Utilising combined MPI and CACS results

We are thankful to Dr Sharma and colleagues,¹ which clearly shows the benefit of combining myocardial perfusion imaging (MPI) and coronary artery calcium score (CACS) assessments. The two individual elements provide robust assessments of myocardial ischaemia. Combined, they juxtapose anatomical and functional perspectives. At our institution—and in many others—the two investigations have to be done separately as the computed tomography (CT) component is not of sufficiently high resolution, being primarily intended for attenuation correction purposes only.² Doing two separate scans is much less convenient for the patient.

With this combination, it was shown that patients with significant CACS findings during MPI had increased mortality and greater likelihood of poor LV function. This would no doubt translate to increased hospitalisations and hospitalisation costs. Hospitalisation costs are very high and the quest to reduce this mound is endless.

In Australia, the average cost per acute care admission was over \$5000.³ We note that this figure encompasses a wide spectrum of medical conditions but chest pain was one of the three most common presentations. There is little doubt that being able to make use of the MPI/CACS combination would have significant medical, economic and psychosocial benefits (from people being out of hospital).

So how can we make more effective use of MPI/CACS data to reduce hospitalisations? We suggest utilising this information—taking patients with normal MPI but high CACS—and aggressively managing their cardiovascular risks. In this way, patients requiring more uncompromising risk factor management are more effectively selected. The question remaining in our minds is which risk factors should be prioritised given that the independent predictors of mortality (age, smoking, renal impairment, CACS) they have identified are not easily modifiable?

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