

LETTER to the EDITOR

Same Topic of Systematic Review, Same Conclusion?

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Dear Editor

Now systematic reviews (SRs) have become increasingly popular. Bastian et al (2010) reported that eleven SRs were published per day, but as for one topic, there were more than one SR and sometimes different conclusions. So when we want to find relevant evidence to resolve clinical problems there are many questions we might face.

We conducted surveys on two topics (the effects of garlic, risk and protective factors of gastric cancer) to clarify this condition, potential SRs were found in five databases. LL and TJH independently selected SR according to inclusion and exclusion criteria and extracted data. Disagreements were resolved involved with YKH. We recorded the numbers of SRs for sub-topics and divided these from two topics as the primary outcome. If there were two or more SRs for one topic, the search time and database, the restrictions on study designs and language time of compared SR were analyzed as the secondary outcome.

The results showed that 92 SRs about 38 sub-topics from two topics were included, in which only 75 SRs focused on two or more sub-topics. (1) There were 17 SRs focusing on ten sub-topics about garlic, in which there were two or more than SRs in three sub-topics. Different conclusions were found in one sub-topic about the effects of garlic on serum total cholesterol(TC), which there were different inclusion criteria on study designs in two SRs. The first SR included both parallel and cross-over randomized controlled trials (RCTs) in English and German, but the second SR only included parallel RCT in English. The first SR excluded three RCTs according to its pre-specified criteria, which were included in the second SR. Because of these three RCTs, the effects of garlic on TC from two SRs were contentious. (2) There were 19 SRs focusing on four sub-topics about the relationship between *Helicobacter pylori* infection and gastric cancer(GC), different conclusions were not found. There were 56 SRs for 24 topics about the relationship between the environment factors and GC, in which there were 44 SRs for 11 topics. Different conclusions were found in the relationships between antioxidant intake, non-steroidal anti-inflammatory drugs use, green tea consumption and gastric cancer risk. Because the different inclusion criteria about study designs, different search time, different database, and some mistakes in 13 SRs.

From our survey, (1) we found that four of 38 sub-topics were not consistent. The reasons for different conclusions were different search time, different languages restrictions, and different study designs in the inclusion

criteria, at the same time. Some mistakes could make different SR include different studies, such as inaccurate study search, crude study selection process, and different statistic methods. So actions must be taken to avoid different conclusions about the sub-topic. (2) 92 SRs for 38 sub-topics, which means two or more groups did the same work. If we used the data calculated by Dr Allen (Allen et al., 1999), the mean total number of hours to conduct a SR is 1139 (median, 1110) hours, we could imagine how much time were wasted. So actions must be taken to avoid unnecessary waste. All SRs should be updated, regardless of Cochrane SRs or non-Cochrane SRs. Cochrane SRs were deemed to be updated regularly, but non-Cochrane SRs is very difficult in updating process. How could we manage it? It reminds us to think about some actions, such as updating non-Cochrane SRs in their journal websites.

References

- Allen IE, Olkin I (1999). Estimating time to conduct a meta-analysis from number of citations retrieved. *JAMA*, **282**, 634-5.
- Bastian H, Glasziou P, Chalmers I (2010). Seventy-five trials and eleven systematic reviews a day: How will we ever keep up? *PLoS Med*, **7**, e1000326.

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