Digestive and Liver Disease 51 (2019) 749–752

Contents lists available at ScienceDirect

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld

Correspondence

Statin use and pancreatic cancer: A risk assessment

Dear Editor,

Archibugi et al. conducted a meta-analysis to clarify the association between statin use and pancreatic cancer [1]. Thirteen case-control studies, 9 cohort studies, and 5 randomized controlled trials (RCTs) were used for calculating effect size. The pooled odds ratio (OR) (95% confidence interval [CI]) of statin use for pancreatic cancer was 0.70 (0.60–0.82). But the significance was only recognized in the regions of Asia and Europe, as well as in males and atorvastatin use. I have some concerns about their study.

First, Zhang et al. also conducted a meta-analysis to clarify the association between statin use and pancreatic cancer [2]. The pooled relative risk (RR) (95% CI) of statin use for pancreatic cancer was 0.84 (0.73–0.97). However, long-term statin use and lipophilic statin showed no significant association with pancreatic cancer. Although statin use has a protective effect against pancreatic cancer, sensitivity analyses show that further studies are needed for an accurate estimate to verify the association.

Second, Archibugi et al. included their case-control study [3] in their meta-analysis. This case-control study evaluated the concomitant effect of aspirin and statin uses. As against their non-use, ORs (95% CIs) of exclusive statin and aspirin uses for pancreatic cancer were 0.51 (0.32–0.80) and 0.64 (0.40–1.01), respectively. In addition, the OR (95% CI) of overall statin use for pancreatic cancer was 0.61 (0.43–0.88), and concomitant statin and aspirin use did not reduce the risk compared to statin use alone. There was a dose-dependent inverse association between statin use and pancreatic cancer, and a meta-analysis with dose-response relationship should be conducted.

Finally, the severity of dyslipidemia should be considered in the analysis. Wang et al. reported that the pooled RR of serum total cholesterol for pancreatic cancer showed no significance, although dietary cholesterol was significantly associated with an increased risk of pancreatic cancer [4]. Chemoprevention or antitumor mechanism of statin for pancreatic cancer should be determined by further studies [5].

Conflict of interest

None declared.

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25 January 2019

https://doi.org/10.1016/j.dld.2019.02.011

Statin use and pancreatic cancer: a risk assessment. Authors? reply

Dear Editor,

We appreciate the interest of Dr. Kawada in our paper reporting the results of a meta-analysis on statins reducing the risk of pancreatic cancer [1].

Regarding the first point, we understand he has concerns about our results as, in another recently published meta-analysis, Zhang et al. [2] report no significant risk reduction with long-term use of statins and use of lipophilic ones. Nevertheless, also in our study we performed a subgroup analysis for length of use observing no significant association with risk of pancreatic ductal adenocarcinoma (PDAC); the analysis was conducted including, as by Zhang et al., only the 7 studies reporting this datum (for a final population of about 420,000 patients compared to the total of 5 millions). Furthermore, all studies employed different definitions for long-term/short-term use and those results might therefore be not reliable. Concerning the use of lipophilic statins, in our study we performed a subgroup analysis for atorvastatin (a lipophilic statin) showing significant risk reduction. It is interesting to note that 2 studies reporting this datum and including a total population of about 2 million individuals were not included in the Zhang analysis and this might, therefore, be the reason why they did not observe any significant association.

Concerning the second point, we have included our recent case-control study dealing with the possible combined effect of aspirin and statins [3], considering only patients taking statins alone, therefore to avoid the confounding effect of the simultaneous intake of aspirin. We do not foresee any concern regarding this point but we agree with Kawada that further studies evaluating a dose-response

DOI of original article: https://doi.org/10.1016/j.dld.2018.09.007.