BM more often occur in cases of central, especially pelvic location of primary lesions (in 4 children of 6) than in cases of peripherally located primary tumor, but this difference is not statistically significant (chi = 2.01 p = 0.18).

Conclusion: It is our opinion medical professionals must be more aware of the possibility of BM in patients with ES (especially in central ES cases) and should conduct the appropriate diagnostic procedures to exclude it.

411 PUBLICATION

About distribution of primary children's brain tumors in Kazakstan

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The study of cancer etiology has shown that ecological trouble, radiation and other factors play a significant role in tumor development of some localization, and first of all, central nervous system. The main purpose of this study was revealing regularities of frequency and distribution of brain tumors in children of Kazakstan (KZ).

During period 1980–1987 on the average 46 children with newly registered diagnosis of brain tumor are revealed annually in KZ. Brain tumors make 10–12% from common pediatric malignancy. Intencive index is 0.9 per 100 000 of children. Territorial distribution of this pathology is irregular. High brain tumor incidence is characteristic for Northeast regions – large industrial centers (East and North Kazakstan, Pavlodar, Karaganda. Minimal rates of incidence were recorded in regions where the agriculture predominates.

Study of pediatric morbidity among various ethnic groups established that ratio of Kazaks and Russians was approximatelly identical.

Thus, the certain regularity in frequency of distribution of primary children's brain tumors in KZ is established. Brain cancer incidence is maximal in industrial developed regions and contiguous to Semipalatinsk nuclear range, and minimal in regions of traditional agrarian direction.

412 PUBLICATION

Retinoblastoma in Kazakstan between 1956–1990

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Purpose: To evaluate potential effect of different factors on retinoblastoma (RBL) incidence.

Methods: Archives of ophthalmological centers of Kazakstan were analyzed. Principal means of the study were epidemiological (descriptive and correlational) methods. The indirect standardization was applied. The differences were evaluated for statistical significance. The level of disease incidence in Kazakstan as published in official reports was taken as a standard.

Results: 363 cases of RBL were registered between 1956–1990 (200 boys and 163 girls). Intensive index was 0.22 + 0.03 per 100 000 of children. For analyzing the disease dynamics during the period 1956–1990 we devided it to shorter periods of five years. Between 1986–1990 intensive index increased 3 times comparing to 1956–1960 and standard – 2.6 times. Incidence among boys and girls was approximately equal. For the period under study RBL dominated among children born in rural areas (in cities 2.89 + 0.62 or 1:34000, in rural areas – 3.69 + 0.63 or 1:26000). But this statistically is not trustworthy. All data taking into account the activity of the sun. Correlation between sun's activity and increase of RBL incidence was established.

Conclusion: Frequency of RBL among children in Kazakstan was analyzed between 1956–1990. This analysis revealed positive correlation between sun's activity and RBL incidence. We should wait the sharp increase of tumor rate in the year of maximum sun's activity.

413 PUBLICATION

Arthroplasty of the knee after resection of a sarcoma in children

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Purpose: The results of osteoplasty of the distal femur and proximal tibia in sarcomas were evaluated.

Methods: 41 patients (21 males and 20 females) aged from 4.5–16 years (mean age 10.64 years) were operated on. There were 34 osteogenic sarcomas, 2 giant cell malignant tumors, 1 chondrosarcoma, 1 fibrosarcoma, 1 reticulosarcoma and 1 Ewing's sarcoma. 29 tumors were situated in the distal femur and 11 ones were situated in the proximal tibia. In 35 cases, boiled down autografts and in 6 cases, allografts were used. 31 patients received polychemotherapy and 10 of them underwent radiation therapy.

Results: 8 patients with osteogenic sarcoma died of lung metastases. In 4 patients, limb amputation was done. Seven patients had graft fractures with subsequent union after conservative therapy and in one case after surgery. The remaining patients show good anatomic, functional and oncologic results.

Conclusion: Osteoplasty plus polychemotherapy for sarcomas was found to be optimal in children.

414 PUBLICATION

3 cases of viral encephalitis in pediatric oncohematologic department in patients at the end of chemotherapy treatment

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Purpose: Infectious complications caused by opportunist microorganisms during intensive chemotherapy remain great problem because of high mortality level. Analysis of their frequency and pts outcome helps in developing adequate supportive management

Materials: 3 patients with oncologic diseases under different phases of chemotherapy (1st with ALL during intensification; 2nd with RMS during the last chemotherapy cycle; 3rd with neuroblastoma on the 1st maintenance CT-cycle) with age of 6 y 6 m, 1 y 8 m and 5 y correspondingly. NMR-imaging procedure was informative in 2 from 3 cases (1st – with diffuse picture and 3rd one – with nodular involvement). Serologic investigations were successful in 1 from 3 cases, but all pts had Herpes Zoster and/or Herpes Symplex clinical manifestations just before or during course of encephalitis.

