Materials and Methods: Primary study aims are to (1) examine prevalence and severity of non-adherence with imatinib treatment in CML/GIST patients; and (2) identify (modifiable) variables that predict or mediate (non-)adherence. 229 patients from 46 centres in Belgium were enrolled in an observational study with assessments as listed in the table.
Results: With last-patient/last-visit scheduled in early May 2007, publication of results is anticipated for late 2007 and 2008.
Conclusions: ADAGIO should increase knowledge about (modifiable) patient-, physician-, disease-, treatment, and system-related determinants of CML and GIST patients' (non)adherence with imatinib treatment.

6020 POSTER

Prevalence of hepatitis C virus infection in B-cell non Hodgkin lymphoma patients in India

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The role of hepatitis C virus (HCV) infection in the pathogenesis of non-Hodgkin's lymphoma (NHL) is controversial. A prior study from our institute (Varma S et al., Gastroenterology 2004; 126: 1498−99) had suggested lack of this association among Indian patients. However, a weakness of this study was the use of serological markers alone to diagnose HCV infection. Hence the present study was undertaken to look for the presence of this association by doing HCV RNA in patients with B-cell NHL. We determined the prevalence of HBsAg, anti-HCV antibodies and HCV RNA in 57 consecutive chemotherapy naive patients with B-cell NHL diagnosed in our institution between January 2004 and June 2005. The control group comprised of 171 patients of non malignant disorders admitted in hospital during the same period. The diagnosis of lymphoma was made by lymph node fine needle aspiration cytology (FNAC), biopsy or bone marrow examination and demonstration of CD 20 positivity. Patients and controls with prior history of jaundice, intravenous drug abuse, Interferon α therapy, corticosteroid therapy and HIV infection were excluded. Antibodies against HCV were detected by a third generation ELISA ('LG HCD 3.0 Plus'; LG Chemical Ltd., Pharmaceutical division, Seoul, Korea), detecting antibodies against three kinds of fusion proteins which are constituents of the HCV nucleocapsid; core 518, E1E2NS4 and NS5. Detection of Hepatitis B surface antigen (HBsAg) was done by direct immunoenzymatic assay of the "sandwich" type ('Bioelisa HBsAg colour', Biokit, S.A., Barcelona, Spain) HCV RNA was detected by nested RT-PCR, involving 3 steps (RNA isolation, c DNA synthesis/Reverse transcription and nested PCR: HCV RNA genotyping). Chi-square test was used to compare the prevalence of HCV infection among patients and controls. Out of the 57 newly diagnosed patients with B-cell NHL enrolled in our study, 37 (64.9%) were males and 20 (35.1%) were females. The mean age was 48.7 years (range 18−80). Using the Ann-Arbor staging, 43 patients were in stage IV, 11 were in stage III and 3 were in stage II at presentation. In the NHL group, one patient tested positive for HBsAg (1.75%) while none tested positive for anti-HCV (0%). This patient had a history of blood transfusion in the past. Among all patients, only one patient tested positive for HCV RNA (1.75%). Among controls, one tested positive for HBsAg (0.58%) and two tested positive for anti-HCV (1.17%). Thus the prevalence of HBV and HCV were not different among patients and controls. We could not demonstrate relationship of any other factors with the presence of hepatitis B or C infection either in cases or controls. In conclusion, this study reconfirmed our earlier observations of no association between HCV infection and NHL in Indian patients.

6021 POSTER

Clinical features and treatment outcome of patients with myeloid antigen coexpression in acute lymphoblastic leukemia: a study of 214 Peruvian patients

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Aim: The purpose of the study was to evaluate the incidence of myeloid antigen coexpression and its prognostic significance in Peruvian patients with acute lymphoblastic leukemia (ALL).
Patients and Methods: A retrospective study was conducted of all ALL cases (between 14 to 57 years old) diagnosed and treated in Neoplasicas Institute (Lima-Peru) between 2002 and 2004, with available immunophenotype data. Presenting features and treatment outcome of 214 ALL patients was analyzed. The patients were similar in demographic, clinical and laboratory features and their treatment outcome. All patients were treated with a uniform treatment protocol (9904, intensive chemotherapy regimen). Myeloid antigen coexpression was defined as more than 30% isolated leukemic cells positive for CD13 and/or CD33 and/or CD15. Median age was 18.5 years. The incidence of myeloid antigen coexpression was 60 per cent.
Results: Presenting features were similar between My+ and My− with regard to age, gender, FAB morphology, white cell count, hemoglobin level, platelet count, mediastinal involvement, presence of lymphadenopathy, and proportion of blast cells detected in the marrow.
We found that only the patients with CD33(+) had difference statistically significant in terms of DFS and OS Vs My(−), DFS was 14% and OS was 18% (p: 0.032).
Conclusion: We observe smallest survival and DFS, stadistically significant among the patient with myeloid associated antigen expression CD33. This study demonstrates that myeloid antigen coexpression is common and constitutes 60% of patients ALL within the Peruvian population and that CD33 can be an adverse risk factor in Peruvian patients with ALL.

