

3 chemotherapy regimen (range 2–6). 11 of 12 evaluable patients have responded (2 complete response, 4 very good partial response, 5 partial response) corresponding to an overall response rate of 91.6%. Myelosuppression was the major toxicity, however only 3 episodes of inpatient admission for neutropenic sepsis were seen with a total of 62 completed courses. We conclude that Bendamustine as monotherapy or in combination with Rituximab is a highly active regimen in the treatment of low grade lymphoproliferative disorders.

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Chemotherapy with short-term hyperglycemia in the treatment of refractory non-Hodgkin's lymphomas

Z. Olimova*, S. Navruzov, D. Pulatov, D. Abdurakhmanov, K. Tuydjanova. National Research Center of Oncology, Medical Oncology Department, Tashkent, Uzbekistan

Background: the aim of this study was to improve survival of patients with refractory non-Hodgkin's lymphomas. It is stated that under hyperglycemia antitumor effect of chemotherapeutic agents is considerably increased.

Patients and methods: One hundred thirty five eligible patients with refractory, follicular low-grade Non-Hodgkin's Lymphomas were treated using chemotherapy with short-term hyperglycemia. Patients were divided in two groups. First group – 75 patients received 6 course CHOEP+hyperglycemia, second group – 60 patients received 6 course of CHOEP regimen. Hyperglycemia is carried out by injections of 20% solution of glucose in quantity 1200 ml. Chemotherapeutic agents dissolved and entered into each bottle of glucose (400 ml), infusion of glucose is spent at the rate of 140–170 drops to a minute. Insulin is not entered into glucose solution.

Results: Best documented response in first group (75 patients) assessable patients were 22 of 75 (29.3%) complete remission, 33 of 75 (44%) partial remission, and 14 of 75 (18.6%) disease progressions. Six patients died of probable treatment-related causes. With a median follow-up of 58, the 5-year overall survival is 30%. Ten of 30 patients (33.3%) are currently alive and well. In second group (60 patients) were 12 of 60 (20%) complete remission, 20 of 60 (33.3%) partial remission, and 18 of 60 (30%) disease progressions. Ten patients died of probable-treatment related causes. With a median follow-up of 43, the 5-year overall survival is 21%. 6 of patients are currently alive and well.

Conclusions: regimen CHOEP+hyperglycemia are more effective, than the regimen CHOEP. Short-term hyperglycemia does not strengthen side-effects of anticancer agents.

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Clinical pattern of primary central nervous system lymphoma in a developing country

G. Narayanan^{1*}, K. Rajasekharan¹, K. Nair¹, N. Sreejith¹, K. Ratheesan². ¹Regional Cancer Centre, Department of Medical Oncology, Trivandrum, India, ²Regional Cancer Centre, Department of Radiation Oncology, Trivandrum, India

Primary CNS lymphoma is a rare entity. We wish to present our experience with this rare tumor.

Aim: To study the pattern of presentation and treatment results of Primary CNS Lymphoma from a single institute in a developing country.

Material & Methods: Thirty patients with a diagnosis of Primary CNS lymphoma were treated at Regional Cancer Centre, Trivandrum, India during the period 2000–2007. The case records of these patients were studied in detail with respect to their presentation, treatment and survival.

Results: Of the 30 patients, there were 18 males and 12 females. Their age ranged from 26 years to 76 yrs with

a median age of 50 years. The main presentation was with features of raised intracranial tension and hemiparesis. The symptoms were present for a median period of 3 months. The pathologic subtype was predominantly Diffuse large B cell NHL in 26 patients and Burkitt in 3 cases and diffuse small cell in 1. The main sites of involvement were frontal lobe, parietal lobe, frontoparietal temporal lobe, cerebellum and thalamus. Sixteen patients had undergone decompression. Fifteen patients received chemotherapy, of which 9 received single agent High dose Methotrexate, 5 patients received De Angeles protocol. Radiotherapy was given in 23 patients and the dose ranged from 45–55 Gy. At 2 years 10 patients were alive disease free and the longest survival was 100 months.

Conclusions: Primary CNS lymphoma a rare tumor is mostly diffuse large B cell subtype and requires multimodality treatment for disease free survival.

