

## Coronary care: doubtful science, doubtful ethics

This sophisticated speciality promotes expensive therapies of dubious value,  
write **M L Kothari, LA Mehta and VL Kothari**

The Sunday newspaper has a full-page feature on 'Dil ka doctor and his state-of-the-heart plans' (1). The box, "Our panel of doctors", informs readers of the top 10 cardiologists in five metropolitan cities. The 'special report' on the 'techniques which will tame our *pagal dil*' presents the cafeteria of coronary care, from trivial measures to transplants.

Such articles do little to educate but plenty to scare readers into believing that we are on "the brink of an epidemic" of cardiac disease. This one also makes grandiose promises, foreseeing routine robotic surgery, and gene therapy with a "magic gene that could make the heart automatically grow fresh arteries to take over from the tired, thickened ones." This combination of journalese and medical language seems unaware of the manifest scientific implausibility of current coronary concepts. The fact is that despite all the developments over decades of research and treatment, the death rate attributable to coronary heart disease remains unchanged. And this is the unethical nature of current coronary care.

### Coronary artery disease

Cardiology covers a wide variety of cardiovascular problems. Much of cardiology practice is concentrated on that branch of cardiology which deals with coronary artery disease (CAD). The essential problem in CAD is that the heart does not get its requisite quantum of blood because its lifeline -- the coronary arterial field -- is clogged. The solution: the artery must be made to carry more blood, by medical or surgical means; the blood must be monitored and kept thin and free from the overload of cholesterol and other undesirable lipid elements

through drugs and diet; and finally, the heart should be helped to work less, to minimise the chances of a crisis in coronary blood supply.

However, the causes of CAD are not known. Which means no one knows what the cure is. The drugs and procedures that cardiologists employ address the symptoms, not the pathology of the disease. Likewise, the course of CAD is essentially a matter of guesswork, and no investigation, however sophisticated, can predict exactly what is going to happen. A recent report comments: "A hot topic among clinicians today, the concept of evidence-based medicine, evolved from the growing realisation that many of the tests and treatments introduced in clinical practice are of unproven or uncertain benefit." (2).

### Treatments, medical and surgical

Medical measures aimed at affecting the coronary arterial tree work by blocking enzymes or channels. The drugs may relieve local symptoms, but they also interfere with the physiological mechanism in the entire body.

The other means to widen the coronary arteries is to attack them directly. But it is not known if a blocked coronary artery is an effect or a cause (3, 4). Treating the result may be of no benefit. Angioplasty is known to cause 'angioplasty-induced defiant stenosis'. It has been opined that angioplasty forcibly tears the artery to create the illusion of a wider artery and a greater flow (5).

Even the bible of doctors, *Harrison's Principles of Internal Medicine*, has been unable over the years to explain how bypass surgery works. The learned text offers three possible explanations. The placebo effect (a theory that justifies calling the bypass the costliest aspirin), sensory neurectomy (the heart

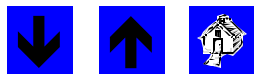
stays the same but the patient no longer feels any pain) or - hold your breath - by killing the complaining segment of the heart. To quote from the latest edition: "Angina is abolished or greatly reduced in approximately 90 per cent of patients following coronary revascularisation. Although this is usually associated with graft patency and restoration of blood flow, the pain may also have been alleviated as a result of infarction of the ischaemic segment or placebo effect... Coronary artery bypass graft does not appear to reduce the incidence of myocardial infarction in patients with chronic ischaemic heart disease. Perioperative (i.e. in the immediate post-operative period) infarction occurs in five to 10 per cent of cases but in most instances these infarcts are small... there is no evidence that coronary artery bypass surgery improves survival of patients with one or two vessel disease with chronic stable angina." (6)

Routine aspirin therapy to prevent blood from coagulating and clotting is now an established procedure for patients with arterial problems. However, aspirin spawns a "high incidence of gastro-intestinal irritation" (7) with occult blood loss occurring "in most people taking aspirin long-term, sometimes sufficient to cause iron-deficiency anemia" (8). Some cardiologists may retort that blood loss and anaemia actually reduce CAD (9). However, such an approach amounts to doing probable good but perpetrating actual harm.

### Aspirin : more damage than good?

Aspirin works by inhibiting prostaglandin synthesis (8, 10). Yet prostaglandins are believed to be potent coronary vasodilators, anti-platelet aggregation, fibrinolytic and pro-heparin, all actions that are good for the heart (11, 12). Because of their

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staunch faith in aspirin, cardiologists suppose that the particular prostaglandins that aspirin inhibits are not that important (10). However, aspirin may do more damage than good.

Cholesterol-lowering drugs may be yet another fraud foisted on unsuspecting patients. When data from the earliest trial on clofibrate, the pioneer cholesterol lowering drug, were decoded, mortality in the clofibrate-treated group was found to be 25 per cent higher than in the placebo-controlled group (13). The side-effects of cholesterol lowering drugs should be weighed against their potential advantage, which is: "As with most primary prevention interventions, however, a large number of healthy patients need to be treated to prevent a single event. For cholesterol lowering, it may be necessary to treat more than 600 patients for several years to prevent a single death or five or six nonfatal coronary events." (13)

Treating the heart is the least reliable and the most contentious aspect of therapy for CAD. Drugs that "rest" the heart offer, like all cardiac drugs, some advantage to the heart but also affect the whole body. And the transplant option is fraught with formidable problems.

## Intellectual bankruptcy

The purpose of this evaluation of the progressively ultrasophisticated field of cardiology is to highlight its inherently patchwork character. Cardiologists must own up this intellectual bankruptcy. Many patients will then pause before going broke for modern coronary care.

In his monograph of the history of coronary revascularisation, US cardiologist TA Preston devotes a chapter to "economic factors in coronary artery surgery". He concludes: "Certainly if the operation were an unqualified success in relieving the symptoms and prolonging life, it would be a justified economic luxury despite the excess

profits of some. But the real question is whether the economics of the medical situation influences the medical decision-making process with regard to the performance of the operation. The overabundance of surgeons, the dependence of most adult cardiac surgeons on coronary artery surgery for most of their business, the organisation of medical health care delivery and fee payment, and the absence of economic restraint on the consumer are all too powerful forces that make it highly likely that coronary artery surgery is performed more often in the United States than it would be under a different economic system." (14)

In closing, we draw attention to the warped thinking that the entire community - patients, doctors, scientists and journalists - has developed over the subject of coronary care. A report in *The New York Times Magazine* describes a group of cardiac patients waiting for a transplant that in 1997 cost \$150,000 for the surgery and \$30,000 a year for the medicines. Expectant patients wait for "the right person" to die, praying for bad weather, and slippery roads so that someone in sound health gets injured in the head to "become" a heart donor. It is a macabre, but real-life death wish, for an innocent unknown someone, so that you continue your tenuous hold on life. The writer observes that "Eight of 10 heart transplants recipients now survive at least one year." Surely it is ironic that the same report mentions that patients have been waiting for a donor for as long as two and a half years. (15)

## Ethics in cardiology

This essay does not aim to be needlessly critical. The medical world desperately needs informed patients to deal with enlightened doctors. As long as we are around, there will be hearts in distress, part of the natural course of aging. Cardiologists should assuage patients' symptoms and boost the morale of patients and their families. But in order to be ethical they should also indicate that the field is a

patchwork quilt that produces a wide variety of symptoms and signs without altering the essential course of the disease.

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