

LETTERS TO EDITOR

About the Article Entitled “Transplantation of Cryopreserved Teeth: a Systematic Review”**To Editor,**

We read with interest the article entitled “Transplantation of cryopreserved teeth: a systematic review” (Osathanon, 2010). Although the author is to be congratulated for his systematic approach to cryopreserved tooth transplantation (CTT), we would like to draw your attention to some technical limitations of this review.

Firstly, evidence-based medical practice (EBMP) mainly comprises 4 steps: (1) formulation of a clear clinical question from an “individual” case, (2) compilation of relevant clinical studies that are the “current best evidence”, (3) critical appraisal of the quality, validity, and usefulness of the studies retrieved, and (4) implementation of findings in the case of the “individual” patient and generally in “routine clinical practice” (Slim 2005; Bhandari and Giannoudis, 2006). Identification and critical appraisal of the evidence, therefore, lies at the heart of EBMP. Unfortunately, Osathanon did not clearly stratify the included primary articles according to the hierarchy of evidence. *In vitro* and *in vivo* study results were mixed with clinical evidence. The best evidence of each subtopic is unclear. Mixing the evidence can mislead readers to prematurely include CTT in clinical practice. This is considered as the major drawback of this review. Many, including the Cochrane Collaboration, discourage an inclusion of different study types to address a specific question and generate a single summary estimate (Moher *et al.*, 2007; Wille-Jørgensen and Renehan, 2008).

Secondly, it is known that electronic searching can retrieve most of the relevant randomised controlled trials (RCTs) in English, and there is no influence of language restriction on the main outcome of most systematic reviews (Pitak-Arnnpot *et al.*, in press). Our systematic review on management of osteo-radionecrosis of the jaws showed that adding the literature in French and German was unlikely to change the study findings (Pitak-Arnnpot *et al.*, 2008; 2010b). However, PubMed alone cannot locate over half of dental RCTs (Türp *et al.*, 2002) and German oral-maxillofacial surgery RCTs (Schulte *et al.*, 2004), and approximately 40% of the articles indexed by Embase (Zlowodzki *et al.*, 2006). This emphasizes the importance of manual searching, the use of multiple search engines, and inclusion of primary studies in multiple languages. Analyzing all relevant databases, including the “grey” literature (meeting proceedings, symposiums, abstracts, dissertations), and contacting experts in the field are also recommended (Pitak-Arnnpot *et al.*, 2010a; in press).

Thirdly, it is recommended that the author(s) follow the guidelines for reporting of RCTs or systematic reviews (*e.g.* CONSORT, PRISMA) during the manuscript preparation. A flow diagram is essential to show journal readers the methods or results of the study (<http://www.prisma-statement.org/statement.ht>, <http://www.consort-statement.org/consort-statement/13-19---results/>). All of this information can be simply presented by a flow diagram. Hence, we recommend adding a flow diagram to present the number of hits in

PubMed, the number of primary articles included, the number of the added articles derived from the manual searching, and the final hierarchy of each included article. It is also interesting if the author does additional searching using other search engines such as Embase or Cochrane Library or Google Scholar, and compares the results with the search using PubMed. This would strengthen the scientific integrity of his systematic review.

Taken together, the Osathanon's article should be interpreted with caution. For details on pitfalls and limitations of EBMP, please refer to our previous publications (Pitak-Arnop *et al.*, 2008; 2010a; in press).

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