other chemiotherapy. Although 7/10 pts died after treatment, none of the deaths were related to drug toxicity.
Conclusions: Clofarabine is a well tolerated novel agent in the treatment of pts with multiple relapsed or refractory leukemia, and its activity is not restricted to a specific leukemia subtype. It did not induce the neurotoxicity know from its analogs, and it has been demonstrated to be safe both in single-agent use and in combination with other drugs. Antiemetic therapy is needed to be adjusted in order to avoid the frequent nausea/vomiting side effects.

4119 POSTER

Hypersensitivity reactions and other complications due to L-asparaginase in the treatment of acute lymphoblastic leukemia according to ALL IC 2002 protocol

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Allergic reaction to all forms of L-asparaginase (ASP) is reported in 5−35% pts of various settings. We have analyzed 277 pts with acute lymphoblastic leukemia (ALL) treated according to ALL IC BFM 2002 protocol in the Czech Republic between 2002 and 2007 with the aim to evaluate the frequency, severity and other details of ASP side effects especially hypersensitivity reactions.
All pts received 8×5000 IU/m^2 of ASP in the treatment induction. Those enrolled to standard (SR) or intermediate (IR) risk group were given additional 4×10000 IU/m^2 in late intensification. High risk (HR) pts obtained 2×25000 IU/m^2 in each of 6 cycles of reinduction chemotherapy. E. coli ASP was switched to PEG ASP in case of hypersensitivity reaction, Erwinia ASP or no other ASP form was given to pts who experienced allergic reaction to PEG ASP. All ASP forms were excluded in pts who manifested reaction to Erwinia ASP.
Allergic reaction occurred in 57 pts (20.5%) treated by E. coli ASP, representing 19.8%, 16.8% and 58.9% in SR, IR and HR group respectively. Abdominal pain, nausea, emesis, dyspnoe and skin rush were the most frequent symptoms. Out of 57 hypersensitivity reactions, 35 (61.4%) appeared during the ninth dose of E. coli ASP following 8 weeks interval from preceding exposition. Hypersensitivity to PEG ASP, Erwinia ASP developed 15 pts (26.3%), 2 pts (30%) respectively. Besides hypersensitivity reactions, we documented various other side effects, out of which pancreas dysfunction/acute pancreatitis appeared in 4 (1.4%) pts. Eleven of 277 pts (3.9%) were not given all protocol listed doses of ASP due to related complications.
Hypersensitivity to all forms of ASP occurred in 20−30% pts, the most frequently in HR group which raise the question of treatment efficacy particularly in this group. Pharmacology studies focused on detection of antibodies and silent inactivation of ASP as well as front line use of PEG ASP may help to decrease frequency of allergic reaction and improve its efficacy.
VZ FNM 00064203

4120 POSTER

Childhood cancer pattern: a hospital based cancer registry from a developing country

