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abstract

Infectious Complications of Paediatric Patients with Acute Lymphoblastic Leukaemia During Maintenance Therapy

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Infectious Complications of Paediatric Patients with Acute Lymphoblastic Leukaemia During Maintenance Therapy

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Introduction: Infectious complications are a serious cause of morbidity and mortality in cancer patients especially those with hematological malignancies. Decreasing the risk of serious and long-lasting infections needs detailed information on infection frequency and characteristic features. The type and incidence of infections during acute lymphoblastic leukemia treatment with less intensive chemotherapy i.e. maintenance are not well known. Objective is to assess the epidemiology of infectious episodes and to evaluate infection-related mortality during the maintenance phase of acute lymphoblastic leukemia chemotherapy.

Methodology: A retrospective cohort study of infectious complications for ALL pediatric patients during the maintenance phase of acute lymphoblastic leukemia treatment protocol. The treatment period was divided according to chemotherapy intensity into three phases; the first phase from week (1 to 19), the second phase from week (20 to 68) and the third phase from (69 to the end of treatment). According to treatment phases of maintenance chemotherapy and degree of neutropenia, each

febrile and infectious episode is recorded, analyzed, and categorized as a bacteremia, viral, fungal, clinically documented infection, or FUO. Finally, the outcomes of the infectious complications and infections-related mortality were analyzed.

Results: A total of 1052 infectious episodes were recorded in 146 ALL pediatric patients during maintenance chemotherapy ;(42.1%) in low risk, (50.3%) in standard risk, and (7.6%) in the high risk group of patients. Most infectious episodes (39.16%) occurred during the early phase of maintenance chemotherapy. FUO was the most common episode (36.8%) followed by clinically documented infections (26%), viral (17%), bacterial (16.8%), and fungal infections (3.6%). The majority of the infection episodes (53%) reported during neutropenia.

Conclusion: Most of the severe infections occurred during the early phase of maintenance chemotherapy. Infectious complications represented a significant morbidity factor, notably mortality was low.