

Patients and method: This is a retrospective, unicentric study performed on a cohort of 189 consecutive patients with ALL, treated in our centre during 1983 until 1997. Their evolution portrayed by the OS and EFS at 3 and 5 years respectively was analysed related to the demographic data (age, gender), clinical (risk factors, initial CNS involvement), and biological data (leucocyte count, FAB classification, immunophenotype and cariotype). Special emphasis was given to the treatment: non-standardized therapy before 1990 (group I), ALL-BFM 90 during 1990-1995 and ALL-BFM 95 after 1995 (group II).

Results: Eligible for the study remained 75 of 97 patients from the first group and 88 of 92 from the second group. The rest of the patients either abandoned treatment or they did not follow strictly the standardized protocols. OS was for the first group 29% and 58% for the second group ($p<0,01$). EFS at 3 years was 32% for the first group and 69,3% for the second group, while EFS at 5 years was 24% in group I and 50% in group II ($p<0,01$). The parameters with negative prognostic value turned out to be the L3-FAB morphology and T-immunophenotype; but taking into account the small number of patients with L3 and T phenotype, the treatment remained with the highest predictive value.

Conclusions: Even not taking into account the great number of non-compliant patients of the first group, treatment remained definitely the main factor with impact on the overall prognosis of ALL in our study. The increased trust in the chances of survival as consequence of new therapeutical approaches, significantly improved also the compliance to treatment.

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POSTER

Psychological disorders in children with cancer

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Objective: The objective of this study is to evaluate the prevalence of psychological problems in children after the diagnosis of cancer and its therapy, especially neurosis, behavior problems and hyperactivity. When doctors and nurses are aware of the possible psychological problems children may have, they are able to recognize and treat them early.

Material/Method: We examined 132 children, who were hospitalized in our Department, during the first, third and sixth month after the diagnosis and compared them with 100 healthy children. The questionnaire of Rutter et al. for parents and teachers was used as an instrument for all the groups of children.

Results: Children with cancer had significantly more psychological problems in the third month after the diagnosis, than during the first and the sixth months. They had also more psychological problems than the control group. Specifically, they present with hyperactivity ($P=0,003$), neurosis ($P=0,045$) and behavior problems ($P=0,38$). The disease, the treatment and the painful medical procedures mostly influence their psychological condition.

Conclusion: The prevalence of psychological problems ($P=0,00001$) experienced by children treated for cancer is statistically significantly different than that found in healthy children. Future research should give greater attention to other aspects of life of children treated for cancer and their parents.

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POSTER

Space-time clustering analyses of childhood cancers supports a common infectious aetiology

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Background. In previous studies we demonstrated significant space-time clustering amongst cases of ALL, astrocytoma, soft tissue sarcoma and Wilms' tumour. We hypothesised that there may be a common aetiology particularly between some of these diagnostic groups. The aim of the present study was to test this hypothesis by analysing for cross-clustering between cases in different diagnostic groups.

Materials and Methods. Cases included in the Manchester Children's Tumour Registry during the period 1954-2001 were analysed. Knox tests for space-time interactions between cases were applied with fixed thresholds of close in space, <5km and close in time, <1 year apart, to determine whether there are more pairs occurring in close proximity than expected by chance. Tests were repeated replacing geographical distance with distance to the Nth nearest neighbour [NN] to adjust for population density. N was chosen such that the mean distance was 5km. Data were also examined by a second order procedure based on K-functions to allow for multiple testing and boundary effects. Reference points in time and space were dates and addresses at birth and diagnosis respectively.

Results. All four methods showed statistically significant ($p<0.05$) cross-clustering between cases of HD and astrocytoma, ALL and astrocytoma, and ALL and NHL, based on time and place of birth; between cases of NHL and PNET's, and AML and peripheral neuroectodermal tumours, based on time and place of diagnosis; between cases of ALL and PNET's, and ALL and peripheral neuroectodermal tumours, based on time of diagnosis and place of birth; between cases of ALL and peripheral neuroectodermal tumours based on time of birth and place of diagnosis. There was little evidence of cross-clustering between Wilms' tumours, soft tissue sarcomas and other malignancies respectively.

Conclusions. These findings are consistent with a common infectious aetiology for certain haematological and neural malignancies in children.