

Beyond the Guidelines: When Biological Reserve Outweighs Chronological Age

Más allá de las guías: cuando la reserva biológica desbanca a la edad cronológica

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Individual longevity and population aging have become increasingly evident during the second half of the 20th century and so far in the current century. This demographic transition is the result of a better understanding of cellular and systemic pathophysiology, improvements in the management of chronic diseases, the impact of health promotion and disease prevention programs, and more effective control of infections due to the availability of state-of-the-art vaccines and antimicrobials.

One of the direct consequences of this phenomenon is the progressive increase in the incidence and prevalence of degenerative cardiovascular diseases. Among these, heart failure, calcific aortic stenosis, coronary artery disease, hypertension, and clinically significant arrhythmias such as atrial fibrillation are particularly salient. (1,2)

This scenario presents new and complex challenges. Multimorbidity is common among older patients, with chronic kidney disease, chronic obstructive pulmonary disease, and anemia being particularly prevalent, as well as the onset of geriatric syndromes, including frailty, sarcopenia, and cognitive decline. These conditions worsen the prognosis and oblige us to rethink traditional therapeutic approaches. Factors such as polypharmacy and the pharmacokinetic changes associated with aging require much more rigorous and personalized prescribing practices.

People > 80 years remain significantly underrepresented in clinical trials that form the basis of clinical practice guidelines, despite this population constituting the predominant users of health care services and drug therapy. (3) This exclusion is even more pronounced at the extremes of age, beginning with patients > 75 years with type 2 diabetes and lung cancer, and becomes critical by the ninth decade (≥80 years) in conditions such as atrial fibrillation, heart failure,

and osteoporosis. (4) There are various causes for this methodological gap, ranging from restrictive exclusion criteria based on chronological age or multimorbidity, to logistical barriers such as mobility issues, lack of social support, and patients' fear or distrust of the research setting.

In light of this persistent lack of evidence, the expert consensus led by Dr. Patricia Blanco et al. (5) addresses these gaps by applying a structured methodology. The panel highlights the importance of assessing the degree of frailty in older patients with cardiovascular disease as a fundamental guideline for management and recommends that therapeutic decision-making be guided primarily by the functional phenotype (robust, mild frailty, or moderate frailty).

The prevalence and incidence of atrial fibrillation increase exponentially with age, becoming an authentic epidemic in the 21st century. Active screening for atrial fibrillation should be encouraged, as its clinical presentation is often atypical or even asymptomatic. In this context, the presence of comorbidities and cognitive impairment is associated with greater disability and mortality. (6) Perhaps the greatest challenge is the need for antithrombotic therapy in a population with an inherently high risk of bleeding. The consensus reached in Argentina confirms a lower tendency toward rhythm control and lower acceptance of anticoagulation in frail patients. Furthermore, the panel expressed low confidence in the applicability of the traditional HAS-BLED score and CHA₂DS₂-VASc score in this group of patients.

Acute coronary syndromes are a major cause of hospitalization, with mortality rates particularly high among octogenarians. Despite the high baseline risk, there is a clear tendency to recommend an early invasive strategy in robust patients; however, this approach has not demonstrated a net benefit in frail patients

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with non-ST-segment elevation myocardial infarction (NSTEMI-ACS). Reperfusion therapy with fibrinolytics for the management of ST-segment elevation myocardial infarction (STEMI-ACS) carries significant risks of major bleeding complications in this population. (7) The panel cautiously acknowledges that the myocardial benefit of thrombolysis does not always outweigh the high risk of intracranial bleeding.

Based on the considerations made above, it is clear that managing older patients with cardiovascular disease is a complex process that cannot be reduced to the implementation of algorithms recommended by clinical practice guidelines. Older patients are under-represented in the evidence and present a substantially different clinical reality. Before defining any therapeutic strategy, it is essential to assess frailty, cognitive function, nutritional conditions, muscle mass, and balance, among other factors. The ideal scenario requires a comprehensive geriatric assessment, in which cardiologists and geriatricians work together to establish the optimal strategy, centered on the patient's functional status and dignity.

Conflicts of interest

None declared

(See authors conflicts of interest forms on the website).

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