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Incidence and outcome of histological transformation in a single-institution cohort of patients with follicular lymphoma

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Background: Few reports describe the histological transformation of follicular lymphoma into diffuse large B-cell lymphoma with respect to risk factors and subsequent clinical outcome.
Patients and Methods: The database of the Oncology Institute of Southern Switzerland (IOSI) contains information of 281 patients with FL treated from 1979 to 2007, including clinical features at diagnosis, therapeutic approaches, survival patterns, with special reference to the impact of histological transformation on disease course. Median survival times, Kaplan-Meier survival curves and relative survival rates were calculated.
Results: Median age at diagnosis was 58 years (range 21−92 years). Median follow-up time from diagnosis was 10 years in the entire cohort and the median overall survival was 11 years (95% CI, 8.8−14 years). Histological transformation into diffuse large B-cell lymphoma was observed in 39 patients (14%; 95% CI, 10−18%). The median time to transformation was 5 years from diagnosis. Risk of transformation at 5, 10 and 14 years was 13% (95% CI, 9−18%), 16% (95% CI, 12−22%), 27% (95% CI, 19−38%), respectively. Notably, histological transformation was not diagnosed in 30 patients (of whom 13 have died) with a minimum follow-up of 14 years (range 14−29; median, 17 years); the rate of transformation remained at 27% from that point onward. This seems to confirm a recent report that there is a subgroup of patients in whom histological transformation may not occur. The histological transformation was associated with a significantly shorter cause specific survival (CSS) (P = 0.0003), which in the patients who did not experience histological transformation was 74% at 10-years (95% CI, 66−80), as opposed to 44% (95% CI, 26−61) in those with transformation. The median survival after transformation was 3 years. The risk of histological transformation was higher in the group of patients diagnosed before 1989 compared to the subsequent period (P = 0.03). In our series an initial "watch and wait" policy appeared associated with a lower risk of subsequent transformation, in comparison with treatment being initiated at diagnosis (P < 0.05). No other therapeutic approach seems to impact the risk of histological transformation.
Conclusions: Our data confirmed the adverse clinical outcome of FL after histological transformation. Patients undergoing expectant management at diagnosis did not show a higher risk of transformation and the effect of specific therapeutic strategies on histological transformation needs to be further explored.

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DNA reparation genes in genetic and epigenetic susceptibility to Chronic Lymphocytic Leukaemia

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Chronic lymphocytic leukaemia (B-CLL) is one of the most common malignant lymphoid diseases in the western world. An early event in this pathology is the appearance of chromosomal deletions, insertions and translocations generated by Double Strand Breaks (DSB) incorrectly repaired. These repair failures could be due to the existence of genetic and/or epigenetic variations in the genes of this pathway. Consequently, we considered the identification of low penetrance susceptibility alleles and variations in methylation levels of the DSB repair genes, centring mainly on the Non-Homologous NHEJ pathway. We carried out a case-control study, genotyping 89 SNPs in eight genes in the NHEJ pathway (ATM, ATR, XRCC4, XRCC5, XRCC6, XRCC7, LIG 4 and DCLRE1C) in 691 cases and 728 controls. Genotyping was performed by using Illumina Bead Array System (Illumina Inc., San Diego, USA) and the MassARRAY SNP genotyping system (Sequenom Inc., San Diego, CA). Methylation status of the gene promoters in the NHEJ pathway was analyzed by MSP (methylation specific PCR) in 150 cases and 150 controls. In the single-locus analysis, we found a strong association with CLL risk after stringent adjustment for multiple testing in the ATM gene variant, rs228589, situated in 5′region. Allele T was significantly more frequent in cases than in controls (41% versus 36%; odds ratio 1.24; 95% confidence interval 1.065−1.439; P-permutation = 0.048). No significant association was found for 81 other polymorphisms studied. Moreover, we have found association with B-CLL risk for 2 haplotypes in ATM gene: one risk ATM haplotype "TCGTTCTTATCGT" (OR = 1.325; 95% CI, 1.102−1.594; Global P-permutation = 0.04 after permutation testing) and one protective "CCGATCTTGTCGG" (OR = 0.824; 95% CI, 0.707−0.962; Global P-permutation = 0.04). Methylation analysis showed 2 genes differentially methylated. CpG island of LIG4 gene promoter was significantly more methylated in CLL patients, while XRCC5 showed a higher methylation frequency in controls. These results, based on an extensive number of patients and controls, will provide new insights in the development of CLL.

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Clinical and morphological characteristics of primary non-Hodgkin's thyroid gland lymphoma

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Primary thyroid lymphoma is rare disease (2.5−7% of all extranodal lymphomas). The aim of our review were determination of clinical and hystopathologic characteristics of this type lymphoma.
Materials and Methods: 704 patients with primary extranodal non-Hodgkin's lymphomas were observed in CRC of RAMS sins 1983 to 2007. 39 patients (5.5%) were affected by primary lymphoma of thyroid gland. Diagnosis was determined after hemythyreoidectomy or open biopsy of the tumor with following immunohystochemical method investigation.
Results: Median of observation was 60 months. 29 patients (74%) female, 10 (26%) male. Age at time of diagnosis ranged from 15 to 83 years (the median age-51 years). 26 patients (66.7%) was younger 60 age. The association Hashimoto's disease and lymphoma has been found in 4 cases of female (10.2%). Most patients (78%) presented for painless neck edema. Bulky disease were expose in 1/2 of cases (21 patients). Predominance histological type was diffuse large B-cell lymphoma 14 (36%) cases. T-cell lymphoma 2 (5.1%) and Burkitt lymphoma 4 (10%), follicular 1 (2.5%), other B-cell lymphoma 11 (28.2%), MALT type and mantle cell lymphoma 1 (2.5%). In 5 cases histological type was not determined. IV stage of disease was constituted in 10 cases (25%). IE stage was determined in 11 cases (28%), IIE -in 13 (33%), IIIE 13% clinical cases. 14 patients (36%) had B-symptoms. In according to parameters of ECOG: 0−1 mark 48%, 2 23%, 3 28%, 4 were not observed. In according to parameters of International Prognostic Index 18 patients (46%) were attitudes to poor prognostic group and had high risk of progressive disease. 21 (54.2%) patients had favourable prognosis. LDG level exceeds normal index was in 29 cases. Level of Hb less 12 g/l was in 16 cases.
Conclusions: Predominantly lymphoma occurs in female population. 2/3 of patients were younger 60 age. Predominance histological type was diffuse larg B-cell lymphoma. In according to parameters of ECOG: 0−1 mark were 48% cases and 54.2% patients had favourable prognosis.

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Primary breast lymphoma is a rare presentation: patient profile and treatment outcome

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Background: Primary breast lymphoma (PBL) is a rare entity. Many reports showed that mastectomy offered no benefit in the treatment of PBL. However, there is no well-defined treatment strategy.
Aim: This retrospective study was conducted to define the clinical profile, disease pattern, and treatment outcome of PBL.
Patients and Methods: All patients with PBL diagnosed and treated from 1998 to 2008 at Minia oncology center, Ain Shams oncology department, and Monufia oncology department were retrospectively identified in the Cancer centres Database. Patients were included if they were presented with lymphomatous involvement of the breast as the first manifestation of their disease with no previous diagnosis of any type of Non-Hodgkin's Lymphoma (NHL). All patients underwent a staging workup including computed tomography (CT) scan of the chest, abdomen, and pelvis, as well as bilateral bone marrow biopsies
Results: A total of 20 patients were newly diagnosed with PBL. 1 pt was excluded, because she had primary bony NHL and was treated one