6022 POSTER

Examination of risk factors for mortality of patients with haematological malignancies admitted to intensive care

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Introduction: We examined potential risk factors for mortality of patients with haematological malignancy (including lymphomas) admitted to a cancer hospital critical care unit (CCU) over a 2 year period. Several factors that have been identified as poor prognostic factors in this group were considered for analysis, including renal replacement therapy (RRT).
Methods: Data from all patients with haematological malignancy admitted to the CCU over two years were collected retrospectively. In addition to RRT the following putative risk factors for mortality, identified from published data, were studied: mechanical ventilation, neutropenia, microbiological evidence of fungal infection, significantly deranged liver function tests (LFTs) and multiorgan failure. Outcomes were expressed in terms of CCU and hospital mortality. Univariate and multivariate analysis were used to assess whether risk factors were predictors of mortality.

Table 1: Individual risk factors and positive outcome.

Factor	N	Positive outcome	P
All patients	64	36(56.3%)	
Renal replacement therapy	19	10 (52.6%)	0.705
Ventilation	28	14 (50%)	0.375
High CRP	48	26 (54.2%)	0.562
Poor liver function	11	7 (63.6%)	0.589
Neutropenia	32	14 (43.8%)	0.046
Fungal infection	20	10 (50%)	0.498
Multi organ failure	28	14 (50%)	0.375

Results: 64 patients were identified. Overall CCU mortality was 44% after a mean stay of 9 days compared to survivor stay of 14 days. Overall hospital mortality was 64%. Individual disease mortality: Acute leukaemia (N = 24), CCU mortality 42%, Hospital Mortality 67%; Chronic leukaemia (N = 11) CCU mortality 64% Hospital Mortality 81%; Lymphomas (N = 24) CCU mortality 42% Hospital Mortality 50%; Myeloma (N = 5) CCU mortality 20% Hospital Mortality 80%
The significance of the individual risk factors was assessed by comparing the CCU mortality. A positive outcome was defined as a patient leaving CCU alive. Using primary binary regression each variable was considered separately as a prognostic factor for CCU mortality.
Conclusion: CCU mortality rates for patients with haematological malignancy were consistent with previously published. We found that only neutropenia is a significant poor prognostic factor for this population (P value 0.046, Odds ratio 0.354). None of the other risk factors assessed were shown to be significant. Further prospective study may identify other risk factors in this patient group.

6023 POSTER

Tissue microarrays method is useful for immunophenotyping analyses in patients with diffuse large B-cell lymphoma

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Introduction: Diffuse Large B-Cell Lymphoma (DLBCL) is the most common of the non-Hodgkin lymphomas. This lymphoma may de novo

or from the transformation of indolent lymphomas. The technique of gene signature from the DNA arrangement in the matrix identifies two distinct forms of DLBCL – one that expresses genes characteristic of the germinal center (GC) cells and another, which expresses genes which are normally induced during in vitro and in vivo activation of B-Cells. Many of these genes codify proteins which play a role in the transcription factors and thus control the tumor transformation and response to the chemotherapy program. The immunohistochemical expression of these proteins is variable within the subgroups identified by the gene signature. Tissue microarrays (TM) appear to be particularly useful for immunohistochemical characterization of lymphomas and. facilitate comprehensive molecular characterization of a large number of tumours at a time.
Objective: To determine the GC and non-germinal center (NGC) subgroups in accordance with the immunohistochemical expression of CD10, BCL-6 and MUM1 and to evaluate the overall survival (OS).
Cases and Methods: Seventy four untreated pts (median age: 59 yrs: 39M/35F) with DLBCL de novo lymphoma, 51.2% male/48.8% female, median age of 59 years, median follow-up time of 16 months and average of 27.5 months, with 63% presenting nodal disease. In order to facilitate the immunohistochemical study, tissue microarrays were utilized. Antibodies used for immunohistochemistry stains: CD10 (clone 56C6; Novocastra; NCL-CD10–270), BCL-6 (clone GI 191E/A8; Cell Mark; CMC 798) and MUM1 (clone MUM1p; Dako, CA; M7259)
Results: The cases were comprised of 36% DLBCL-CG and 64% DLCBL-NGC, the group GCB was associated with a significantly longer OS ($p = 0.003$).
Conclusions: TM method is useful for immunophenotyping and clinic pathological analyses and it makes diagnosis less labor-intensive at lower cost. The algorithm based on the expression of CD10, BCL-6 and MUM1 identified subgroups with different prognoses.

