

Moxifloxacin in acute exacerbations of chronic bronchitis and COPD

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Submitted on Mar 13, 2014. Accepted for publication Jun 30, 2014.

doi: 10.3978/j.issn.2072-1439.2014.07.08

View this article at: <http://dx.doi.org/10.3978/j.issn.2072-1439.2014.07.08>

To the editor,

Liu and colleagues have conducted a systematic review and meta-analysis to evaluate the efficacy and safety of moxifloxacin in acute exacerbations of chronic bronchitis and chronic obstructive pulmonary disease (1). The searched databases were inconsistent. In the *Methods* subsection of *Abstract*, searched databases were PubMed, EMBASE, and the Web of Science; however, in the *Data sources and search strategy* subsection of *Text*, searched databases were PubMed, the Cochrane Central Database of Controlled Trials, and EMBASE.

- (I) For the outcomes of clinical success and bacteriological eradication, it was inappropriate to use odds ratio for estimating the differences between moxifloxacin group and other antibiotics group, since the clinical success and bacteriological eradication rates were very high in both groups. In this case, relative risk should be used;
- (II) In the *Study selection* subsection of *Text*, the authors stated that for this meta-analysis, we considered those randomized control trials (RCTs) that compared the clinical efficacy of moxifloxacin and another antibiotic in patients with AECB and AECOPD. In the *Statistical analysis* subsection of *Text*, the authors said that we computed pooled odds ratios (ORs) and 95% confidence intervals (CIs) from the adjusted ORs and 95% CIs reported in the observational studies. And then, I have to wonder why the authors computed pooled ORs from the observational studies rather than the included RCTs, even the adjusted ORs?
- (III) In the *Statistical analysis* subsection of *Text*, there is no reason to select fixed-effects analysis when heterogeneity is less than 50% by I squared, since under those circumstances tau squared may still be greater than zero and random-effects models may

still give wider confidence intervals. If there is zero heterogeneity (tau squared zero), then the random effects result will equal the fixed effects result;

- (IV) In the second figure of that article, Wilson R 1999 accounts for nearly one-third (29.7%) of the total weight. Also, Wilson R 2012 accounts for nearly half (45.3%) of the total weight in the fourth figure of that article. The authors should performed sensitivity analysis by omitting the trial to test the robustness of their results;
- (V) In the *Publication bias* subsection of *Text*, the authors found evidence of publication bias upon visual inspection of the funnel plot. Strictly speaking, it was incorrect to describe the result like this. The most important one is that the asymmetry of funnel plot does not mean the existence of publication bias. It would be more appropriate that evidence of small trial bias was found upon visual inspection of the funnel plot.

Acknowledgements

Disclosure: The author declares no conflict of interest.

References

1. Liu KX, Xu B, Wang J, et al. Efficacy and safety of moxifloxacin in acute exacerbations of chronic bronchitis and COPD: a systematic review and meta-analysis. *J Thorac Dis* 2014;6:221-9.

Cite this article as: Gu WJ. Moxifloxacin in acute exacerbations of chronic bronchitis and chronic obstructive pulmonary disease. *J Thorac Dis* 2014;6(7):E160. doi: 10.3978/j.issn.2072-1439.2014.07.08