Reviewer's report

Title: High efficacy in Helicobacter pylori retreatment: seven days with furazolidone, levofloxacin and lansoprazole, in Sao Paulo, Brazil.

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Reviewer: Ala I Sharara

Reviewer's report:

This case series describes the effect of a salvage regimen consisting of levofloxacin, furazolidone, and lansoprazole in the eradication of Helicobacter pylori (H. pylori) after failed prior eradication therapies (ranging from 1 to 3 prior attempts). The paper is reasonably well written and describes a relatively novel regimen.

Major issues:

1. As the authors correctly point out, a second or third line eradication regimen consisting of levofloxacin, amoxicillin and a PPI has been widely tested and meta-analyses have shown it to be reasonably effective particularly when given as a 10-day course. Given the low cost of amoxicillin and the very low rate of primary or secondary H. pylori amoxicillin resistance, it makes little scientific sense to substitute amoxicillin with furazolidone which is more expensive, has more important adverse effects, and has relatively limited in vitro and in vivo studies on H. pylori compared to amoxicillin. The authors should discuss this particular limitation and possibly advocate the use of this promising regimen in patients with penicillin allergy.

2. Levofloxacin was used in a 250 mg twice a day form unlike previous first- or second-line trials that have used levofloxacin as a once daily 500 mg dose. Did levofloxacin exist in the Brazilian market as a 250 mg formulation throughout the study or were the patients instructed to take half a tablet? If so, what data are there on the ability of the pill after cleavage and the exact dose consideration?

3. From table 3, it appears that 15 patients had previously failed one (or more in the case of 2 patients) furazolidone-containing regimen. It is therefore important to examine the eradication rate in such patients compared to furazolidone-naïve patients. Moreover, 3 patients received “other” regimens under the 3 or more prior regimen category. If any of those had received furazolidone in the past, they need to be added to the analysis of the 15 listed above.

4. The high rate of adverse events of 85%, albeit mild to moderate, is concerning and should be discussed further and compared with reported adverse events of other second or third-line eradication regimens.

5. The potential advantage of this regimen over PPI/levofloxacin/amoxicillin is the improved response using a 7-day treatment. This should also be compared with
the high rate of response reported with another promising 7-day regimen of rabeprazole, gatifloxacin, and amoxicillin as second-line therapy (Sharara AI, et al. Helicobacter 2006; 11:231-6)

Minor issues:

1. Table 2 and 4 are unnecessary and should be deleted.
2. Disease duration in table 1 is of little significance or value and should be deleted.

**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.

**Declaration of competing interests:**

'I declare that I have no competing interests'