

## OP22.

**Antibacterial prophylaxis with fluoroquinolones in children with acute myeloid leukemia: impact on viridans group streptococci**

T Bauters, L Staels, G Laureys, L Willems, B De Moerloose. UZ Gent

Background/Objectives

Infections remain an important cause of morbidity and mortality in children with acute myeloid leukemia (AML).

In recent years, ciprofloxacin prophylaxis was introduced in our hospital to reduce the risk of infectious complications. Recent reports however, describe breakthroughs of Viridans Group Streptococci (VGS) bacteremia in children with AML receiving fluoroquinolone (FQ) prophylaxis.

The aim of this study is to investigate the impact of FQ-prophylaxis on bloodstream infections in terms of prevalence and type of isolated species in a pediatric AML population who received FQ prophylaxis and those who did not.

Design/methods

Retrospective study in pediatric patients hospitalized in the period 11/2009-4/2017 and treated according to subsequent international AML protocols. Pharmaceutical and laboratory records were analyzed to determine the use of FQs (ciprofloxacin) and to identify positive hemocultures (HCs). Statistical analysis was performed by Chi square tests.

Results

The study included 26 patients with de novo or relapse AML, representing 195 episodes of hospitalization. FQ prophylaxis was administered in 109/195 episodes (55.9%). HCs were positive in 17 episodes (17/195; 8.7%) and in 13 of these episodes (13/17; 76.5%) FQ prophylaxis was used.

When looking at the species isolated from the 17 HC-positive episodes, a mix of VGS/non-VGS (1/4) or a non-VGS species (3/4) was identified in the patients who did not receive prophylaxis. The 13 HC-positive episodes with FQ (13/17; 76.5%) revealed 11/13 (84.6%) VGS or a mix of VGS/non-VGS and 2/13 (15.4%) non-VGS species ( $p = 0.022$ ).

Conclusion

The use of FQ prophylaxis was associated with a significantly higher number of VGS positive HCs. This prompted us to stop FQ prophylaxis in our pediatric patients. A larger retrospective study to validate these findings is currently ongoing.