Ageism and coronary angiography

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National life-expectancy is steadily rising with the number of those aged 85 years or over doubling from 1985 to 2010,[1] and ever more elderly patients presenting to cardiology. Age is a potent risk factor for mortality after acute coronary syndrome (ACS),[2] and older patients with angina present with more severe symptoms and prognostically significant coronary anatomy.[3] Age has a very powerful influence on risk stratification tools such as GRACE (Global Registry of Acute Coronary Events), and National Institute for Health and Care Excellence (NICE) guidance supports early invasive investigation and management for high-scoring patients.[4] Diagnostic coronary angiography (DCA) is crucial to assessing the cross-spectrum of coronary disease presentation. Despite this, elderly patients are less likely to be treated in accordance with best practice after presenting with ACS,[5,6] the so-called 'risk paradox'. Concern about the safety and efficacy of DCA and percutaneous coronary intervention (PCI) in the more elderly population seems to underpin this behaviour.

There is in fact a wealth of data to indicate that DCA in the elderly has acceptable complication rates,[7] and that revascularisation, surgical or by PCI, offers significant benefit.[5] The study by Walsh and Hargreaves (pages ?–?) is welcome in further describing the fallacies of current practice, which fall short of best practice.[6]

The study

The research is presented as a retrospective case-control study in the modern era of coronary intervention, and gives some insight into current practice. Data from 100 randomly selected patients aged over 80 years and a control group aged below 70 years were taken from a district general hospital (DGH) DCA database. This method of patient selection is perhaps the major weakness of the study. There will inevitably have been a high degree of case selection – particularly of older patients – with those put forward deemed appropriate for DCA (and by implication also considered 'reasonable' candidates for revascularisation). The low rate of selection of elderly patients for DCA is confirmed, with only 4% of the overall 17,325 patients in the database aged over 80, despite a much higher prevalence of coronary artery disease (CAD) in this age group.

The investigators chose to explore the difference between the preferred intervention (immediately after catheterisation) and the treatment the patient ultimately received; medical therapy, PCI or coronary artery bypass graft (CABG). The preferred treatment would be decided by the cardiologist performing the diagnostic angiogram and would be weighted more heavily by the coronary anatomy, while the final treatment would take more account of the complete clinical picture. The study design is very similar to that of Elder *et al.*,[3] from the cardiology dark ages of 1991, and thus provides an interesting comparison between the diagnostic and revascularisation strategies of an earlier era and our own. The value of this study is as an observation of practice and comparison with a previous age of cardiology.

As might be expected, a higher number from the elderly cohort were initially recommended for CABG (27 *vs.* 11 from the control group). An interesting observation is the high rate of later 'conversion' of mode of revascularisation in the elderly group; of the 27 patients who were initially put forward for surgery only nine eventually received an operation. In comparison, 10 out of 11 in the control group went on to have surgery. This would confirm the usual supposition that the elderly population have not only a higher predominance of surgical disease, but also comorbidities that produce an unfavourable operative risk, sufficient to dissuade many cardiac surgeons in the modern era of outcomes disclosure.

In terms of the diagnostic angiogram, this study showed no significant difference in complication rates between the two age groups, but the sample sizes were far too small to be able to state this with any confidence, given the very low rate of complications with DCA in modern practice.

It is now well-established that age alone should not have a role in determining who undergoes invasive cardiological management. Frailty assessment, a technique still in evolution, is a more important arbiter in deciding who enters the catheterisation lab[8-10]

Conflict of interest

None declared.

Editors' note

See also the study by Walsh and Hargreaves (doi: 10.5837/bjc.2014.003) on pages ?–? of this issue.

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Echocardiography and enlarged cardiothoracic ratio

Dear Sirs,

The Guys' and St Thomas's echo team are to be congratulated on producing evidence-based advice that could result in a significant reduction in cardiac ultrasound referrals, which may be enhanced if our radiology colleagues are taken on board.[1] Many years ago, our echo department was overloaded with requests for studies as a consequence of radiology reports that included the emotive term 'cardiomegaly'. This expression is, of course, speculative, as enlargement of the 'cardiac' shadow may be due to an expiratory radiograph, prominent epicardial fat pads, pericardial effusion or even an anterior mediastinal mass.[2] I managed to get our radiologists to use the alternative term 'cardiac silhouette' (as in 'the cardiac silhouette is slightly enlarged'). Referrals plummeted.

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