

Contents lists available at ScienceDirect

Clinical Nutrition

journal homepage: http://www.elsevier.com/locate/clnu



Letter to the Editor

Interpreting data on alpha-lipoic acid safety considering the number of subjects exposed



Dear Editor,

We have read with attention and interest the recent paper of Raschi et al. [1], analysing spontaneous reports of suspected adverse reactions to alpha-lipoic acid included in the Italian Phytovigilance System (IPS). The conclusion of the authors suggests the need for a strong attention to the use of alpha-lipoic acid because of an unpredictable risk of serious side effects. However, we would like to stress some concerns about these data interpretation. In the paper of Raschi et al. [1] the reports regard different dietary supplements (with different production quality and associated with different components), different kind of patients (often assuming other drugs at the same time) and very rarely with a reported treatment rechallenge. During 18 years, the IPS registered 212 suspected adverse events in 116 subjects. In Italy, in the same period, a conservative estimate from sell-out databases (limited to the pharmacy distribution, excluding selling via web or large distribution) suggests that around 4.000.000 boxes of dietary supplements containing alpha-lipoic acid were sold each year. Considering that a part of boxes contains 20 tablets and also assuming that all were consumed for a whole year by single subjects, we should have an expected rate of people experiencing suspected adverse events of 0.0029%, independently from the strength of association and of severity. This is in line with what reported in the setting of randomized clinical trials, given the high safety profile of alpha-lipoic acid reported in large meta-analyses [2,3]. In conclusion, we agree that a more rigid regulation is desired on dietary supplement production and that frail subjects should be monitored by medical doctors, but that warning should be cautious for a molecule that is demonstrating positive effects in ameliorating the perceived quality of life of patients affected by a number of disturbing diseases [4].

References

- Gatti M, Ippoliti I, Poluzzi E, Antonazzo IC, Moro PA, Moretti U, et al. Assessment
 of adverse reactions to α-lipoic acid containing dietary supplements through
 spontaneous reporting systems. Clin Nutr 2020 Jul 29. S0261-5614(20)
 30393-9. https://doi.org/10.1016/j.clnu.2020.07.028 [Epub ahead of print].
- [2] Rahimlou M, Asadi M, Banaei Jahromi N, Mansoori A. Alpha-lipoic acid (ALA) supplementation effect on glycemic and inflammatory biomarkers: a Systematic Review and meta-analysis. Clin Nutr ESPEN 2019;32:16–28. https://doi.org/10.1016/j.clnesp.2019.03.015.
- [3] Fogacci F, Rizzo M, Krogager C, Kennedy C, Georges CMG, Knežević T, et al. Safety evaluation of α-lipoic acid supplementation: a systematic review and meta-analysis of randomized placebo-controlled clinical studies. Antioxidants (Basel) 2020 Oct 19;9(10):1011. https://doi.org/10.3390/antiox9101011.
- [4] Salehi B, Berkay Yilmaz Y, Antika G, Boyunegmez Tumer T, Fawzi Mahomoodally M, Lobine D, et al. Insights on the use of α-lipoic acid for therapeutic purposes. Biomolecules 2019;9(8):356. https://doi.org/10.3390/biom9080356.

Elda Favari Department of Food and Drug, University of Parma, Parma, Italy

Davide Grassi

Department of Life, Health, and Environmental Sciences, University of L'Aquila, L'Aquila, Italy

Arrigo F.G. Cicero*

Medical and Surgical Sciences Dept., University of Bologna, Italian Nutraceutical Society, Bologna, Italy

* Corresponding author.

E-mail address: arrigo.cicero@unibo.it (A.F.G. Cicero).

8 September 2020