


Survival in the elderly after acute myocardial infarction: room for more improvement

Globally, the world’s population is growing and in general longevity is increasing. Consequently, there are more older people living and at risk of acute myocardial infarction (AMI). Older persons who present with AMI have higher mortality rates compared with younger patients, and the reasons for this are multifactorial [1]. So why do very elderly persons have a much worse prognosis post-AMI? Most likely, it is the association of increasing age with co-morbidity [2–5] and that life expectancy falls as age rises.

Age-related variations in presentation, treatment and clinical evidence may negatively influence AMI outcomes in the elderly. Elderly patients are under-represented in clinical trials, with some trials using an enrollment limit of 70–80 years [6]. Older persons are more likely to present with atypical symptoms, which could mask recognition of an AMI which in turn would increase the time to treatment (i.e. coronary reperfusion therapy) [7]. Older persons are also more likely to present with non-ST elevation myocardial infarction (NSTEMI), which is a much more heterogeneous condition than ST elevation myocardial infarction (STEMI) which is usually associated with typical severe symptoms of sudden onset [8]. Finally, older AMI survivors may be less likely to receive an evidence-based treatment [9–12].

Alabas et al. [13] have described a population-based cohort study on survival after AMI in relation to age at presentation in 583,466 patients (41.1% with STEMI) using data from the United Kingdom Myocardial Ischaemia National Audit project (MINAP) database (2003–10). Alabas et al. [13] report that patients who are <65 years of age have higher survival rates than patients ≥65 years, but in contrast to individuals <65 years, improvements in survival between 2003 and 2010 were only observed in older persons. Interestingly, the temporal trends in survival rates for the elderly and the very elderly (≥80 years) for both STEMI and NSTEMI were similar. The study is novel in terms of methodology (i.e. the forms of survival analyses) and also in the type of information that has been analysed (i.e. by age and MI type).

A number of other studies have shown reductions for in-hospital and 30-day mortality among elderly patients with
AMI, and this has been attributed to an increase in prescription of an evidence-based medication [9–12]. However, these studies have also reported that the subgroup of elderly patients >75 years were prescribed a less evidence-based medication [9–12], implying the potential for further scope in health-care improvements.

The developments in health care for AMI patients that sublend improvements in survival, including in the elderly, include treatment stratification based on risk (rather than just age) and implementation of guidelines. For example, clinical risk scores, such as GRACE (Global Registry of Acute Coronary Events), which include age [14], are now widely used in clinical practice for risk assessment and treatment stratification. Gale et al. [1] have also reported that in elderly patients with AMI in-hospital mortality rates have fallen in association with clinical standards (e.g. for an evidence-based therapy) and their implementation (e.g. the NSF framework [10] in England and Wales), and in their current study, Alabas et al. [13] also observed improvements in the prescriptions of an evidence-based therapy from 2003 to 2010, although to a lesser extent in the elderly.

The study by Alabas et al. [13] complements and adds to the existing literature on survival after AMI in relation to age in the United Kingdom. In recent years, survival rates in patients >65 years with NSTEMI or STEMI have clearly improved [9, 10]. As a concluding remark, we would add that such improvements in survival should ideally also be associated with improvements in quality of life [1].

Conflicts of interest

None declared.

KENNETH MANGION1,2, COLIN BERRY1,2
1West of Scotland Heart and Lung Centre, Golden Jubilee National Hospital, Clydebank, UK
2BHF Glasgow Cardiovascular Research Centre, Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK

Address correspondence to: C. Berry. Tel: (+44) 141 330 1671 or (+44) 141 951 5000; Fax: (+44) 141 330 6794.
Email: colin.berry@glasgow.ac.uk

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