



Stephen A Margolis

# Is human ingenuity changing the face of ischaemic heart disease?

'We have this history of impossible solutions to insoluble problems.'<sup>1</sup>

I have been reflecting on the changes in clinical practice over the 30+ years since I graduated from medical school. So many interesting ideas have now become accepted wisdom. For example, as I graduated, the first streptokinase studies into clot lysis for acute myocardial infarction were just starting in Australia. Discussions among my clinical leaders at that time were fairly evenly divided between the 'cautious', those sceptical of new and as yet unproven developments, and the 'early adopters', who were excited to embrace the future. Needless to say, the trials were a success and were soon followed by an apparently endless succession of new investigations, medications and treatment modalities that have changed the face of cardiovascular disease management to what we see today.

Despite the enormous advances, cardiovascular disease remains the leading cause of death in Australia at 136 per 100,000 population, especially among men (5.5% versus 4.5% in women) and those most disadvantaged (6.5%, compared with 3.3% among the least disadvantaged).<sup>2</sup> To help place this in perspective, in Nepal, one of the world's poorest nations and one with limited health services, as indicated by a maternal mortality rate 210 times higher, the cardiovascular mortality rate is 3 times higher than that in Australia. This suggests that cardiovascular disease is a global problem requiring new ideas and processes to help lower its impact.

In the 1980s and early 1990s I provided forensic pathology services to my community as the Government Medical Officer in addition to my general practice clinical work. In this role I performed autopsies on those who were unable to receive a death certificate from their regular doctor. Unsurprisingly, coronary artery disease (CAD) was the most common cause of death found at autopsy.

In essence, this meant that sudden death was the presenting symptom of their underlying hidden CAD. While conducting these autopsies and perusing their clinical notes, I often wondered what could have been done to identify these patients earlier in their disease cycle and hence prevent their untimely death. As the investigations available at that time came with significant challenges, I looked forward to the time when a simple, rapid, non-invasive, reliable test could be performed to help identify those with potentially silent CAD. Perhaps that time has now arrived as detailed by Peter Storey, who describes the latest state of play in medical imaging for CAD.<sup>3</sup>

Warfarin has been an important part of our therapeutic armament since 1954, following its successful introduction as a rodent pesticide in 1948. Warfarin was first isolated in 1941 from mouldy hay, which, when fed to cattle caused haemorrhagic death.<sup>4</sup> Warfarin hit the mainstream in 1955 after being prescribed for President Eisenhower following a myocardial infarction: 'What was good for a war hero and the President of the United States must be good for all, despite being a rat poison!'<sup>5</sup> Interestingly, randomised trials to provide an evidence base for effectiveness were undertaken much later (1960 for treatment of pulmonary embolus<sup>6</sup> and as late as 1992 when initial treatment with heparin was required due to the initial hypercoagulable state when starting warfarin<sup>7</sup>).

Warfarin is now the leading anticoagulant globally, regularly prescribed in the UK for >1% of the general population and 8% of those aged >80 years.<sup>8</sup> The overall importance of warfarin makes the arrival of the 'new oral anti-coagulants', summarised by David Brieger,<sup>9</sup> important reading, to help place these new medications in context.

Despite the excitement of new discoveries, the paper on dizziness by Maja Susanto<sup>10</sup> illustrates that the core clinical skills of taking a history and performing a physical examination remain paramount in the provision of timely, effective and personalised

care. These basic skills, which form a key component of both undergraduate and general practice training, are sometimes overshadowed by the glamour of new discoveries.

Cardiovascular disease rightfully remains a key focus of healthcare. I am looking forward to future innovations and watching how new ideas will be translated into standard practice.

## Author

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