

The Management of Frailty: Barking Up the Wrong Tree

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Frailty is today a hot topic in the scientific community and among clinicians. Geriatricians are no longer the only specialists discussing this age-related condition. Many medical disciplines (e.g., oncologists (1), cardiologists (2), neurologists (3), nephrologists (4), infectious disease specialists (5), pneumologists (6), anesthesiologists (7)) have finally started looking at this critical aspect in older persons, particularly impactful on prognosis and treatment modalities (e.g., (8, 9)). In the debate about this “novel” condition, it may sometimes happen that the word “frailty” is inappropriately used, suggesting a still incomplete understanding of the condition of interest. Some concepts seem difficult to get through, especially in those fields that are not used to the holistic approach and multidisciplinary typical of geriatrics.

For example, there is considerable confusion about the difference between 1) the theoretical concept of frailty (10), 2) the models to capture this condition (e.g., the physical phenotype model (11), the accumulation of health deficit model (12), the bio-psycho-social model (13)), and 3) the instruments to translate the model into a score for clinical use. Not surprisingly, the different models are often interchangeably used, which generates confusion and misunderstandings (14).

An ambiguity around frailty is related to the ageistic connotation it has been assuming over the past years (15). Today, frailty is often translated with “do not” and excludes persons from interventions. Indeed, it seems a more elegant way than chronological age to discriminate. Differently, frailty was conceived as a target condition to implement interventions with the aim of 1) increasing the individual’s reserves (16) and 2) offering him/her the most suitable and effective solution (17). The detection of frailty paradoxically nests the inclusive idea of “doing more” (sometimes even invasively) for persons who would otherwise be inadequately/insufficiently considered.

Furthermore, it is not easy for many to see frailty outside the monodimensional paradigm of a “disease”. Frailty is not a disease and, as such, does not fit with the approach used for traditional nosological conditions: one biological abnormality resulting in a monodimensional clinical expression that needs a “one-fits-all” treatment. Another controversial point, frequently stemming from the erroneous framing of frailty as a disease, is related to the interventions to implement. It is not infrequent to see recommendations indicating lifestyle modifications

(particularly, physical activity and healthy diet) as definitive solutions for the problem. It is evident to clinicians familiar with the biological, clinical, and social complexity of an older person with frailty how these statements oversimplify the reality.

First, virtually any clinical condition benefits from physical activity and optimal nutrient intake. A healthy lifestyle is critical for the well-being of every individual, regardless of his/her age. For this reason, the inclusion of physical activity and healthy diet in primary prevention gives way to “ground-state prevention” (18). It is also noteworthy how some intensive programs of lifestyle modifications have shown the most clinically meaningful benefits among the frailest individuals (19). Frailty may thus influence the meaning/relevance of the recommendations (from common sense in the general promotion of healthy aging to an essential strategy to boost the reserves of an exhausted organism).

Second, the prescription of lifestyle interventions to an older person with frailty cannot be prescinded from a comprehensive geriatric assessment (CGA) to measure his/her reserves, needs, and priorities. For example, the prescription of physical activity to a person whose frailty status is related to undiagnosed cancer may be pointless (or even harmful). Further, adherence to a protein-rich diet may be expected to be low if socioeconomic factors preclude access to high-quality foods. It is evident that interventions directed towards the phenotypic expression of a condition do not necessarily eradicate its underlying causes.

In this context, it is noteworthy that randomized controlled trials testing lifestyle modifications in older persons with frailty (e.g., LIFE (19), FINGER (20)) tend to report a higher number of adverse events in the intervention group. Of course, we are not putting into question the clear benefits that physical activity and adequate nutrition have on an older person’s health status. We are also aware that methodological justifications may explain these findings (e.g., reporting bias). However, the excess vulnerability that characterizes frail persons poses them at a higher risk of homeostatic disruption and complications when a stressor (perhaps, also one that is theoretically beneficial) is applied. After all, it cannot be excluded that the lack of statistical significance might be due to low statistical power.