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Efficacy of new short-term high intensive protocol BL-M-04 for adult patients with Burkitt lymphoma

E. Baryakh^{1*}, S. Kravchenko¹, E. Zvonkov¹, A. Kremenetskaya¹, T. Obuhova¹, J. Popova¹, G. Klyasova¹, I. Kaplanskaya¹, A. Vorob¹. ¹Hematology Scientific Center Russian Academy of Medical Science, Hematology and Intensive Care Department, Moscow, Russia

Burkitt lymphoma (BL) is the most aggressive B-cell lymphoid neoplasm, whose growth fraction approximates 100%, with specific chromosomal abnormalities (t(8;14)(q24;q32), rarely – t(2;8)(p12;q32), t(8;22)(q24;q11)). BL is one of the most chemosensitive lymphoid neoplasm. High intensive short-term alternating multiagent chemotherapy regimens are most effective in patients with BL. The major goal of our protocol was greater efficacy due to its intensification and shorter treatment duration. 44 previously untreated patients with BL were eligible for our study (they had specific translocations involving chromosome 8. 30 males and 14 females, mean age 29 years (15–62) participated in the study between August 2003 and December 2009. The treatment was based on high intensive protocol BL-M-04. Stage I, II, III, IV, B-acute lymphoblastic leukemia (L3) were diagnosed in 3, 5, 14, 6 and 16 patients respectively. The new treatment protocol is based on the modified NHL-BFM protocol for high risk patients with a reduced dose of methotrexate from 5 g/m² to 1.5 g/m². We decided to treat patients with BL in 4 courses of chemotherapy (2 induction and 2 consolidation) irrespective of the initial tumor mass. As BL is most sensitive to high dose methotrexate and cytarabine, we used these drugs in the induction phase to achieve to maximize the cytoreductive effect. Courses A and C were used to achieve remission. Doxorubicin was added to course A, and methotrexate to course C. Consolidation courses were similar to induction courses. Hence, we used A and C courses (without course B), intensified with course B drugs, the interval between the courses being 21 days. 40 patients (91%) achieved a complete remission (CR). 38 are alive in the first CR during 36 months (median 2–72 months). Six patients died: 2 patients died due to early relapse, 3 – chemotherapy related complication, 1 – progression. The 5-year disease-free survival was 95% with an overall survival of 86%.

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Emotional adjustment and outcome in advanced non Hodgkin lymphoma patients

P. Heras*, A. Hatzopoulos, M. Mihas, M. Hera, M. Mantzioros. Hellenic Medical Society for the Study of Psychosomatic Problems, Athens, Greece

The aim of this study was to examine the relationship between coping style and emotional adjustment in advanced non hodgkin lymphoma (NHL) patients.

Patients and Methods: In our study were entered 54 advanced NHL patients who were on average 1.6 years post-recurrence with a history of chemotherapy treatment. Data were a cross-sectional analysis of self report and clinical data.

Results: Fighting spirit and being married were associated with less depression and less total mood disturbance. Anxious preoccupation and emotional control were related to higher depression, higher total mood disturbance, and higher avoidance scores. Those who scored highest on depression were those who were high in both anxious preoccupation and emotional control. The presence of social support was associated with better adjustment, but did not contribute to the relationship between coping style and emotional distress.

Conclusions: Results indicate that patients whose coping styles are characterized by emotional expressiveness and a realistic yet optimistic approach to their illness adjust better to a diagnosis of NHL than those who are preoccupied with their illness and who are controlled in their emotional expression.

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Heterogeneity of patients with aggressive non-Hodgkin's lymphomas in terms of quality of life impairment

D. Fedorenko*. National Pirogov Medical Surgical Center, Department of Hematology and Cellular Therapy, Moscow, Russia

Grading of quality of life (QoL) impairment is worthwhile to provide adequate management of lymphoid malignancies. According to the model of grading of QoL impairment, patients with lymphoid malignancies experience no, mild (25% decrease from a population norm), moderate (25–50% decrease), severe (50–75% decrease) or critical (>75% decrease) QoL impairment. The goal of the research was to study heterogeneity of new patients with aggressive Non-Hodgkin's lymphomas in terms of their QoL.

Patients and methods: 114 new aggressive Non-Hodgkin's lymphoma patients were enrolled in this study (male/female – 58/56; stages IIB-IV). The SF-36 and MDASI were used for QoL and symptom assessment.

