



LETTER TO THE EDITOR

Reply to the Letter to the Editor entitled "Bleeding risk assessment and comorbidities in elderly patients with acute coronary syndromes"



Resposta à Carta ao Editor intitulada «Avaliação do risco hemorrágico e comorbilidades em doentes idosos com síndromes coronárias agudas»

We appreciate the interest of A Ariza-Solé, F Formiga, E Bernal and A Garay in our recent original paper entitled "Non-ST-elevation acute coronary syndromes in octogenarians: applicability of the GRACE and CRUSADE scores",¹ and would like to thank them for their pertinent comments.

Despite the increasing prevalence and higher cardiovascular risk of elderly patients, evidence regarding the management of non-ST-elevation acute coronary syndromes (NSTEMI-ACS) in this age-group is scarce and not representative of real practice, since they are often excluded from clinical trials. Thus, we felt that a national registry, such as the Portuguese Registry on Acute Coronary Syndromes (ProACS),² would be a good opportunity to address this knowledge gap. Unfortunately, in the ProACS, major bleeding was defined using the GUSTO criteria,³ and data on baseline hematocrit and witnessed bleeding were not available.⁴ Thus, we were unable to define major bleeding using the same criteria as used for the validation of CRUSADE.⁵ We agree that using the GUSTO criteria for defining major bleeding while assessing the accuracy of the CRUSADE score may be a limitation. Nevertheless, a c-statistic of 0.5 truly shows a performance that can be described as mere chance, comparable to flipping a coin. Furthermore, we considered that as CRUSADE is currently recommended by the European Society of Cardiology to assess the risk of bleeding in patients with NSTEMI-ACS,^{6,7} it should be able to identify patients who suffered clinically

significant bleeding, even if this is major bleeding as defined by the GUSTO criteria.

Our finding that the CRUSADE score is unsuitable for assessing bleeding risk in octogenarian patients is in line with the study by Ariza-Solé et al.,⁸ which included 369 patients aged ≥ 75 years and found a significantly worse performance by the CRUSADE score for discrimination of major bleeding in this age-group, compared to younger patients. To summarize, our conclusions overlap those of Ariza-Solé and colleagues,⁸ as we also believe that the development of new scores to assess bleeding risk in the elderly should be the aim of future research.

Conflicts of interest

The authors have no conflicts of interest to declare.

References

1. Faustino A, Mota P, Silva J, for the National Registry of Acute Coronary Syndromes, Portuguese Society of Cardiology. Non-ST-elevation acute coronary syndromes in octogenarians: applicability of the GRACE and CRUSADE scores. *Rev Port Cardiol.* 2014;33:617–27.
2. Portuguese Registry on Acute Coronary Syndromes (ProACS). Available at www.clinicaltrials.gov/identifier/NCT01642329 [accessed 03.10.15].
3. GUSTO Investigators. An international randomized trial comparing four thrombolytic strategies for acute myocardial infarction. *N Engl J Med.* 1993;329:673–82.
4. Registo Nacional de Síndromes Coronárias Agudas, 2a Fase, Definição das Variáveis. Available at http://www.spc.pt/DL/home/listdestaques/Definicoes_das_Variaveis_RNSCA_2aFase_Final.pdf [accessed 03.10.15].
5. Subherwal S, Bach RG, Chen AY, et al. Baseline risk of major bleeding in non-ST-segment-elevation myocardial infarction: the CRUSADE (Can Rapid risk stratification of Unstable angina patients Suppress ADverse outcomes with Early implementation of the ACC/AHA Guidelines) bleeding score. *Circulation.* 2009;119:1873–82.
6. Hamm CW, Bassand J, Agewall S, et al. ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: the Task Force for the management of acute coronary syndromes (ACS) in patients presenting without persistent ST-segment elevation of

DOI of original article:

<http://dx.doi.org/10.1016/j.repc.2015.09.030>

<http://dx.doi.org/10.1016/j.repc.2015.10.010>

0870-2551/© 2016 Sociedade Portuguesa de Cardiologia. Publicado por Elsevier España, S.L.U. Todos os direitos reservados.

- the European Society of Cardiology (ESC). *Eur Heart J.* 2011;32:2999–3054.
7. Roffi M, Patrono C, Collet J, et al. 2015 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: Task Force for the management of acute coronary syndromes in patients presenting without persistent st-segment elevation of the European Society of Cardiology (ESC). *Eur Heart J.* 2015, <http://dx.doi.org/10.1093/eurheartj/ehv320>, cited 11-10-2015.
 8. Ariza-Solé A, Formiga F, Lorente V, et al. Efficacy of bleeding risk scores in elderly patients with acute coronary syndromes. *Rev Esp Cardiol.* 2014;67:463–70.
- Ana Faustino^{a,*}, Paula Mota^b, Joana Silva^c
- ^a *Serviço de Cardiologia, Centro Hospitalar do Baixo Vouga – EPE, Aveiro, Portugal*
- ^b *Cardiology Department, William Harvey Hospital, Ashford Kent, United Kingdom*
- ^c *Serviço de Cardiologia B, Centro Hospitalar e Universitário de Coimbra – EPE, Coimbra, Portugal*
- * Corresponding author.
E-mail address: anacatarina.faustino@gmail.com (A. Faustino).