

P2226 Breakthrough fever in paediatric leukaemia patients and the risk of invasive fungal infections: a 5-year experience from the Schneider children's medical centre of IsraelSalvador Fischer*¹, Isaac Yaniv¹¹ Schneider Children's Medical Center in Israel, Petah Tikva, Israel

Background: Fever in the context of chemotherapy induced neutropenia (F+N) is common in children who are treated for acute leukemia, although infections are confirmed in only 21-25% of these patients. Breakthrough fever (BTF), which is defined as a new episode of fever (>38 C) after an afebrile interval of 48 hours in a patient with neutropenia is considered dangerous as it may portend a possible invasive fungal infection (IFI). Evidence based guidelines elaborated by expert panels recommend empiric administration of antifungal therapy for BTF, but data on the incidence of BTF in children with acute leukemia is sparse.

The aim of this study is to study the characteristics of BTF in a cohort of children with acute lymphoblastic and myeloid leukemia.

Materials/methods: The medical records of all children diagnosed with acute lymphoid or myeloid leukemia at the Schneider Children's Medical Center in Israel between 2010-2014 were reviewed for episodes of BTF.

Results: 139 children were diagnosed with acute lymphoblastic leukemia (ALL) and 29 were diagnosed with Acute Myeloid Leukemia during this period. Sixty-four episodes of BTF occurred, 44 in children with ALL and 20 in patients with AML. An infection was documented in 34% of patients - 17 (38%) in children with ALL and 5 (25%) in children with AML. Three ALL patients and four AML patients have 2 episodes of BTF.

Seven patients (11%) sustained IFI - 6 children with ALL (3 episodes of candidiasis and 3 of aspergillosis) and one child with AML (aspergillosis).

Conclusions: The incidence of documented infections in patients with BTF in our cohort (34%) is slightly higher than the reported incidence of documented infections in leukemia patients with F+N, and the rate of fungal infections in this special population is high (11%) as compared with that seen in children with fever and neutropenia following chemotherapy (2-7%). These findings support the current diagnostic and therapeutic practices in leukemia patients with BTF.