Searching Additional Databases Except PubMed Are Necessary for a Systematic Review

To the Editor:

We enjoyed reading the article by Sonja et al where they had analyzed the occurrence of new diffusion-weighted imaging (DWI) lesions after carotid angioplasty and stenting (CAS) or carotid endarterectomy (CEA).1 However, we would like to add some cautionary words.

The authors stated that they had performed a systematic review and they searched PubMed from January 1990 to June 2007. However, this systematic review was based solely on English articles, thus a lot of non-English studies may have been missed. Meanwhile, it has been emphasized that PubMed (including MEDLINE and Pre-MEDLINE) alone cannot be enough for literature searches.2 Moreover, the COCHRANE guideline demands that literature search should include all the articles matching the eligible criteria no matter the language, journal influence and sample size.3 Previous researches assessing different electronic databases have demonstrated that combining more databases yields greater coverage of possible articles.4 For example, EMBASE.com provided twice as many citations as PubMed per search and provided greater coverage of total retrieved citations.5

Therefore, in an effort of comprehensive search, particularly for performing systematic review, a combination of multiple databases searches would yield more articles than PubMed alone. So, we have to raise our concern on the comprehensiveness of the article. From our experience, a much more comprehensive search should include PubMed, EMBASE.com, Science Citation Index, Cochrane Controlled Trials Register, the Cochrane Library, SCOPUS and certain specialty databases. An exhaustive literature search for a systematic review should include almost all of these databases and related “gray literature”, web searching and hand searching of the mainstream journals in the discipline.

To summarize, we should gain access to all relevant studies that help us in decision-making for management of our patients and try to avoid only mentioning studies indexed in an electronic database with a language we are most familiar with. We should remember that up-to-date systematic reviews represent the highest level in the hierarchy of evidence.3 Thus, a more extensive literature search is mandatory before the conclusions in the systematic review can be put into clinical practice.

Disclosures

None.

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