Reviewer's report

Title: How is ciprofloxacin currently used in children? An audit in a university hospital in Paris

Version: 2 Date: 5 February 2013

Reviewer: Michael B Kays

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Major Compulsory Revisions

1. The study was conducted from December 1, 2007 to May 31, 2008. This was almost 5 years ago. Why was the study stopped after a short period of time? A longer study would have provided more meaningful information.

2. The definitions for classifying cipro use into "alternative" and "unjustified" require additional information. It seems that the authors have considered some cipro use unjustified when the American Academy of Pediatrics recommend its use (e.g., neutropenic fever). Why is neutropenic fever inappropriate by the authors' criteria? Also, it is fairly easy to determine appropriate vs. inappropriate therapy with positive cultures and susceptibility testing. However, a number of kids did not have positive cultures or susceptibility results in the cases deemed "alternative" or "unjustified". Without culture or susceptibility data, how did the authors really know that another agent could have or should have been used instead of cipro?

3. What was the average or median duration of therapy in these 98 patients?

4. The authors do not list any limitations of this study. Please add.

5. The format of the references is not consistent. The authors must read the Instructions for Authors and ensure that the references are listed correctly. For some references, the authors list the month and issue of publication but not in others. The authors name are listed incorrectly in some references. The page inclusion numbers are not listed consistently either.

Minor Essential Revisions

1. There are a number of areas where sentence structure and grammar are quite poor and should be revised. Also, the paper is written in more of a conversational manner and not scientifically. For example, in the Abstract, under Objectives, the authors state that "FQs are more and more used in children with a major risk of increasing emergence of multi-drug resistance." This sentence is written poorly. The phrase "more and more used" could be changed to "FQs are used with increasing frequency in children," or something similar. In addition, it sounds like the authors are saying that the children have a major risk of increasing the emergence of multi-drug resistance. In line 4 of the Methods section in the text, it
is a little confusing because it seems that pediatric patients had to be receiving ciprofloxacin when admitted to be included in the study. Please revise and clarify. In the next sentence, how exactly were prescriptions "monitored" by the pharmacy computer? Is monitored the correct word here or is identified a better term? In the Discussion section, the authors use the term "meta-analyzed". Suggest to say that a meta-analysis was performed.

2. Abstract, Results, line 5 - For P. aeruginosa infections, should the number be 20 rather than 21? Table 2 lists 20 patients with CF were infected with PSA and 1 patient with a mixed infection. Please clarify.

3. Abstract, Conclusion and in Conclusion of the text - The authors seem unsure if a control program will decrease FQ use. Instead of stating that they "think" a control program is warranted, I would suggest they blatantly state that a control program should be developed to control FQ use in kids. Also, I am not sure what is meant by a mobile ID team. Every ID team I have been a part of has been "mobile". Would it be better to use the term antimicrobial stewardship team?

4. Introduction, line 9 - The authors begin the sentence with "Recently" but then provide references that are 9-11 years old. Is this really recent? In addition, this same sentence is a run-on sentence and should be revised. In line 18, please provide the name of the country or countries where ciprofloxacin was approved for use in kids.

5. Methods - Regarding reporting of adverse events, why was voluntary reporting by the patient's physician the only method to ascertain adverse events? If the study is prospective, why did the authors not question that patients themselves? How accurate was the voluntary reporting? How was the appropriateness of cipro use determined prospectively? It is impossible to determine appropriateness before the patient is prescribed cipro. The authors state that cipro use was mandatory "if the culture showed resistance." Cultures do not show resistance. Cultures identify the pathogen and resistance is determined by susceptibility testing - please revise. In this same sentence, the authors mention resistance to all beta-lactams and carbapenems. Structurally speaking, carbapenems are beta-lactams so this is redundant. In the last paragraph of the Methods, how often was voluntary follow-up and monitoring performed in the children who were discharged? Were patients specifically asked about myalgias and arthralgias? If not, why?

6. Results, Types of infections - The definition of healthcare-associated should be listed in the Methods, not the results. Perhaps definitions of community-acquired, healthcare-associated, and nosocomial should be included in the Methods. Were any kids from a long-term care facility? Is this really needed?

7. At the bottom of the first full page in the Discussion section, the authors mention the study by Sermet-Gaudelus et al and then list reference #17. However, in the reference list, this study is reference #19. The authors must double-check and make sure that all reference numbers correspond to the
correct reference in the reference list.

8. What is BCGitis? Is this a word? It doesn't appear in my medical dictionaries.

9. Table 3 - In the line for patient with CF receiving IV cipro, there is only one patient. Is it appropriate to list one number as the min, max, mean, and median? Can you even calculate a mean with 1 number?

10. Table 4a - For justification, what is meant by "only cipro available"? Should this be only cipro susceptible?

11. Table 4 b - Where was the CNS cultured from? Was a true pathogen or contaminant?

Discretionary Revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests.