Using GRADE to evaluate the quality of evidence in Chinese systematic reviews

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Background: Lots of Systematic Reviews (SRs) have been produced in China, however, little is known about the quality of evidence they provided.

Objectives: To assess the quality of evidence in Chinese systematic reviews (ChiSRs) using GRADE.

Methods: Mesh terms "meta-analysis" and "systematic review" were used to search the Chinese Biomedicine Literature Database from Jan. 2009 to Dec. 2011 for ChiSRs. Meanwhile, we selected randomly 1:10 batches of records for Cochrane systematic reviews (CSRs) published between 2009 and 2011. We screened the studies searched and selected and included treatment intervention SRs that included only RCTs, assessed the methodology quality, conducted meta-analysis and provided forest plot. The quality of critical outcomes of included SRs was evaluated with respect to five key factors and quality levels were given based on them. Excel and SPSS were used to analyze the data.

Results: The search yielded 2,082 relevant Chinese articles. After applying the inclusion criteria, 543 ChiSRs, including 1,183 critical outcomes, were included to be evaluated using GRADE. 165 (14%) outcomes were rated as high quality, 463 (39%) as moderate, 427 (36%) as low, and 128 (11%) as very low (Figure 1). The quality was downgraded for study limitations (55%), imprecision (33%), inconsistency (29%), publication bias (24%), and indirectness (0.1%). 200 CSRs were selected randomly, and 95 CSRs with 251 critical outcomes were included to be evaluated, and the quality of them is presented in Figure 2. For the proportion of high and moderate quality outcomes, CSRs was higher than ChiSRs (155/251 VS. 628/1183, P=0.008), but there was no significant difference for the proportion of outcomes of very low quality (29/251 VS. 128/1183, P=0.73).

Conclusions: Most evidence in ChiSRs was of moderate or low quality, study limitations was the most factors for downgrading evidence, and the quality of evidence of ChiSRs was lower than CSRs.

Figure 1. Quality of critical outcomes of included Chinese systematic reviews (quality, number of outcomes, proportion)
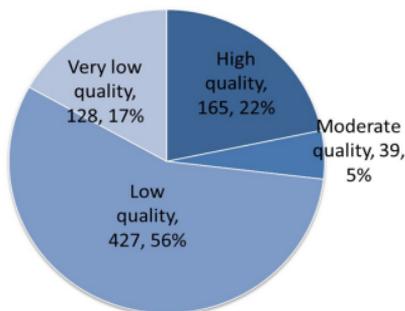

Figure 2. Quality of critical outcomes of included Cochrane systematic reviews (quality, number of outcomes, proportion)