

Meta-Analysis Should be Done in a Normative Manner

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Dear Editor-in-Chief,

We read the published study by Lynch et al. about breast pocket irrigation with antibiotic solution at implant insertion: a systematic review and meta-analysis [1], carefully. However, we found some points worth discussing in the paper.

Firstly, the quality evaluation of the included article is completed by a quality assessment proposed by Downs and Black [2] and modified by Hadgstromer et al. [3]. However, the quality evaluation result of the article was not mentioned in the paper.

Secondly, in the meta-analysis, the author used the random effect model without distinction. So we do not think the conclusion is accurate enough. The use of a fixed effect model and random effect model depends on

heterogeneity in the meta-analysis. If there was no heterogeneity, the fixed effect model can be used. When substantial heterogeneity is observed, the random effect model is utilized. In general, if I^2 of the meta-analysis is less than 50%, heterogeneity is considered acceptable. In this article, I^2 was less than 50%. Therefore, we think that the fixed effect model should be used for meta-analysis.

Thirdly, publication bias will affect the final results of meta-analysis [4], so the recognition and processing of publication bias is an important step in systematic evaluation. However, publication bias was not detected in this meta-analysis. Therefore, we cannot evaluate whether the final conclusion of this meta-analysis is affected by publication bias. According to the requirements of PRISMA [5], publication bias for the meta-analysis should be tested.

In summary, meta-analysis is an important means of evidence-based medicine. It is necessary to carry out meta-analysis according to PRISMA's requirements. And it can guarantee the scientificity and rigor of meta-analysis.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interests.

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