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Hematological delineation of primary non-Hodgkin's lymphomas of the spleen: diagnostic and prognostic significance

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Objective: The purpose of this multicentric study was to determine the specific hematological features of primary splenic stage IV non-Hodgkin's lymphomas (NHL), that could be used as the diagnostic criteria and prognostic factors.

Materials and Methods: Hematological findings were analyzed in 145 patients with primary splenic stage IV NHL (age range 15 - 82 years). According to the N.C.I. Working Formulation and World Health Organization Classification, low-grade (LG) histological types were identified in 107 (75.4%) cases, and high-grade (HG) histological types - in 38 (24.6%).

Results: Bone marrow involvement was revealed in 106 (99.1%) cases of LG NHL, occurring less frequently in HG NHL (20 cases/52.6%). The hematological abnormalities were registered at the stage of bone marrow involvement. Leukemic phase was detected in 89 (83.9%) and 6 (30.0%) patients, respectively. In cases without leukemic phase cytopenias were common. In LG NHL, anemia and thrombocytopenia were found in 13 (76.5%) patients, leukopenia in 12 (66.7%). In HG NHL, these cytopenias developed in 13 (92.9%), 6 (42.9%), and 8 (57.1%) cases, correspondingly. Patients with leukemic phase presented anemia, leukopenia, leukocytosis, and thrombocytopenia with following frequency: 75/84.3%, 20/22.3%, 37/76.5%, and 46/51.7% in LG NHL; 4, none, 2, and 4 of 6 in HG NHL. In LG NHL without leukemic phase the median lymphocyte count constituted 26.5 ± 1.7%, in those with leukemic phase - 70.9 ± 4.2%. In the bone marrow aspirates, the median lymphocyte count was 25.2 ± 2.11% and 51.4 ± 2.78%, respectively. In HG NHL, the median blast cell count in the bone marrow was 7.1 ± 0.91% in cases without leukemic phase, and 33.3 ± 5.97 in those with leukemic phase. Cytopenias, lymphoid cell count in the peripheral blood and in the bone marrow didn't correlate with the spleen size. In LG NHL, median lymphocyte count in the peripheral blood was superior to that registered in the bone marrow, and the nodular bone marrow involvement in the form of follicular structures was predominant (56.0%). In HG NHL, the disseminated microfocal lymphomatous bone marrow infiltration with blast cells was common (78.6%). In LG NHL, the 5-year survival was 70.0% in cases without leukemic phase, being higher ($P < 0.05$) than in cases with leukemic phase (53.0%). In HG NHL, the median longevity was 23.5 and 4.7 months, respectively ($P < 0.01$).

Conclusions: The realized researches pointed out the characteristic hematological aspects of primary splenic stage IV NHL, that might serve as an important diagnostic criteria. In all the histological types of primary NHL of the spleen leukemic phase was determined as a poor prognostic factor.

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Evaluation of cyclic chemotherapy in non Hodgkin's lymphoma patients infected with chronic hepatitis.

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Aim: To evaluate the safety of administering cyclic chemotherapy in patients with Non Hodgkin's Lymphoma and chronic hepatitis.

Patients and methods: An evaluation of patients treated for Non Hodgkin's Lymphoma between 1996 and 2002 was carried out. Patients infected with chronic hepatits B or C were identified. A total of 29 patients had chronic hepatitis B or C in association with Non Hodgkin's Lymphoma. Out of 29 patients fifteen were hepatitis C positive and fourteen were hepatitis B positive. The characteristics of patients were as follows: median age 49 years (range 20-84 years) with 22 males and 7 females. There were six patients each with stage I, II, III disease and eleven patients with stage IV disease. Three patients had liver involvement due to lymphoma. Pathologic subtypes were Follicular variety in 8 patients, Diffuse large cell and its subtypes in 20 patients and Burkitt's like in 1 patient. IPI was low risk in fourteen patients, low intermediate in six patients,high intermediate in seven patients and high risk in two patients. At baseline Pugh-Child's score for grading of severity of liver disease was score A in 19 patients, score B in 7 patients and score C in 3 patients. Twenty four patients received anthracycline based chemotherapy while three patients received oral alkylating agents. Two patients did not receive any chemotherapy. Patients were followed with liver function tests done at baseline, during treatment, and three months after completion of chemotherapy.

