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Editorial

Elderly patients with comorbidities and acute coronary syndrome: primum non nocere?

Ancianos con comorbilidades y síndrome coronario agudo: ¿primum non nocere?

Miquel Vives-Borràs[a] and Alessandro Sionis[b,c,*]

[a] *Servicio de Cardiología, Hospital Universitari Son Espases, Institut d'Investigació Sanitària Illes Balears (IdISBa), Palma de Mallorca, Islas Baleares, Spain*
[b] *Servicio de Cardiología, Hospital de la Santa Creu i Sant Pau, IIB-SantPau, Universitat Autónoma de Barcelona, Barcelona, Spain*
[c] *Centro de Investigación Biomédica en Red de Enfermedades Cardiovasculares (CIBERCV), Spain*

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According to data from the National Statistics Institute, life expectancy has increased from 73.5 years in 1975 to 83.6 years in Spain in the year 2019. Also, the mean age of the population has gone up 10 years during this same period.[1] In this sense, the results from the study conducted by Dégano et al.[2] in 2013 come as no surprise. They already anticipated a strong increase in the rate of acute coronary syndrome (ACS) within the next 35 years when the Spanish population > 75 years will represent almost a quarter of the national census. This study anticipated that between 2013 and 2049, the cases of ACS in elderly patients would increase over 70%, but keep a discrete growth in patients under 75 years. These data are but a glimpse of a not so distant future when our patients will be older and their life expectancy longer. Also, the association between aging and comorbidity means that we will have to treat more complex patients.

Elderly patients with comorbidities are misrepresented in clinical trials studying the efficacy of both early invasive strategy for the management of non-ST-segment elevation acute coronary syndrome (NSTEACS) and the most suitable antithrombotic treatment.[3] Therefore, despite the fact that clinical practice guidelines recommend early invasive strategy in most patients,[4] its generalization to these patients is controversial. It is often decided to individualize the decision-making process by weighing risks and benefits and taking into consideration the treating physician's perception on the possible complications. Hence, conducting clinical trials focused on this subpopulation as creating large registries representative of the actual clinical practice is of paramount importance.

In an article recently published by Pernias et al.[5] on *REC: Interventional Cardiology*, the authors present a wide registry of elderly patients with NSTEACS conducted thanks to the collaborative work of different cardiology units from several Spanish autonomous communities. With over 7000 patients included, this study evaluated the impact of comorbidities on the indication to perform coronary angiographies. The 6 comorbidities studied (cerebrovascular disease, anemia, kidney disease, peripheral arteriopathy, chronic pulmonary disease, and diabetes mellitus) turned out to be independent predictors of a non-invasive approach. Also, it was confirmed that patients with more comorbidities had lower the chances of undergoing an invasive strategy despite having higher GRACE scores.

The comorbidities reported in this study are associated with a worse prognosis in this clinical setting.[6] However, this does not necessarily involve low short-term life expectancy per se. Therefore, given the futility of an eventual revascularization a conservative strategy would not be justified. This clearly shows the need for a proper comprehensive geriatric assessment of these patients, since the accumulation of concomitant comorbidities is often followed by frailty, cognitive impairment, and functional dependency. These variables are key finding out why there is a paradoxically reverse correlation in these patients between the risk of ischemic events and the frequency of performing coronary angiographies. In this sense, we should mention the LONGEVO-SCA, a registry conducted in our setting that studied in detail the impact of frailty and geriatric syndromes on the therapeutic approach and vital prognosis of elderly patients with NSTEACS. Important conclusions can be drawn from this registry, like the negative impact of frailty both on the prognosis of elderly patients with NSTEACS and on the benefits of an invasive strategy.[7,8]

The usefulness of the invasive strategy in elderly patients is not well established. The randomized clinical trial After Eighty included 457 patients > 80 years with non-ST-elevation acute myocardial infarction (NSTEMI). It confirmed a lower incidence rate of the composite endpoint of death or cardiovascular events at the 1.5-year follow-up with the invasive strategy.[9] However, this clinical trial did not consider frailty and included less than 25% of the possible candidates, indicative of bias in favor of elderly patients in better general health conditions and with fewer comorbidities.[9] The MOSCA clinical trial[10] included 106 elderly patients with NSTEMI and comorbidities. Although there were fewer chances of death or ischemic events in this study at the 3-month follow-up in patients randomized to the invasive strategy, no benefits were seen with this strategy at the end of the follow-up (2.5 years).

* **Corresponding author:** Servicio de Cardiología, Hospital de la Santa Creu i Sant Pau, Sant Antoni Maria Claret 167, 08025 Barcelona, Spain.
E-mail address: asionis@santpau.cat (A. Sionis).

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Currently underway, the MOSCAFRAIL clinical trial[11] will assess the efficacy and safety of the invasive strategy and its prognostic effect within the first year after NSTEMI in elderly patients with confirmed frailty. This trial, that included over 10 tertiary and secondary Spanish hospitals, is a systematic geriatric and comorbidity study conducted with widely validated scales. Its results should provide valuable information and greatly impact clinical practice in the coming future.

Another controversial issue with studies of elderly patients with ACS is what clinical outcomes should be assessed. Most randomized and observational studies focus on "traditional" clinical outcomes like mortality or ischemic events. However, on many occasions there are no data on the impact on symptoms, perceived quality of life, and need for readmission, which may indicate better the clinical benefits of this population. In this sense, we should mention the After Eighty clinical trial found no differences regarding quality of life between patients treated with the invasive strategy and those treated conservatively.[12]

In conclusion, elderly patients with high comorbidities who are hospitalized due to NSTEACS are a common problem today and will remain so in the future. Given the scarce scientific evidence on the therapeutic approach of these patients, studies like the one conducted by Pernias et al.[5] improve our understanding of this complicated clinical scenario and remind us of the importance of collaborative research to conduct large registries that show the reality of this emerging problem in our setting.

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CONFLICTS OF INTEREST

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