

Submit a Manuscript: http://www.wjgnet.com/esps/ Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx DOI: 10.3748/wjg.v21.i30.9189 World J Gastroenterol 2015 August 14; 21(30): 9189-9208 ISSN 1007-9327 (print) ISSN 2219-2840 (online) © 2015 Baishideng Publishing Group Inc. All rights reserved.

META-ANALYSIS

Antioxidant therapy in acute, chronic and post-endoscopic retrograde cholangiopancreatography pancreatitis: An updated systematic review and meta-analysis

Maziar Gooshe, Amir Hossein Abdolghaffari, Shekoufeh Nikfar, Parvin Mahdaviani, Mohammad Abdollahi

Maziar Gooshe, Amir Hossein Abdolghaffari, Mohammad Abdollahi, Department of Toxicology and Pharmacology, Faculty of Pharmacy, and Pharmaceutical Sciences Research Center, and Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran 1417614411, Iran

Amir Hossein Abdolghaffari, Pharmacology and Applied Medicine, Department of Medicinal Plants Research Center, Institute of Medicinal Plants, ACECR, Karaj 31375369, Iran

Amir Hossein Abdolghaffari, International Campus, ICTUMS, Tehran University of Medical Sciences, Tehran 1417614411, Iran

Shekoufeh Nikfar, Department of Pharmacoeconomics and Pharmaceutical Administration, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran 1417614411, Iran

Parvin Mahdaviani, Department of Pharmaceutics, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran 1417614411, Iran

Author contributions: Gooshe M and Abdolghaffari AH contributed equally to this paper; Gooshe M reviewed data and drafted the manuscript; Abdolghaffari AH prepared the bibliography, collected data and edited the manuscript; Nikfar S conducted the meta-analysis, reviewed the data and the manuscript; Mahdaviani P prepared the bibliography, collected data and prepared the tables; and Abdollahi M conceived the study and edited the manuscript.

Conflict-of-interest statement: The authors declared no conflict-of-interest.

Data sharing statement: No additional data available.

Open-Access: This article is an open-access article which was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/

licenses/by-nc/4.0/

Correspondence to: Mohammad Abdollahi, PhD, Professor, Faculty of Pharmacy, and Pharmaceutical Sciences Research Center, and Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran 1417614411, Iran. mohammad@tums.ac.ir Telephone: +98-21-64122319 Fax: +98-21-66959104

Received: March 12, 2015 Peer-review started: March 13, 2015 First decision: March 26, 2015 Revised: April 15, 2015 Accepted: June 15, 2015 Article in press: June 16, 2015 Published online: August 14, 2015

Abstract

AIM: To investigate the efficacy and adverse effects of antioxidant therapy in acute pancreatitis (AP), chronic pancreatitis (CP) and post-endoscopic retrograde cholangiopancreatography pancreatitis (PEP).

METHODS: PubMed, Scopus, Google Scholar, Cochrane library database, and Evidence-based medicine/ clinical trials published before August 2014 were searched. Clinical and laboratory outcomes of randomized trials of antioxidant therapy in patients with AP, CP and PEP were included. The methodological quality of the trials was assessed by the Jadad score based on the description of randomization, blinding, and dropouts (withdrawals). The results of the studies were pooled and meta-analyzed to provide estimates of the efficacy of antioxidant therapy.

RESULTS: Thirty four trials out of 1069 potentially relevant studies with data for 4898 patients were

