphomas. Presently the universal consensus is on the WHO classification for tumors of haematopoietic and lymphoid system which is alteration of the REAL classification based on

morphology, immunophenotype, genetic and clinical characteristics.[4]

The IPI has been developed to prognostically stratify the patients of aggressive NHL based on pretreatment clinical features which incorporate age, performance status, stage, LDH and number of extra nodal sites involved. Yet, for patients younger than 60 years an age adjusted IPI based on three prognostic factors (stage, performance status and LDH level) has been developed.[5]

MATERAILS AND METHODS

This randomized control trial was conducted on 200 patients of biopsy proven aggressive non Hodgkin's lymphoma at Department of Medical Oncology, Jinnah Hospital Lahore from January 2016 to June 2016. The cases were allocated into two groups by using random numbers table i.e. group A & B having 100 patients each. Group A received CHOP-21 regimen which is defined as cyclophosphamide (750mg/m2 intravenously), doxorubicin (50mg/m2 intravenously), vincristine (2mg i/v) & prednisone 100mg/m2 for day 1-5. Group B received CHOEP-21 regimen which is defined same as CHOP-21 but with the addition of etoposide 100mg/m2 for day1-3 intravenously. Observation regarding efficacy was including all the number of cases in which complete remission of disease was noted one month after completion of chemotherapy.

RESULTS

The mean age of the patients in group A was 44.6±13.9 years and in group B was 45.6±11.5 years. In group A, 74 (74%) male and 26 (26%) female patients and in group B, 72 (72%) male and 28 (28%) female patients. In the distribution of patients by CR after 6 cycles, in group A, 66 (66%) patients had complete remission, 30 (30%) patients had partial remission, 1 (1%) patient expired, 2 (2%) patients had progressive disease (shifted to salvage therapy) and 1 (1%) patient lost the follow up. In group B, 80 (80%) patients had complete remission, 16 (16%) patients had PR, 2 (2%) patients expired, and 2 (2%) patients lost the follow up.

Age (Years)	Group A (n=100)		Group B (n=100)	
	No.	%	No.	%
18-20	7	7.0	1	1.0
21-30	14	14.0	15	15.0
31-40	13	13.0	15	15.0
41-50	29	29.0	27	27.0
51-60	37	37.0	42	42.0
Mean±SD	44.6±13.9		45.6±11.5	

Table-I. Age-wise distribution of patients (n=200)

Efficacy	Group A (n=100)		Group B (n=100)	
	No.	%	No.	%
Yes	66	66.0	80	80.0
No	34	34.0	20	20.0

Table-II. Distribution of patients by complete remission (efficacy) after 6 cycles (n=200)

χ^2 - 4.97 df - 1 P - 0.0258

DISCUSSION

The greater number of the patients with aggressive NHL are around 60 years of age. These patients have more awful toxicities than younger patients.[6] After it was affirmed by the Intergroup Study[7] that CHOP is the Gold standard regimen for high grade NHL, the German High-Grade NHL Study Group chose to explore whether the decrease of treatment interval from 3 weeks to two weeks (CHOP-14), or the potentiation of CHOP-21 regimen to CHOEP-21 by adding etoposide[8], or the blend of two (CHOEP-14) can enhance the result after treatment.

A regimen comprising of a solitary infusion of VCR and 100mg prednisone for one week was prescribed before giving main treatment cycle to enhance the ECOC PS of the patient. But as this treatment which was used before the main treatment was not routinely archived, So no factual information evaluating this could be given. Six session of CHOP-21 and CHOEP-21 regimen were administered in this preliminary trial. In the first CHOP-21 regimen[9], CHOP was given for 3 session post complete remission, bringing about 5 to 8 session for majority of patients. Though we can't suggest that 8 session of CHOP may be superior to 6, As proof from preliminary studies to support this presumption is scanty; to be sure,

this inquiry is at present being explored in the RICOVER-60 trial, where older patients are being randomized to 6 or 8 session of chemotherapy.

The impact of etoposide in older patients is more hard to decide. Though its addition to the CHOP-21 regimen to make CHOEP-21 fundamentally diminished the chances of progression on treatment in contrasted to CHOP-21, it neglected to enhance the outcomes as for the opposite end focuses. Additionally after adding to bi-weekly regimen CHOP-14, the constructive outcome of the bi-weekly regimen was halfway balanced due to the expanded risk of the two fold strengthened protocol in light of the fact that CHOEP-14 leaded to more treatment related mortalities and successive chemotherapy delays. This proposes measurements strengthening past a specific farthest point may not be beneficial rather harmful in older patients.

As indicated by Hryniuk and colleagues[10] CHOP-14 has a relative measurement power of 150% as contrasted CHOP-21 and it is completely because of decreased interval between chemotherapy cycles (ie, a similar aggregate dosages of cytotoxic medications are given in a shorter time frame). This proposes dosage density is the factor in charge of the achievement of CHOP-14, since chemotherapy regimens endeavouring to build measurements power by means other than dosage density have neglected to enhance result in aggressive non Hodgkin lymphoma.[7]

A recent preliminary study demonstrated that long haul treatment results in elderly patients with aggressive lymphomas with CHOP-21, which has been viewed as the standard chemotherapy regimen for aggressive non Hodgkin lymphoma for the last 25 years[7], can be enhanced utilizing "dosage dense" CHOP.

In our study, in group A, 66% patients had complete remission and in group B, 80% patients had complete remission. As investigation of Pfreundschuh et al[11] CHOEP-21 is to be more powerful than CHOP-21 in regards to complete remission (87.6% VS 60.1%), as in our study.

CONCLUSION

It is concluded from this study that viability regarding complete remission was accomplished in a greater number of patients treated with CHOEP-21 than those treated with CHOP-21 in the management of patients with aggressive Non hodgkin's lymphoma.

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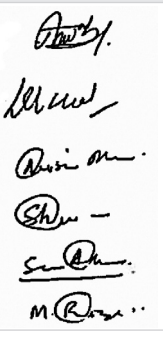
1	Tahir Mehmood	Methodology, Results, Introduction, Results, Conclusion, Discussion.	
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