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Hodgkin disease in children – experience in Croatia

K. Josip[1], M. Anicic[1], B. Glavas[1], J. Konja[1]. [1]*Clinical Hospital Centre Zagreb, Pediatric Hematology and Oncology, Zagreb, Croatia*

In the past decade, considerable modifications in the management of Hodgkin's disease in children have resulted in a continuously rising rate of recovery. As the disease responds favorably to the use of cytostatic therapy and radiotherapy, attempts have been made to treat as many affected children as possible with the least possible rate of early and late side effects. Previous therapy is known to have been associated with the development of secondary malignancies in some of the successfully treated children.

Purpose: To describe the experience in the management of children with Hodgkin's disease in Croatia, staged and treated at a single institution.

Patients and Methods: During the 1990–2008 period, 68 children with Hodgkin's disease (36 male and 32 female) were treated at Department of Hematology and Oncology, University Department of Pediatrics, Zagreb University Hospital Center Zagreb Croatia. The patients were administered a combination of cytostatic therapy (OPPA, OEPA and COPP) and radiotherapy (involved field radiation). Patients were allocated to 3 treatment groups (TG) by disease stage: TG1, stages I and IIA, TG2, IIEA, IIB and IIIA and TG3, stages IIEB, IIIB, IIIE and IV. All patients underwent initially 2 cycles of OPPA or OEPA. In TG1 no further chemotherapy was given, patients in TG2 and TG3 received additional 2 or 4 cycles of COPP. The distribution of the patients was: TG1, 24 = 35.3%, TG2, 26 = 38.2%, TG3, 18 = 26.5%. Radiotherapy was administered to the initially involved sites. Standard dosage was 20 Gy.

Results: Remission was achieved in all patients; in six patients with relapse of the disease, highly aggressive cytostatic therapy and radiotherapy was introduced, in four of them in combination with autologous bone marrow transplantation; 3 patients died. 65 patients are still alive in the first or the second remission. There were no severe side effects and no case of secondary malignancies in any of patients.

Conclusion: Combined modality therapy using risk-adapted low dose, involved field radiotherapy + chemotherapy is optimal treatment for the majority of children with Hodgkin's disease.

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Review of children with Wilms tumor in Serbia – single center experience

J. Lazic[1], D. Janic[1], L. Dokmanovic[1], N. Krstovski[1]. [1]*University Children's Hospital, Hematology and oncology, Belgrade, Serbia*

Background: Wilms tumor represents 7% of all malignancies in childhood, occurring most commonly around age of three years. Contemporary protocols ensure high remission rate and long term free survival in nearly 90% of patients.

Material and Methods: We present a study review of 30 patients with Wilms tumor, diagnosed from 1999 until 2009 in Department for hematology and oncology in University Children's Hospital, Belgrade. Age ranged from 4 up to 132 months, median 39 months. In our study group female patients represented 63% of children.

Results: Disease presented in majority of cases as one or combination of following symptoms: enlargement of abdomen (50%), abdominal pain (37%), fever (23%), macroscopic painless hematuria (17%), decreased oral intake (17%), constipation (10%), vomiting (7%), weight loss, malaise or diarrhea in 3% of patients. Duration of symptoms varied from 1 up to 90 days, median 6 days. Preoperative chemotherapy was administered in all children, mostly according to SIOP 93−01 protocol. Pulmonary metastasis were seen in 15%, while hepatic metastasis were diagnosed in 7.5% of patients. Single nephrectomy was performed in 77%; complete kidney removal from one side and partially from other side was done in 8%, while surgical approach as only partially resection of infiltrated kidney was done in 15% of patients. Postoperative complications were noticed in 18% of children, ileus in 11% and Meckel's diverticulum in 7%. Veno-occlusive hepatic disease was diagnosed in 23% of children. According to histopathology, stage 1 was seen in 31%, stage 2 in 21%, as well as stage 3, stage 4 in 17% and stage 5 in 10% of study group. In a group of low and intermediate risk 81% of patients were stratified, while 19% of children were high risk. Radiotherapy was administered in 27% of children. Therapy complications were seen in 23%, as follows: hepatitis B in 11%, chronic kidney disease, neuropathy and tubulopathy in 4% per se. Remission was accomplished in 78% of patients, relapse was diagnosed in 11%, while fatal outcome was noticed in 15% of children. Stem cell transplantation was performed in one child, after relapse of disease.