Results: Therapy by i.v. Acyclovir in dose 500 mg/m^2 × 3/day was used in all three cases, but was effective in 2 pts (1st and 3rd) with fast regression of encephalitic symptoms (convulsions, somnolence, headache, hypothermia). Autopsy in 2nd case revealed diffuse necrotic changes of brain.

Conclusion: Early using of high dose Acyclovir is useful for any case of encephalitic clinical picture in patient under long immunosuppressive therapy.

415 PUBLICATION

Acute lymphoblastic leukemia: Therapy results in one Pediatric Oncohaematologic Center in Ukraine

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Purpose: Introducing of modern treatment strategy for children and adolescents with acute lymphoblaslic leukemia was necessary for improvement the final results of their therapy and giving them chance for surviving.

Methods: Modern Protocol based on BFM-ALL-Strategy was used from January, 94 in Pediatric Oncohaematologic Department in Kiev Regional Oncologic Dispensary for 54 patients with ALL (34 boys and 20 girls), median age of group was 6 y 5 m (range 8 m – 18 y 3 m). Original BFM-Protocol was adopted to the conditions of the country (using of 1 g/m^2 MTX in M-phase instead of 5 g/m^2).

Results: pEFS of this group of patients for 61 month was 0.81 (SD = O.07) with pS = 0.82 (SD = 0.07). Treatment failures: NR-1, ED-2, Death in Rem. – 4, Rel – 3; 2 patients were LFU; 44 were in CCR on 01.01.99.

Conclusions: Dramatic improvement of general therapy results was shown for children with ALL after introducing of modern therapy strategy. Additional consequence of this process was adequate training of staff and achieving experience for further development.

416 PUBLICATION

Cefepim and ceftazidime in combination with amikacin in febrile neutropenia of childhood: Which regimen is more effective?

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The efficacy of amikacin (800 mg/m^2/day IV 1 × 1) in combination with either cefepim (150 mg/kg/day IV tid) or ceftazidime (4500 mg/m^2/day IV tid) in treating childhood febrile neutropenia was studied in 90 patients

prospectively in a randomized fashion at Marmara University Hospital, Department of Pediatrics.

Thirty four (37.8%) female and 56 (62.2%) male patients were recruited. Demographical data and the primary diagnosis of the patients were found to be the same for both of the antibiotic regimen groups. The primary diagnosis of the patients were the like following: 38 (42.2%) acute lymphocytic leukemia, 24 (26.7%) malignant central nervous system tumor, 9 (10%) neuroblastoma, 6 (6.7%) Wilms tumor, 6 (6.7%) rhabdomyosarcoma, 2 (2.2%) Burkitt lymphoma, 2 (2.2%) malignant liver tumor, 1 (% 1.1) Hodgkin's disease and 1 (1.1%) nasopharyngeal carcinoma.

Microbiologically proven febrile neutropenia, fever of unknown origin and clinically defined febrile neutropenia were 24 (26.7%), 56 (62.2%) and 10 (11.1%) respectively. The median days till discharge and days of antibiotic treatment were 9 and 7 days in cefepim group, and 8 and 7 days in ceftazidime group respectively ($p > 0.05$). Median days of defervecence of fever was 2 days for both of the groups ($p > 0.05$). The response to antibiotic regimens at hour 72 was similar for both groups.

Drug modifications were done in 19 (50%) patients in cefepim group, 19 (50%) patients in ceftazidime group, and 38 (42.2%) patients in the overall study group.

Cefepim is a new drag. This drug's usage in childhood febrile neutropenia has to be investigated. According to the preliminary results from our study, it is found to be as efficacious as ceftazidime in childhood febrile neutropenia. Studies done on larger scales are needed in order to determine if one of the regimens is more efficacious than the other.

417 PUBLICATION

Evaluation of neo-adjuvant chemotherapy for efficacy of retinoblastoma treatment

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Purpose: Generally accepted images of retinoblastoma treatment in Stage T2–T4 are surgery (enucleating and exenterating) and further chemoradiotherapy. This protocol doesn't prevent relapses of retinoblastoma which are reached 15–20% on the average. Neo-adjuvant chemotherapy was order for decrease of primary tumor dimensions and prevent from metastasis.

Methods: Neo-adjuvant chemotherapy (Cyclophosphamide – Endoxan, ASTA Medica, – 200–300 mg/m^2 i.m. every other day ' 7, and Etoposid, Bristol Myers Squibb, 100 mg/m^2 i.v. inf. days 1, 3, 5) was performed in 9 patients with retinoblastoma, Stages T2–T4b. One child had metastasis of Tung and mediastinal lymph nodes.

Results: Tumor regression to finish of neo-adjuvant treatment was average 40–50%. There were no relapses during 2 years after the comlex treatment.

