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Letter to the Editor

Geriatric indexes and malnutrition in dialysis patients. Are we actually speaking of nutritional issues?

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Proteinenergy wasting

Dear Editors,

We read with great interest the paper from Matzukuma and co-workers, who reported novel and relevant data on Geriatric Nutritional Risk Index (GNRI) as a predictive marker of infection-related mortality in a Japanese multicenter study on hemodialysis (HD) patients [1]. The authors divided the HD patients in quartiles according to the GNRI value and defined poor nutritional status as GNRI < 90, chosen a rounded cipher, instead of the commonly employed threshold of 91.2 [2,3].

In multivariable Cox regression model, they demonstrated that the lowest GNRI levels were associated with the highest hazard ratios for all-cause and infection-related mortality. To the best of our knowledge, GNRI has not previously been tested as a prognostic index for infection-related mortality in HD patients.

While these data are challenging, and further underline the importance of the nutritional status of HD patients, we would like to stress how the definition of malnutrition is difficult [4], and suggest how this term may even be misleading. On Wikipedia, malnutrition is defined as "a condition that results from eating a diet in which one or more nutrients are either not enough or are too much such that the diet causes health problems".

This is usually not the case in dialysis patients, in which the insufficient diet is the result and not the cause of clinical problems; indeed, the definitions commonly used of protein-energy wasting is probably more appropriate to identify a complex disease called the MIA syndrome, an acronym merging malnutrition, inflammation and atherosclerosis [5]. This association shifts the cause effect relationship from a deficit in nutrition, possibly secondary to insufficient depuration by dialysis, to the ancient condition of "vascular cachexia", in which premature ageing and cardiovascular impairment are the leading causes, both accelerated by the subclinical inflammatory status which often characterises our elderly or fragile patients [6]. Indeed, the malnutrition inflammation score, merging comorbidity and nutritional indexes, may be a more comprehensive marker of death risk, and indeed shares albumin and anthropometric indexes with the GNRI [7].

These issues are not merely semantic: focusing on nutrition may lead to the simplistic idea that this condition can be reversed by an appropriate improvement in nutritional intake, which is sadly only rarely true. While the focus on irreversible vascular disease may lead to a therapeutic nihilism, inflammation may still be a reasonable target for health improvement. It would have been interesting to have data on the vascular access status of these patients: indeed, the presence of a central venous catheter increases the risk of sepsis and, especially in settings where fistulas and grafts are employed whenever possible, represents both a risk marker, signalling the presence of an impaired vascular tree, and a risk factor [8].

Indeed, the novel paper from Matzukuma and co-workers not only has the merit of proposing a further simple way to assess malnutrition as a infectious-death risk marker, and to open the way to further studies, but may further add to the reflection on what "malnutrition" really means in our elderly dialysis population.

Conflicts of interest

None of the author has any conflict of interest.

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