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Background: More than 80% of world children live in developing countries where adequate medical care is limited. A very few studies have been done in the epidemiology of childhood cancer in the developing countries. Whatever studies have been done in Asia, the incidence of child hood cancer is 3−5% of all cancers. The aim of our study is to see the incidence of childhood cancer and their disease pattern from the hospital based cancer registry.
Material & Methods: During period from January 2002 to December 2008 we analyzed our hospital based Cancer Registry data in Netaji Subhash Chandra Bose Cancer Research Institute, Kolkata a tertiary cancer center in Eastern India. There were total 20568 patients who attended in our institution as Outpatients and Inpatients. Among them 1859 were the childhood age groups (<18 yrs).
Results: In our hospital based cancer registry the patients of childhood age (<18 yrs) group were 9%. The distribution of patient according to the age group (1−5 yrs), (6−10 yrs) and (11−18 yrs) were 365 (19.6%), 901 (48.46%) and 593 (31.89%) respectively. Most frequently childhood cancer were Acute Lymphatic Leukemia 471 (25.33%), Lymphomas 466 (25.06%) (Hodgkin's disease 25%, Non Hodgkin's disease 75%), Round Cell Tumours 279 (15%) (Ewing's Sarcoma 33.33%, Primitive Neuro Endocrine Tumour 26.66%, Rhabdomyosarcoma 22.22%, Neuroblastoma 12.44%), Brain Tumour 183 (9.86%) (Meduloblastoma 91.21%, Astrocytoma 8.78%), Wilm's Tumour 967 (5.2%), Acute Myeloid Leukemia 82 (4.4%), Germ Cell Tumour 77 (4.13%), Osteosarcoma 68 (3.66%), Chronic Myeloid Leukemia 52 (2.8 %), Retinoblastoma 36 (1.93%), Soft tissue sarcomas and other malignancies 48 (2.58%).
Conclusion: The incidence of paediatric cancer in our study was higher as compared to other studies. Children in Indian subcontinent showed a different pattern of cancers with excess of Lymphomas (especially Hodgkin's Lymphoma) and Round cell tumours as compared to those reported in Western Literature.

4121 POSTER

DNA ploidy and proliferative activity in common round cell tumors in children and their value as prognostic indicators

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Background and Aim: Traditional clinico-pathologic criteria are often inadequate to accurately identify, children with small round cell tumors who will have poor response to therapy. Abnormal cellular DNA content (aneuploidy), has been linked to the rate of cell proliferation, and ultimately to prognosis. Flowcytometry (FCM), is a relatively rapid and precise technique, allowing quantitative detection of DNA content and measurement of S phase fraction (SPF), which can be used to classify cases into prognostically different subgroups. This may help in choosing the suitable chemotherapeutic regimens.
The aim of this study, was to evaluate the ploidy status and cells in SPF of common round cell tumors of Egyptian children, using FCM, correlating these parameters with the clinical and biological features and showing their effect on treatment and survival.
Material and Methods: The study included 50 children with round cell tumors, presenting to the National Cancer Institute (NCI), Cairo University. Only patients with complete follow up, full data were included in the study. Patients in each tumor type received the same treatment, and response to treatment was assessed according to the World Health Organization (WHO) criteria. Survival was calculated from the first day of diagnosis until the last date of follow up or death. Nuclear suspension was prepared for each sample, stained with propidium iodide. Measurements were performed using a FACScan flow cytometer and 10.000 cells were acquired for each sample. Results presented as frequency distribution histograms.
Results: In 20 neuroblastoma cases, DNA ploidy and index correlated significantly with progression free survival (PFS) and overall survival (OS). Diploid tumors fare worse than aneuploid ones. Response to treatment significantly correlated to ploidy ($p = 0.019$) and status of patient ($p = 0.006$). SPF correlated significantly to ploidy ($p = 0.03$) and to DNA index. In 15 rhabdomyosarcoma cases, only ploidy significantly correlated with PFS and to OS. DNA index significantly correlated with OS. In 15 Non Hodgkin's lymphoma (NHL) cases, only SPF correlated significantly to PFS.
Conclusion: DNA analysis by FCM is a valuable prognostic factor of great benefit in treatment of neuroblastoma, and can be used to confirm biological entity of tumors. Ploidy is prognostic in rhabdomyosarcoma, identifying high risk patients for treatment failure even with favourable standard criteria. In NHL, SPF may be a useful prognostic marker, only to response to treatment but not to survival.

4122 POSTER

The effect of self care on quality of life of children with acutelymphocytic leukemia

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Introduction: Acute Lymphocytic Leukemia (ALL) is the most common childhood cancer that with current treatment 80% of children survive more than 5 years. But treatment is long term, painful and invasive, So prevention of adverse effects and their effects on Quality Of Life (QOL) is an important problem that confirm need of self care. The purpose of this study was to determine the effect of self care on QOL of children with ALL in Medical centers of Isfahan in 2008.