Conclusion: Neo-adjuvant chemotherapy with using of Cyclophosphamide and Etoposid in Stages T2–T4b of retinoblastoma promotes to increase efficacy of treatment for retinoblastoma in children.

Soluble tumour markers

418 POSTER

Progression markers in serum of patients with multiple myeloma

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Multiple Myeloma (MM) accounts for 10% of hematological cancer. It is primarily a disease of the elderly that has proved relatively difficult to treat and leads often to a period of ill health associated gradual deterioration, bone pain, repeated infection and death. The responsiveness of MM to Chemotherapy and oral Enzyme therapy (chymotrypsin, trypsin, papain) was demonstrated in early clinical studies (Sakalova et al. Vnitr-Lek. 1994;40:98–103). We compared the remission time of MM patients after chemotherapy and after enzyme + chemotherapy retrospectively. The remission time was ($p < 0.0001$) longer in enzyme treated patients stage II. We determined soluble NF-Receptors p55 and p75, beta2-Microglobulin and IL-6 in the sera of 198 patients with MM stage I–III: before therapy, after chemotherapy (MOCCA/VMCP) or after chemotherapy + enzyme treatment and in 67 age matched healthy volunteers. The serum concentrations of sTNF-Rs and beta2M were significantly ($p < 0.05$) elevated in patients stage II and III before therapy. sTNF-Rs and beta2M correlate ($r = 0.886$). The levels of these serum proteins were lower after chemotherapy and significantly lower after chemo + Enzyme therapy (beta2M: $p < 0.1$; p55: $p < 0.05$; p75: $p < 0.05$).

Enzyme- + chemotherapy prolongs remission times in stage II MM patients and reduces the concentration of progression markers sTNF-R and beta2M.

419 POSTER

CA 15-3 and CA 27-29 serum markers in monitoring breast cancer patients

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Purpose: In order to define the most useful tumor marker panel in breast cancer patients follow-up and in monitoring treatment response, serological levels of CEA, MCA, CA 15-3 and CA 27-29 were evaluated in 220 patients.

Methods: 180 patients were NED after primary treatment, and 40 had metastases at first diagnosis time; in 4 years follow-up 30 out of NED patients relapsed, and were than included in the group of metastatic patients submitted to anticancer therapy. Serum markers were determined every 3–6 months in follow-up patients, as well as before, during and after treatment in metastatic patients.

Results: Overall sensitivity was: CEA 40%, MCA 35%, CA 15-3 79%, CA 27-29 70%, with the highest percentages and mean values in liver (CA 15-3 95%; CA 27-29 72%) and bone (CA 15-3 70%; CA 27-29 70%) localization. Combination of CA 15-3 and CA 27-29 improved sensitivity in bone lesions (85% vs 80%). In loco-regional relapses only association with CEA increased sensitivity (60% vs 40%). CA 15-3 and CA 27-29 values increased on average 3 months before relapse's clinical diagnosis. In treated patients there was a better correlation with clinical courses of disease for CA 15-3 and CA 27-29 (both 81%) compared to the others determined markers.

Conclusion: By our observation the combined serial measurement of CA 15-3 and CA 27-29 appears to be the most favourable both in disease progression diagnosis in treatment monitoring as indicator of therapy effectiveness.

420 PUBLICATION

Effects of navelbine (NVB) on the electrophoretic profile of hyaluronidase (HAase) on Lewis lung carcinoma (LLC)

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Purpose: Hyaluronic Acid (HA) and HAase, its degrading enzyme, are present in extracellular matrix and body fluids. HA degradation produces small fragments, involved in angiogenesis and tumor progression and metastasis. Elevated HA and/or HAase levels have been reported in certain tumors. NVB shows an inhibitory effect on LLC growth. We studied if this effect is partly associated with changes in HAase activity.

Methods: Twelve $C_{57}B1$ mice were transplanted with 2×10^7 LLC cells/mouse. Six of them were treated with 1.0 mg/kg/day of NVB from day 1 to 9. The rest were controls. All mice were sacrificed on the 14th day and serum samples were analysed electrophoretically using a sensitive substrate (HA) – polyacrylamide gel technique. HAase activity was detected by the presence of the unstained (clear) bands on the gel.

Results: NVB produced 73% inhibition of tumor growth and no mortality. The electrophoretic banding pattern of HAase activity in controls exhibited several unstained bands of different molelcular sizes. In NVB-treated mice the absence of the low molecular size fragments decreased the number of unstained bands and subsequently the total activity of HAase.

Conclusion: The absence of low molecular fragments of HA, which are reported to be angiogenic, may relate to LLC inhibition after NVB treatment. Thus, HA and/or HAase altered activity may reflect responsiveness to chemotherapy and may prove to be a useful serum marker in monitoring treatment.