survival and patterns of relapse. The DFP was 65 months for the Tonsillar and 92 for the non-Tonsillar group. The median survival was 86 months for the first, while it has not reached yet in the second group. The most common site of relapse was GI tract in the Tonsillar group (7 out of 21 cases) and CNS in the non-Tonsillar NHL (4 out of 14 cases).

Conclusion: The most common site of HN-NHL is tonsil. The vast majority of HN-NHL are presented in early stages and belong to aggressive histology. Tonsillar NHL have rather different clinical behaviour and should considered as distinctive and separate entity.

1210 POSTER

Primary gastrointestinal lymphoma: Long-term follow-up of 75 patients treated in 2 german centers

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The gastrointestinal tract is the most common site of extranodal lymphomas. We present long-term follow-up data of 75 patients with primary gastrointestinal Non-Hodgkin's lymphoma (GI-NHL) treated in two german centers. The median age was 63 years, range 28–85.60% of patients had high-grade NHL. The median tumor diameter was 9 cm. Major treatment options were limited surgery and/or radiotherapy in localized low-grade GI-NHL with or without chemotherapy. The mainstay of the treatment was chemotherapy in all stages of high-grade GI-NHL. 10-year overall survival rate was 57%. Patients with gastric lymphoma had a better prognosis (10-year survival rate 73%) than patients with lymphoma of other sites of the gastrointestinal tract (10-year) survival rate 44%). Bleeding or perforation rarely occurred during chemotherapy without lethal consequences. Patients with high-grade as well as low-grade gastric lymphoma had an excellent prognosis if they achieved a complete remission at any time of their treatment (10-year overall survival rate >90%). Patients who could not achieve a complete remission had a much worse prognosis 4-year overall survival rate 14%) irrespective of the malignancy grade of their lymphoma. These results suggest that GI-NHL have a different clinical course than their nodal counterparts and the achievement of a complete remission should be a therapeutic goal even in low-grade GI-NHL.

1211 POSTER

Secondary tumors in longsurvival patients with Hodgkin (HDK) disease

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Purpose: We report our experience of secondary tumors in the series of patients seen in our hospital between January 1967 and December 1995.

Methods: We review the medical records of 486 patients with HDK followed in our hospital and the type of secondary tumor, period of presentation and mortality of the group were analyzed.

Results: Forty six second tumors were found. Leukemia and myelodysplastic

Tumor type	N° (%)	<5 years	5–10 years	>10 years	Mortality
Leukemia/MDS	12 (26)	4/4	6/6	2/2	12/12
Lymphoma	7 (15)	1/3	2/2	1/2	4/7
Lung ca	7 (15)	0/1	3/3	1/3	4/7
Breast ca	7 (15)	–	1/1	2/6	3/3
Sarcoma	6 (14)	2/2	2/3	0/1	4/6
Others	7 (15)	1/2	1/3	1/2	3/7
Total	46 (100)	8/12 (35%)	16/18 (36%)	7/18 (38%)	31/46 (67%)

syndrome (MDS) were the most commonly observed (33%) during the period of 10 years following diagnosis; after the 10th year, leukemia and MDS represented only 12% of the total at that period and breast and lung carcinoma reached the 56%.

Conclusion: Prolonged follow-up of HDK patients shows an steady rate of secondary tumors. Breast and lung Ca. screening must be recommended in this group of patients

1212 POSTER

Serum L-Selectin and P-Selectin levels in lymphomas

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Purpose: Adhesion of lymphocytes to endothelium is essential in lymphocyte trafficking. Lymphoma cells represent immortalized counterparts of normal lymphocytes. Altered expression patterns of adhesion molecules appear to be involved in the spread of lymphoid malignancies. In this study, serum levels of soluble L-Selectin and P-Selectin were determined in patients with Hodgkin's (HL) and non-Hodgkin's lymphoma (NHL) and in normal healthy individuals.

Methods: The study group consisted of 17 patients (10 NHL, 7 HL; 11 men, 6 women; median age 35 years, range 19–70) and 15 healthy volunteers (11 men, 4 women; median age 49 years, range 36–67). Serum L-Selectin and P-Selectin levels were determined with ELISA (Bender MedSystems, Vienna, Austria). Data are presented as mean ± SD. Unpaired t-test was used for statistical analysis.

Results: Serum soluble L-Selectin and P-Selectin levels were significantly elevated in patients with both Hodgkin's and non-Hodgkin's lymphoma (table).

Patients (n)	L-Selectin (ng/ml)	P-Selectin (ng/ml)	p
HL (7)	1140 ± 498	875 ± 370	0.0082
NHL (10)	1137 ± 428	610 ± 211	0.0023
Controls (15)	625 ± 159	178 ± 48	

Conclusion: Differential expression of these adhesion molecules may account for distinct patterns of growth and dissemination in lymphomas. The study of adhesion molecule expression and function may allow a better understanding of the malignant behavior of lymphomas.

1213 POSTER

Non Hodgkin lymphoma (NHL) & hepatitis C in Egypt: Prevalence, clinical characteristics & response to therapy in a randomized controlled trial

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Hepatitis C is associated with chronic B cell stimulation, mixed cryoglobulinemia, and is implicated as a causative factor in the development of NHL. Whether the clinical characteristics of HCV associated NHL differ from HCV–ve is not known. The response to therapy has not been compared in the 2 groups, and the value of adding interferon (IFN) to treatment has not been assessed.

Aim: This study aimed at assessing the prevalence of HCV antibodies in patients with NHL in an area of Egypt with high prevalence for HCV infection, and comparing it to HCV antibody prevalence in other malignancies and to normal individuals. We also aimed at assessing the clinical characteristics of HCV associated NHL, and assessing its response to therapy using standard CHOP or CHOP+IFN compared to HCV–ve NHL in a randomized controlled manner.

Patients and Methods: Sixty consenting patients with intermediate and high grade NHL (40 males), 60 patients with other malignancies, and 60 normal asymptomatic matched controls were included. Patients and control sera were tested for anti-HCV by 2nd generation ELISA. Patients with NHL were categorized according to anti-HCV status, and the disease severity and clinical characteristics were assessed. Anti-HCV+ve patients were randomized to receive CHOP or CHOP+IFN 5 MU/day for 5 days with CHOP cycles and tiw in the interim.

Results: Forty two NHL patients were anti-HCV+ve (70%) (33 males) compared to 24 patients (40%) with other malignancies, and 22 controls (36.7%), (both $p < 0.0001$, Risk Ratio 4.03, 95% CI 1.9–8.6). Males with NHL were more likely to be anti-HCV+ve ($p < 0.005$). Clinical characteristics including stage, number of sites involved, bulkiness of disease, B symptoms, bone marrow involvement, and elevated LDH were not different in the 2 NHL groups. Complete remission (CR) was achieved in 61% of HCV–ve patients and 52% of HCV+ves ($p > 0.05$). Twenty HCV+ve patients received CHOP+IFN and 22 standard CHOP. CR was achieved in 60% and 46% respectively ($p = 0.34$). Side effects were comparable in the two groups, but significant liver dysfunction occurred in 1/18 of the anti-HCV–ves, and in 10/22 of the CHOP group and 3/20 of the CHOP+IFN group ($p < 0.05$).

Conclusion: The prevalence of HCV infection in NHL is higher than the general population and patients with other malignancies, and HCV infection