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http://dx.doi.org/10.1016/j.nut.2015.06.003

Re: "Dietary fatty acids intake and mortality in patients with heart failure"

To the Editor:

We read with great interest the recently published article by Colin-Ramirez et al. [1] in which the authors aimed to evaluate the association of macro- and micronutrients intake on 1-y of mortality in patients with heart failure (HF). The authors concluded that intake of polyunsaturated fatty acids (PUFAs) and saturated fatty acids (SFAs) was independently associated with 1-y of all-cause mortality in patients with chronic HF. Limiting dietary SFAs and increasing PUFA intake might be advisable in this population [1]. However, we think that there are some points that should be emphasized about this study.

First, in the original study, it was indicated that dietary intake of participants was estimated by using a 3-d food record, which has been shown to have a higher validity and agreement than the 103-item food frequency questionnaire compared with 9-d food record. However, this 3-d record is not of long enough duration for an opinion to be formed about the pathogenesis of cardiovascular disease (CVD) or HF. Although, the importance of fatty acids (FAs) in cellular homeostasis demands an efficient uptake system, their metabolism in cells and tissues still plays the most important role in the pathogenesis of diseases like CVD [2]. Therefore, quantitating the level of FAs in plasma, erythrocyte membrane, and even tissues, particularly of essential FAs, in addition to assessing dietary intake, can provide more accurate results about the processes leading to the pathogenesis of HF and can provide valuable information in the management of dietary strategies in HF, which are deficient and blamed for the pathogenesis of CVD.

Second, to date, there have been several studies evaluating the influence of intake of PUFAs on risk for coronary heart disease and on mortality in patients with chronic HF [3–5]. In the original study, intake of total fat was broken down into monounsaturated, PUFAs, and SFAs. PUFAs include both ω-3 and ω-6 FAs and a healthy diet contains a balance of both FAs. This balance is essential for cardiovascular health because, as is known, ω-6 PUFAs may compete with ω-3 PUFAs for common metabolic enzymes and thereby increase the production of prothrombotic rather than antithrombotic and inflammatory leukotrienes, thromboxanes, and prostaglandins [6,7]. However, exploratory analyses of dietary PUFAs subtypes were not performed in the original analysis, and this may lead to underestimation and undertreatment of the current patient group. Therefore, it would have been better to evaluate different patterns of ω-3 and ω-6 PUFA intake and ratios of intake in the original study [8].

In conclusion, measurement of the level of FAs in plasma, erythrocyte membrane, and even tissues, and evaluation of dietary PUFAs subtypes are critical to assess patients with HF.

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http://dx.doi.org/10.1016/j.nut.2014.10.005

Re. "Dietary fatty acids intake and mortality in patients with heart failure": Authors' response

To the Editor:

We thank Sertoglu et al. for their interest in our work, their insightful comments, and the opportunity to clarify relevant aspects from our work. Sertoglu et al. [1] pointed out that the self-reported dietary method we used in our study, the 3-d food record, is not enough to justify an opinion about the pathogenesis of cardiovascular disease (CVD) or heart failure (HF), and that metabolism of fatty acids (FAs) in cells and tissues plays the most important role in the pathogenesis of CVD. They further suggested that quantifying the level of FAs in plasma erythrocyte membrane and tissues, particularly essential fatty acids, can provide more accurate results than dietary information regarding the processes leading to HF.

Although our work [2] was designed to evaluate the association of dietary intake and 1-y mortality in patients with HF, we