Need to implement a method of screening on malnutrition in elderly patients in primary care

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Prevalence of malnutrition in general elderly population fluctuates between 5 and 12% [1]. Its effects are particularly dramatic in this population, for they tend to be more vulnerable, fragile, and dependent [2]. Tools to screen the nutritional status of the elderly who are admitted to the hospital or who are institutionalized have been proposed, being the Mini-Nutritional Assessment (MNA) the most widely employed. Despite having proven useful [3], in general this screening has not been regularly applied to elderly patients who live in the community and depend on primary care.

Nowadays life expectancy has significantly increased and we pursue the goal to keep those gained years free from disability. Adequate nutrition is a decisive factor for healthy aging [4]. Malnutrition is associated with other geriatric syndromes, in a particularly relevant way with dependence in daily life activities and cognitive decline [5]. Notwithstanding the fact that caloric requirements decrease over the age of 70 years, those concerning proteins and the majority of vitamins and oligoelements remain unchanged. Some degree of anorexia and dysgeusia is frequently observed and is further exacerbated by polypharmacy [6], being the latter an increasingly noticeable factor due to the rise of pharmacological treatments connected to the presence of chronic diseases.

When elderly patients go to their primary care doctor's office, their physical appearance is the first thing related to their nutritional status that the doctor can observe, taking into account that physiologically the percentage of body fat increases with aging, specially in women. Afterwards, the body mass index (BMI) is usually calculated. Based on the available scientific evidence, this index must be assessed differently in the elderly than in the general population, for a BMI<22 kg/m^2 has been associated with a higher mortality in elderly patients [7] and the lower mortality in patients aged over 70 years corresponds to a BMI of between 27,5 and 30 for men and between 30-32,5 for women [8] (in terms of global mortality data). This considered and by consensus of experts, a BMI of between 22-26,9 is judged normal in elderly patients [9]. The nutritional assessment of the elderly living in the community currently ends at this point in most health systems.

Saturation of health systems makes it difficult to propose a systematic nutritional screening through a direct interview, as in the case of the MNA, for all the elderly consulting in primary care. Such problem could be solved by turning MNA into a test performed annually by nurses in a scheduled consultation.

Methods to assess the risk of biochemical malnutrition through analytical parameters have also been suggested. One of these methods is the Conut Index, which has proven to be fast, efficient and useful to screen clinical malnutrition [10]. This method uses albumin, lymphocytes and cholesterol levels and therefore it presents the advantage that a control blood test may allow the doctor to observe a risk of malnutrition and thus lead to a more exhaustive study. Its drawbacks are that the levels of these parameters are influenced by certain diseases and treatments, although it must be also borne in mind that comorbidity itself increases the risk of malnutrition.

One way or another, it is necessary that nutritional assessment should be systematically taken into account. There exist IT which can easily and at a relatively low cost be implemented to help the clinician in daily practice by automating some processes and decreasing the time needed for an accurate evaluation of elderly patients (who, on the other hand, are those who consume more time and resources, a fact which will certainly increase). The importance of establishing this nutritional assessment definitely lies mainly in two aspects: the relationship between malnutrition and frailty (and therefore morbidity and mortality) and the existence of tools to alleviate malnutrition and thus to reverse or at least improve the situation.

References

1. John BK, Bullock M, Brenner L, McGaw C, Scolapio JS (2013) Nutrition in the elderly. Frequently asked questions. *Am J Gastroenterol* 108: 1252-1266. [Crossref]

2. Pérez-Lamas F (2012) Risk of desnutrition in the Spanish population. Evaluation of the current situation and need for a nutritional intervention. *Med Clin (Barc)* 139: 163-164. [Crossref]

3. Raynaud-Simon A, Revel-Delhom C, Hébuterne X (2011) Clinical practice guidelines from the French Health High Authority: nutritional support strategy in protein-energy malnutrition in the elderly. *Clin Nutr* 30: 312-319. [Crossref]

4. Cannella C, Savina C, Donini LM (2009) Nutrition, longevity and behavior. *Arch Gerontol Geriatr* 49: 19-27. [Crossref]

5. Saka B, Kaya O, Ozturk GB, Erten N, Karan MA (2010) Malnutrition in the elderly and its relationship with other geriatric syndromes. *Clin Nutr* 29: 745-748. [Crossref]

6. Moss C, Dhillo WS, Frost G, Hickson M (2012) Gastrointestinal hormones: the regulation of appetite and the anorexia of ageing. *J Hum Nutr Diet* 25: 3-15. [Crossref]

7. Landi F, Zuccalà G, Gambassi G, Incalzi RA, Manigrasso L, et al. (1999) Body mass index and mortality among older people living in the community. *J Am Geriatr Soc* 47: 1072-1076. [Crossref]

8. Alison DB, Gallagber D, Heo M, Pi-Sunyent FX (1997) Body mass index and all-cause mortality among people age 70 and over; the longitudinal study of aging int. *Int J Obes Relat Metab Disord* 21: 421-431. [Crossref]

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9. Sociedad Española de Nutrición Parenteral y Enteral (SENPE), Sociedad Española de Geriatría y Gerontología [documento de consenso]. *Valoración Nutricional en el Anciano. Madrid: Gelénitas-Nigra Trea;* 2008.

10. González-Madroño A, Mancha A, Rodríguez FJ, Culebras J, de Ulibarri JI (2012) Confirming the validity of the CONUT system for early detection and monitoring of clinical undernutrition; comparison with two logistic regression models developed using SGA as the gold standard. *Nutr Hosp* 27: 564-571. [Crossref]