Letter to the Editor

Orlistat on plasma lipids and body weight reduction: A really effective drug?

Dear Editor-in-Chief

We read the paper entitled “The Effect of orlistat on plasma lipids and body weight: A systematic review and meta-analysis of 33 randomized controlled trials” written by Sahebkar et al., which was published in the Pharmacological Research in May 2017 [1]. The aim of the study was to assess the efficacy of orlistat on plasma total, low-density lipoprotein and high-density lipoprotein cholesterol, triglycerides and lipoprotein (a) levels. Finally, the results of this showed that Orlistat reduced body weight (weighted mean difference (WMD): −2.12), total-cholesterol (WMD: −0.30 mmol/L), low-density lipoprotein cholesterol (WMD: −0.27 mmol/L), high-density lipoprotein cholesterol (WMD: −0.034 mmol/L) and triglyceride (WMD: −0.09 mmol/L) concentrations.

However, although this research was valuable and the results are interesting, some methodological issues should be considered. It is necessary to emphasize that, clinically, WMD of −0.27, −0.3, −0.034 and −0.09 negligible. The readers should understand difference between statistical significance and clinical importance. The larger sample size, higher standard deviation (SD) and bigger means difference, it can increase the chance of finding a difference of statistically significant [2,3]. In meta analyses, the larger sample size arising from pooling individual studies can easily lead to a significant P-value. As the authors point out in their conclusion, Orlistat treatment slightly reduces cholesterol and triglyceride levels and Total- and low-density lipoprotein cholesterol levels reductions are more consistent in patients with greater body weight reduction and shorter duration of orlistat treatment. However, this conclusion should be interpreted with caution because clinical judgments have been overlooked.

Conflict of interest

The authors have no conflicts of interest to declare for this study.

References


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