Conclusion: Nowadays, high remission rate and long term free survival are achieved in nearly 90% of patients by modern protocol strategies. Without formal participation in current protocol event free survival in our study group was 78%, but we presume that better results could be accomplished by becoming a protocol member.

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Effective psychological supporting strategies for the children with brain tumours and their families

J. Malova[1]. [1]*Russian Scientific Centre of Radiology, Psychological Rehabilitation, Moscow, Russian Federation*

Background: The psychological consequences in children with brain tumors depend not only on physical well-being and neuropsychological and neurological effect of decease and treatment. The main etiological factor of possible psychological changes is the psychological state of the parents and their copying strategies.

Materials and Methods: In the group of children with the brain tumors (N = 40, age 6−12 years old) we investigated the anxiety level, self-estimation, body image, aggressiveness and satisfaction with the relations. We used CAT, self-esteem scales, projective drawings. We compared the level of undesirable psychological consequences of decease and treatment experience with the parent-child attitude (Varga-Stolin test) and anxiety level in the mothers of these children.

Results: The high level of anxiety in children significantly correlates with the high level of anxiety in their mothers who stay permanently in the hospital with their children during treatment course. The cooperative attitude isn't significantly better for the psychological well-being in comparison with the symbiotic attitude. Not-effective copying strategies in mothers lead to the similar in children: fixation, autism, anxious-aggressive behavior. After the body-oriented psychotherapy for the mothers who reported the highest level of anxiety (N = !0) the psychological state in children became better in 80% of the cases.

Conclusions: The psychological help should be provided for the family of children with brain tumors and other types of cancer. This work influences not only the psychological state of parents, but secondary effects the psychological well-being of children with cancer decease and quality of their life in general.

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Tolerability of cyclophosphamide and vinorelbine maintenance therapy for rhabdomyosarcoma in a Scottish paediatric centre

J. Sastry[1], D. McIntosh[1], M. Ronghe[2], D. Murphy[1], F. Cowie[2], C. O'Connor[1]. [1]*Royal Hospital for Sick Children, Paediatric Oncology, Milngavie Glasgow, United Kingdom;* [2]*Gartnaval General Hospital, Beatson West of Scotland Cancer Centre, Glasgow, United Kingdom*

Background: Aim of the study is to assess tolerability of cyclophosphamide and vinorelbine in children undergoing maintenance treatment for high risk (HR) or very high risk (VHR) rhabdomyosarcoma.

Methods: A retrospective case note review was undertaken of patients receiving treatment for HR/VHR rhabdomyosarcoma with vinorelbine and cyclophosphamide.

Results: Between 2003 and 2008, 8 patients with rhabdomyosarcoma in HR/VHR groups, ages 22 months to 12 years were identified.

Primary sites affected included middle ear, orbit, nasopharynx, infratemporal fossa, hemithorax and genitourinary system. Histologically 6 were alveolar and 2 embryonal. Only 2 had metastatic disease but none had bone marrow infiltration. All patients had been treated with chemotherapy followed by radiotherapy prior to starting maintenance chemotherapy. This involved 6×4 week cycles of continuous cyclophosphamide ($25\,mg/m^2$) and $3\times$ weekly doses of vinorelbine ($25\,mg/m^2$) per cycle as per EpSSG protocol. All 8 patients completed 6 cycles of treatment but only 2 patients tolerated 100% of planned maintenance treatment. All patients tolerated cycle 1 of vinorelbine at full dose however 6 patients required dose modifications and omissions in subsequent cycles. An average of 14.33 doses of vinorelbine out of a possible 18 were administered (range 9.66−18).

Out of a potential 24 continuous weeks of cyclophosphamide, patients received on average 19.6 weeks (range 16−24). Reasons for dose omission and reduction were due to haematological toxicity, neutropenia in all cases ($<1\times10^9/l$) and thrombocytopenia ($80\times10^9/l$) in 1.

Conclusion: All patients completed 6 cycles of combination maintenance therapy and all completed the first cycle at full dose. Only 2 of the patients completed all 6 cycles at full dose. Dose modifications in the other 6 patients were required due to haematological toxicity, especially neutropenia. We have demonstrated that in our patient cohort, the majority do not tolerate full dose maintenance treatment immediately following high dose chemotherapy and radiotherapy. We speculate this may be due to prolonged myelosuppression with no time for bone marrow recovery after intensive chemotherapy and radiotherapy. A larger international multicentre