The management of frailty is critically based on the

CGA intervention (21). Sometimes, recommendations on the management of frailty include vague sentences on the opportunity to conduct a CGA but, again, without apparent conviction. CGA is, at best, seen as a set of questionnaires, scales, tools, etc. to be inertially administered to the older person. Again, it often seems that the discussion on CGA is conducted without a clear understanding of its methodology. The fact that the disruptive potential of CGA resides in the intervention stemming from the assessment, and not in the latter, is often disregarded. As a matter of fact, the CGA is rarely conceived in full as the “multidimensional, multidisciplinary diagnostic and therapeutic process conducted to determine the medical, mental, and functional problems of older people with frailty so that a coordinated and integrated plan for treatment and follow-up can be developed” (22). As soon as frailty becomes the entry door to the CGA, its massive impact on public health becomes clear. The focus is automatically extended from the patient to the system, which needs to re-orient services to promote multidisciplinary and integration of care (23). At the same time, the inadequateness of proposing lifestyle modifications as the primary and often only solution for frailty becomes strikingly clear.

Last but not least, it cannot be ignored that recommendations to promote a healthy lifestyle are frequently neglected in the clinical routine. Geriatricians are well aware of the importance of lifestyle modifications at old age since they may have more considerable benefits than those achievable through pharmacological agents. After all, geriatrics is the specialty where deprescribing is the norm. Generally, healthcare professionals are not sufficiently trained to prescribe behavioral interventions because the education of clinicians is almost entirely absorbed by hyperspecialized and reactive medicine. Prevention is often confused with overdiagnosis, thus possibly resulting in overtreatment (24). Moreover, the appeal of prescribing medications in today’s clinical practice is out of doubt. It is definitively easier to prescribe a pill than motivate patients to reorganize their daily routine to accommodate a personalized intervention plan. The prescription of drugs spares time, may represent a visible act that the clinician “cares”, and is often expected by the patient/caregiver. Unfortunately, while not addressing the problems of a clinically complex older patient, drug prescription may be harmful to the person. Frailty thus becomes an opportunity to revise the prescriptions adequacy and deprescribing (25).

We should be more aware that the prescription of physical activity and healthy diet is an important matter, potentially even more important than prescribing a pill because it more radically affects the individual’s living (26). There is the serious risk that, by oversimplifying the management of frailty with interventions that are frequently overlooked and considered of secondary importance, the condition of frailty itself would be relegated to a marginal spot in the daily clinical routine. It will mean perpetuating the same mistakes that today impact our capacity to offer proper care to older persons with frailty and further delay the necessary evolution of the care systems.

As Oscar Wilde once said, “There is only one thing in the world worse than being talked about, and that is not”. In a

clinical world overwhelmed by the complexities of the aging population, it is important to disseminate the basic principles of geriatric medicine. The condition of frailty is today growingly discussed and might represent the lever for developing synergies across disciplines and specialties. However, more attention should be paid when translating theoretical concepts such as frailty into practice. Lifestyle interventions are undoubtedly essential for the management of frailty. Yet, they should be the output of CGA and, hence, tailored to the person’s needs and priorities.