Results: The median number of chemotherapy cycles administered was 6 cycles (range 1-8 cycles). Mean baseline values were bilirubin 10.2 micromol/l, ALT 47 IU/l, AST 41 IU/l and albumin 35 g/l. Mean values during treatment were bilirubin 12 micromol/l, ALT 53 IU/l, AST 43IU/l and albumin 33 g/l. Mean values 3 months after completion of chemotherapy were bilirubin 9 micromol/l, ALT 59 IU/l, AST 43 IU/l and albumin 35 g/l. One patient required treatment interruption due to abnormal liver function tests and developed progressive liver failure. This patient had early cirrhosis and Pugh-Child's score C at baseline. One patient died during chemotherapy. The cause of death was unrelated to hepatitis. Values for viral load were not available in all patients so they are not reported here.

Conclusion: Chemotherapy can be safely administered to patients with chronic hepatitis B or C. Based on our observation no dose modification is required in patients with normal liver function tests and absence of cirrhosis at baseline. Patients should be closely monitored with regular liver function tests during the chemotherapy.

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Late toxicity of radiotherapy (RT) and chemotherapy (CT) for malignant lymphomas

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Purpose: To assess the degree of late complications of radiotherapy (RT) and chemotherapy (CT) in patients succesfully treated for malignant lymphomas.

Patients and Methods: Long-term side effects were evaluated in 142 patients who were in a complete remission for 3 years or more after having received 35-45 Gy and/or minimum 3 courses of CT (101 patients). The following investigations were performed: clinical examination, pulmonary function tests, chest X-ray, cardiological investigations including echocardiography, haematological investigations, bone marrow cytology and thyroid function tests.

Results: Reduced performance status and deteriorated general condition was found in 48%, mediastinal or paramediastinal fibrosis in 72% (severe in 7% and moderate in 39%), slight (20%) and moderate (8%) fibrosis of the apical parts of the lung, ventilation disorder in 64%, mostly of restrictive type, ventricular ventilation disorder in 18%, cardiac insuficiency in 11%, pericarditis in 7%, granulocytopenia in 11%, lymphocytopenia in 33%, slight anemia in 24%, aplasia in 60% and hypoplasia in 27% on sternal marrow cytology (previously irradiated) and hypoplasia in 16% on the iliac crest cytology (not irradiated), clinically manifested hypothyroidism in 2 patients, elevated TSH in 27%. 13% of investigated patients received supported therapy.

Conclusion: The fact that more than 50% of patients showed pathological findings signals the need for further detection of late complications of RT and CT and the need for administration of additional supportive therapy.

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Study on prognostic factors and on role of radiotherapy (RT) in patients (pts) with aggressive Non Hodgkin's Lymphomas (NHL) treated with MACOP-B or VACOP-B chemotherapy (CT)

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Background: In advanced high grade NHL chemotherapy is basic treatment modality and the role of RT has not been clearly defined.

Material and methods: A retrospective analysis of treatment results was performed in the group of 120 pts with advanced high grade NHL treated initially with MACOP-B (24 pts) or VACOP-B (96 pts). There were 84 male and 36 female, median age was 52 years (18-72), 95 pts had stage III or IV disease. Radiotherapy (RT) was given to 37 (31%) of patients. Indications to RT included: initial bulky disease of lack of CR after CT. Median dose of 36 Gy in 20 fractions was delivered. End points of the study have been 5 year relapse-free survival (5-y RFS) and overall survival (OS). Kaplan-Maier method and log rang test were used for survival analysis. Multivariate analysis of clinical and therapeutic prognostic factors was performed with Cox's model.

Results: With median follow-up time 32 months 5 year OS and RFS were 46% and 38,5% respectively. After CT CR was obtained in 77 pts, PR in 35, PD in 8 pts (4 of whom died during treatment). Following RT the rates of CT and PR was 70% (84 pts) and 23% (28 pts) respectively. Univariate and multivariate analysis shoved that: stage, extranodal involvement, performance status, LDH level, international prognostic index have