Reviewer’s report

Title: Epidemiology of bloodstream infections in patients with acute myeloid leukemia undergoing levofloxacin prophylaxis

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Reviewer: Sari Hämäläinen

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The manuscript "Epidemiology of bloodstream infections in patients with acute myeloid leukemia undergoing levofloxacin prophylaxis" reports the bacterial spectrum and the resistance patterns in a retrospective study in adult AML patients with neutropenia (181 febrile neutropenic episodes in 81 hematological patients). The main finding was the growing fluoriquinolone resistance among E.Coli strains towards consolidation phases. This arises concern about use of levofloxacin as a prophylaxis.

1. Major Compulsory Revisions

Methods: Describe the use of levofloxacin more specifically. At which time point You started to use it (for example, when the neutrophils were under something or at the same time as the patient arrived to hospital) and how long You continue to use it? What was the dosage? Did You use it in induction and consolidation phases, with same dosages?

Results: The sentence "five cases of neutropenic fever were associated with SIRS" is difficult to understand. I assume the SIRS criteria (for example from Bone, Balk, Cerra et al. Chest (6) 1644-55: - Temperature < 36 °C or > 38 °C, HR > 90, RR > 20 or PaCO 2 < 32 , WBC > 12000 < 4000, or > 10% immature (band) forms) are fulfilled in every case of neutropenic fever, not only in five cases. I hope You can either leave this sentence out or open the meaning of it a bit better.

The conclusion in the sentence "Empirical treatment was significantly more associated with fever disappearance in the consolidation phase.." is at least debatable. is it possible that the consolidation phase is lighter treatment than the induction phase? Is it possible that the fever resolves sooner because of (perhaps shorter) duration of deep neutropenia in consolidation phase? I hope You open this observation up in discussion.

Discussion: I would like to see few lines about the general resistance profiles and microbiological surveillance data in Your own hospital during this time interval. How much of the findings in patients blood cultures is explained with levofloxacin usage? What is the proportion of general resistance profile in Your hospital (or in Your ward)?

2. Minor Essential Revisions
3. Discretionary Revisions

Table 2. I ask You to include the number of patients and number of neutropenic fever episodes in both induction and consolidation sections. It is easier to read the table with this information available.

In general, the article includes important data about the prompt development of fluoroquinolone resistance when used prophylactically. It is major concern in whole Europe and also world wide.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.