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References

1. Ferrucci L, Guralnik J, Cavazzini C, et al. The frailty syndrome: a critical issue in geriatric oncology. *Crit Rev Oncol Hematol* 2003;46:127–137
2. von Haehling S, Anker S, Doehner W, Morley J, Vellas B. Frailty and heart disease. *Int J Cardiol* 2013;168:1745–1747
3. Canevelli M, Cesari M, Remiddi F, et al. Promoting the Assessment of Frailty in the Clinical Approach to Cognitive Disorders. *Front Aging Neurosci* 2017;9:36
4. Zezza C, Vettoretti S, Caldiroli L, Bergamaschini L, Messa P, Cesari M. Use of the Frailty Index in Older Persons With Chronic Kidney Disease. *J Am Med Dir Assoc* 2019;20:1179–1180
5. Guaraldi G, Francesco DD, Malagoli A, et al. Compression of frailty in adults living with HIV. *BMC Geriatr* 2019;19:229
6. Gale N, Albaratti A, Munnery M, et al. Frailty: A global measure of the multisystem impact of COPD. *Chron Respir Dis* 2018;15:347–355
7. Chan R, Ueno R, Afroz A, Billah B, Tiruvoipati R, Subramaniam A. Association between frailty and clinical outcomes in surgical patients admitted to intensive care units: a systematic review and meta-analysis. *Br J Anaesth* 2022;128:258–271
8. George EL, Hall DE, Youk A, et al. Association Between Patient Frailty and Postoperative Mortality Across Multiple Noncardiac Surgical Specialties. *JAMA Surg* 2020;e205152
9. Marinus N, Vigorito C, Giallauria F, et al. Frailty is highly prevalent in specific cardiovascular diseases and females, but significantly worsens prognosis in all affected patients: A systematic review. *Ageing Res Rev* 2021;66:101233
10. Morley J, Vellas B, Abellan van Kan G, et al. Frailty consensus: a call to action. *J Am Med Dir Assoc* 2013;14:392–397
11. Fried L, Tangen C, Walston J, et al. Frailty in older adults: evidence for a phenotype. *J Gerontol A Biol Sci Med Sci* 2001;56:M146–56
12. Mitnitski A, Mogilner A, Rockwood K. Accumulation of deficits as a proxy measure of aging. *ScientificWorldJournal* 2001;1:323–336
13. Gobbens R, Luijckx K, Wijnen-Sponselee M, Schols J. Towards an integral conceptual model of frailty. *J Nutr Health Aging* 2010;14:175–181
14. Cesari M, Gambassi G, Abellan van Kan G, Vellas B. The frailty phenotype and the frailty index: different instruments for different purposes. *Age Ageing* 2014;43:10–12
15. Mudge AM, Hubbard RE. Frailty: mind the gap. *Age Ageing* 2018;47:508–511
16. Vellas B, Cestac P, Morley J. Implementing frailty into clinical practice: we cannot wait. *J Nutr Health Aging* 2012;16:599–600
17. Balducci L, Colloca G, Cesari M, Gambassi G. Assessment and treatment of elderly patients with cancer. *Surgical Oncology* 2010;19:117–123
18. Blasiame A, Canevelli M, Cesari M. Shifting the Focus of Dementia Prevention: Ethical Considerations. *AJOB Neuroscience* 2021;12:240–242
19. Pahor M, Guralnik J, Ambrosius W, et al. Effect of Structured Physical Activity on Prevention of Major Mobility Disability in Older Adults: The LIFE Study Randomized Clinical Trial. *JAMA* 2014;311:2387–2396
20. Ngandu T, Lehtisalo J, Solomon A, et al. A 2 year multidomain intervention of diet, exercise, cognitive training, and vascular risk monitoring versus control to prevent cognitive decline in at-risk elderly people (FINGER): a randomised controlled trial. *Lancet* 2015;385:2255–2263
21. Fit for Frailty - consensus best practice guidance for the care of older people living in community and outpatient settings - a report from the British Geriatrics Society. 2014. British Geriatrics Society
22. Ellis G, Gardner M, Tsiachristas A, et al. Comprehensive geriatric assessment for older adults admitted to hospital. *Cochrane Database Syst Rev* 2017;9:CD006211
23. Cesari M, Marzetti E, Thiem U, et al. The geriatric management of frailty as paradigm of “The end of the disease era.” *Eur J Intern Med* 2016;31:11–14
24. Canevelli M, Vanacore N, Blasiame A, Bruno G, Cesari M. Overtreating Alzheimer’s Disease. *J Prev Alzheimers Dis* 2021;8:234–236
25. Molist-Brunet N, Sevilla-Sánchez D, González-Bueno J, et al. Therapeutic optimization through goal-oriented prescription in nursing homes. *Int J Clin Pharm* 2021;43:990–997
26. Izquierdo M, Merchant RA, Morley JE, et al. International Exercise Recommendations in Older Adults (ICFSR): Expert Consensus Guidelines. *J Nutr Health Aging* 2021;25:824–853

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