6024 POSTER

Treatment outcome in patients with advanced-stage Hodgkin's lymphoma after developing drug intolerance to components of ABVD or BEACOPP regimens

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Purpose: Doxorubicin-associated cardiac symptoms and bleomycin-induced pulmonary toxicity as well as hypersensitivity reaction to etoposide. are important side-effects of ABVD or BEACOPP chemotherapy regimens used in patients with advanced Hodgkin's lymphoma (HL). Omission of a particular drug from subsequent chemotherapy or proceeding with another regimen are most common approaches to complete HL therapy. The aim of the study was to estimate the impact of different drugs discontinuation on the outcome in this cohort of HL patients. Patients and Methods: Between 1998 and 2004, 120 pts with advanced HL were enrolled for receiving 6−8 courses of ABVD- or BEACOPP-based chemotherapy followed by radiotherapy on bulky or residual sites. BEACOPP (baseline) was prescribed only to the patients with any of 3 adverse characteristics: (1) lymphoid depletion histology, (2) pericardial effusion, (3) involvement of bones or bone marrow combined with massive splenic lesions. Overall (OS) and relapse-free survival (RFS) in groups of patients, who had doxorubicin, or bleomycin, or etoposide omitted from their regimen, were compared with those ones after full course therapy.
Results: In ABVD group (n = 65), doxorubicin or bleomycin discontinuation was necessary, respectively, in 6.2% and 8% patients. In BEACOPP group (n = 55), etoposide or bleomycin were withdrawn in 5.4% and 9% cases, respectively. The median follow-up was 4 years. The omission of bleomycin had no impact on OS and RFS in the relevant treatment groups. Discontinuation of doxorubicin resulted in 3-year RFS of $50\pm25\%$, compared to $89\pm4.7\%$ in the main AVBD group ($P = 0.109$); OS was, respectively, 100% and $95\pm3\%$. All three patients who had been treated without etoposide, developed relapses and died of HL after 9, 21 and 42 months; OS and RFS in the main BEACOPP group was, respectively, $92\pm4\%$ and $86\pm5\%$ ($P = 0.000$, log-rank test).
Conclusions: Despite the relatively rare occurrence of etoposide intolerance, our data on this small cohort show important role of this drug for favorable OS and RFS after BEACOPP-based treatment. The use of doxorubicin seems to be important for acceptable RFS after ABVD. The crucial point may be an early discontinuation of etoposide and doxorubicin. On the contrary, bleomycin pulmonary toxicity is dependent on cumulative dose and, as a rule, it is registered after 4 to 6 courses when bleomycin may be safely omitted.

6025 POSTER

Toxicity and Response rates to Imatinib in chronic myeloid leukemia with variant translocation – An experience from south India

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Background: The scenario of Chronic myeloid leukemia is changed considerable with the introduction of the novel Bcr-Abl tyrosine kinase inhibitor; Imatinib. Currently we can achieve nearly 100% complete hematological remission, upto 85% cytogenetic remission and 45% of molecular remission with Imatinib in classical t(9:22) translocations. We wanted to evaluate weather we can achieve the same results in variant translocations.
Methods: It is a non randomized, prospective study conducted at a tertiary care cancer center with an approximate attendance of 15,000 new cases. The patients were stratified into those with classical translocation and those with variant translocation. Hematological assessment was done every monthly, Cytogenetics (conventional) every 3 monthly and molecular assessment (PCR for Bcr-Abl) every 6 monthly. CTC version 3.0 was used to assess the toxicity. Differences in the proportions were calculated with the help of Medcalc Version 7.5.
Results: A total of 314 patients with CML were evaluated who were on regular treatment with Imatinib. Out of them 24 patients had varint translocation. The response rates in two groups are listed in the table.
Conclusion: Our findings suggest that CML patients with variant translocations had slow and poorer response to Imatinib, compared to those having classical translocation. The toxicity rates are comparable in both groups.

Response rates and toxicity to imatinib

	Classical (n = 289)	Variant (n = 25)
Mean age	42.6±12.2	41.6±14.9
Percentage of patients in		
chronic phase	86%	80%
accelerated phase	12%	16%
blast crisis	2%	4%
Hematological response		
complete	96%	80%
no response	4%	20%
Cytogenetic response(n = 184)	62%	48%
Molecular response[a] (n = 99)	42%	32%
Grade II/IV toxicity	25%	32%

[a]Reduction of BCR-ABL.

6026 POSTER

Primary follicular lymphoma of the gastrointestinal tract; initial sites and the promise of the rituximab plus CHOP chemotherapy

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Background and Aims: Little is known about the frequency, clinicopathologic characteristics, prognosis, and treatment of primary follicular lymphoma of the gastrointestinal tract (PFLGI). We examined the clinicopathologic characteristics of PFLGI and the potential benefit of the treatment with rituximab plus CHOP chemotherapy (R-CHOP).
Methods: Fourteen patients with PFLGI (10 men and 4 women; mean age, 57.9 years) who visited Hiroshima University Hospital between January 2001 and December 2006 were enrolled in this study. We performed double-balloon enteroscopy (DBE) in 12 PFLGI patients to examine the entire small bowel. Five patients were treated with R-CHOP and evaluated for response after completing treatment.
Results: The frequency of PFLGI was especially high in recent years. PFLGI accounted for 19.6% of primary GI non-Hodgkin's lymphoma from 2005 to 2006, whereas it accounted for only 4.1% from 2001 to 2004. DBE showed new lesions in the third portion of duodenum, jejunum, or ileum in 10 of these 12 patients (83.3%). The endoscopic finding was nodularity of