Results: The majority of patients experienced critical (39%) or severe (13%) QoL impairment. Moderate or mild QoL impairment was observed in 17 and 12% of patients, respectively. 20% of patients had no QoL impairment. The QoL indices differed significantly depending on the grade of QoL impairment ($p=0.002$): 0.52 vs 0.34 vs 0.21 vs 0.15 vs 0.03 in the groups with no, mild, moderate, severe and critical QoL impairment, respectively. The number and severity of symptoms differed depending on the grade of QoL impairment (Gamma correlations 0.6, $p=0.01$). In the group with no QoL impairment less than 50% of patients experienced symptoms; in the vast majority of patients they were mild. On the contrary, in the group with critical QoL impairment all the patients had fatigue; in 80% it was moderate or severe (97.6%). Pain, sleep disturbance, distress and sadness were experienced by the vast majority of patients; in half of them these symptoms were significant.

Conclusion: New patients with aggressive Non-Hodgkin's lymphoma are heterogeneous in terms of their QoL impairment. Identification of the grade of QoL impairment is the starting point in supportive care of aggressive Non-Hodgkin's lymphoma patients.

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Sexual disorders in patients treated for non-Hodgkin lymphoma

P. Heras*, A. Heras, M. Hera, M. Mihos, M. Mantzioros. Hellenic Medical Society for the Study of Psychosomatic Problems, Athens, Greece

The aim of this study was the development an anonymous questionnaire to study the sexual disorders and related problems of patients treated for non hodgkin lymphoma (NHL).

Patients and Method: We studied 22 (19 men – 3 women) NHL patients, age 32–64 years. The cultural level was average: 31% elementary school education, 33% high school education, 3% graduates. All were married. 87% had one or more children. At the time of the study all the NHL patients were disease free and had finished chemotherapy.

Results: In 34% of cases the sexual disturbances were present before the diagnosis. In 10% sexual disturbances worsened, in 34% they arose after chemotherapy. These disturbances were: absence of desire (sometimes 34%, often 8%, always 5%), diminution of desire (sometimes 57%, often 6%, always 4%). Before chemotherapy, 65% of the patients graded their sex life qualitatively good, 31% fair and 4% poor. After chemotherapy, these gradings were: 21% good, 39% fair and 11% poor. 13% were no longer sexually active following chemotherapy.

Conclusion: In the overall view of side effects of NHL treatment, sexual disturbances have a significant role, even though the patients describe an improvement in their affectionate relationship with their partner. Doctors must give greater attention to and discuss with the NHL patient their sexual problems with the realm of side effects in the planning of the treatment for NHL.

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The efficacy of high-dose therapy NHL BFM-90 in adults with anaplastic large cell lymphoma ALK-positive

L. Gorenkova*, J. Vinogradova, S. Kravchenko, I. Lucenko, D. Marjin, E. Ilyushkina, E. Zvonkov, A. Kremenezkaya. Hematology Research Centre, Department of Hematology and Intensive Care, Moscow, Russia

Anaplastic large cell lymphoma ALK-positive (ALCL) accounts for approximately 3% of all lymphomas in adults. It is characterized by the expression of surface antigen CD30, translocation t(2;5)(p23;q35) and the expression of ALK protein, the chimeric gene NPM-ALK product. The best results in treatment of ALCL in children have been achieved by the program NHL BFM-90: the complete response is 95–100% in I–II stage and 80–89% in III–IV stage, the overall survival is 100% and 79%, respectively. The therapy of choice of ALCL in adults is CHOP and CHOP-like courses. Five-year overall survival in adults is 30–68% (stages are not mentioned).

Aim: to evaluate the efficacy of therapy NHL BFM-90 of ALCL in adults.

Methods: the study includes 15 patients. The age of patients was 17–65 years. All the patients had III–IV stage of disease. There was high frequency of extranodal sites of disease (13 of 15 patients). All the patients received therapy NHL BFM-90 (branches K2 and K3 according to a stage of the disease), which was devised for ALCL in children.

Results: The complete response was achieved in 14 patients (93%). The follow-up is 22 months. One patient died of infectious complications during the first cycle of treatment. Two patients relapsed (14%). One of them died of progressive disease and other patient achieved the second remission after allogenic BMT.

Conclusions: The program NHL BFM-90 shows a high efficacy in treatment of ALCL in adults. The frequency of complete remissions in adults is similar to the results in pediatric oncology.