

Cancer in Children – The Role of Supportive Treatment

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Cancer represents a major public health problem with an increasing incidence in the last years. Worldwide, 1 of 500 children is diagnosed with cancer, which equals with 130-140/1000000 children, having a higher incidence in the age group under 5 years (1). The incidence and survival in children with cancer depends on the time trends and the geographical variance. According to the international records of cancer such as Automated Childhood Cancer Information System (ACCIS) and Eurocare, the highest incidence among children under 15 years of age, is owned by leukemia – 34%, followed by cerebral tumors 23%, lymphomas – 12%, the rest being neuroblastomas, neuroblastomas and others (2). Due to the introduction of the standard protocols adapted for every malignancy, the total survival among children with cancer increased very much, starting under 20% before 1975 (1) to over 80% in 2014 (2, 3). Therefore, it is very important to establish an early and accurate diagnosis in order to initiate an adequate treatment, the delay of diagnosis determining an increase of the morbidity and mortality (3). The progresses and survival in cancer are mostly a result of the improvements in supportive care. Thus, we recall the correct approach of the child with fever and neutropenia (which is considered an oncologic emergency), leukocytosis, tumor lysis syndrome, superior cava vein syndrome or compression of the spinal cord (3). The supportive treatment is an important part, sometimes decisive in obtaining and maintaining the remission in the patient with cancer. Combined with the specific treatment for cancer, the supportive treatment improves both, the quality of life and the survival. The supportive therapy is focused on the most common symptoms experienced by the patient, such as pain, nausea, vomiting, weight loss, but it also includes the substitution therapy with blood products, nutritional support, anti-microbial treatment, growth factors, cytoprotective therapy and others (4).

Recently a group of investigators from the local Pediatric Clinic analyzed the adjuvant treatments, the substitution therapies with blood, erythrocyte and platelets mass, and anti-infectious treatment, respectively, on a group of 20 children with malignancies of different causes between 2014-2015 (5), in which the highest percentage was owned by acute leukemia 12/20 cases, followed by Wilms

tumors, similar data with those published in the specialty literature (2).

In the study performed by Pap Z et al, the patients with malignant hemopathies benefited by 70 ml/kg erythrocyte mass and 50 U of platelets mass. The patients with solid tumors and lymphoma had aplasia periods less severe than the others with malignant hemopathies. All patients with neutropenia needed antibiotic treatment, anti-fungal, and antiviral due to the infection with varicella zoster virus. In addition, with two exceptions, all children needed treatment with immunoglobulin by vein, liver protective drugs, leukocyte growth factor, and ondansetron associated to chemotherapy (5).

Henry et al underline the fact that children with fever and neutropenia must be treated with antibiotic treatment depending on the risk of these patients to develop bacteremia. The initial treatment is started with a single antibiotic, continuing the antibiotic regimen depending on the culture results and the clinical status (3). In the study of Santolaya et al. in which, they took under consideration the risk factors of developing bacteremia, among the 161 children who were considered with low risk, 78 were treated ambulatory and 71 were hospitalized for treatment. The evolution was favorable in 95% of the cases treated ambulatory and 94% of the cases treated in the hospital, therefore, without a significant difference. Only those with increased risk need admission and adequate treatment (6). In patients with febrile neutropenia, an empirical combined treatment is imposed, which must also include an anti-staphylococcal antibiotic, due to the increased risk of bacteremia with gram-positive germs; the prospective study performed by Cometta et al, which included patients with cancer and febrile neutropenia underline the advantage of these empirical combined regimen (7).

It is well known that the survival in cancer is improved in great amount also due to supportive measures which are applied accordingly to standardized protocols (3).

References

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