Efficacy of vitamin and antioxidant supplements in prevention of bladder cancer: Meta analysis of randomized controlled trials

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This meta-analysis aimed to investigate the efficacy of vitamin and antioxidant supplements in the prevention of bladder cancer as reported by randomized controlled trials (RCTs). We searched PubMed, EMBASE and the Cochrane Library in April 2015. Two of the authors independently reviewed and selected eligible RCTs, based on pre-determined selection criteria. Out of 180 articles searched from three databases and relevant bibliographies, 14 RCTs were included in the final analysis. In a fixed effect meta-analysis, there was no efficacy of vitamin and antioxidant supplements in the prevention of bladder cancer (relative risk (RR), 1.03; 95% confidence interval (CI), 0.91-1.16; I²=43.4%). Overall, there was no preventive effect of these supplements in the subgroup meta-analyses by various factors. Among the subgroup analyses by type of supplements, beta-carotene supplementation alone was marginally increased the risk of bladder cancer (RR, 1.44; 95% CI, 1.00-2.09; I²=0.0%; n=3). The current meta-analysis of RCTs found that there was no clinical evidence to support the efficacy of vitamin and antioxidant supplements in the prevention of bladder cancer.

Biography

Seung-Kwon Myung has received his MD from Seoul National University College of Medicine and has completed his PhD in Family Medicine from the same university. He is an Associate Professor of Graduate School of Cancer Science and Policy, National Cancer Center, Korea. He has published 63 papers in reputed medical journals and served as an Editor-In-Chief of the Korean Journal of Family Medicine. His research specialty is meta-analysis and his research areas are cancer prevention and food, specifically the efficacy of vitamin supplements and functional foods on health.

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