Would You Want to Know Your Risk of Having a Heart Attack in the Next Five Years?

Being mortal, we are all under sentence of death, but the execution of the sentence is more imminent in some of us than in others. People who suffer from angina, for example, are aware that they could suffer a fatal heart attack at any time; and even if human beings can accommodate themselves to most situations, the awareness of the threat in the back of one's mind must be disconcerting, to say the least.

Would we wish to know our statistical risk of death in the next five years? I suppose we vary in this as in everything else: there is no hard and fast rule.

The question went through my mind as I read a paper in a recent edition of the New England Journal of Medicine. The authors took a defined group of patients – those with stable angina and type II diabetes – and measured their troponin levels. Troponin is an enzyme that is found in the blood when the heart muscle is damaged by infarction, but with a new technique it is possible to measure much slighter increases in the level than previously.

The authors found that, of 2285 patients who came within the study, the 897 who had slightly raised levels of troponin had nearly twice the risk of fatal or non-fatal heart attack or stroke within the next five years compared with those who did not have a raised level. This increased risk persisted after adjustment for as many relevant variables as they could think of, so the relationship is probably a real one and not merely a statistical artifact. 27.1 per cent of patients with raised troponin levels suffered fatal or non-fatal heart attack or stroke in the succeeding five years compared with 12.9 per

cent of those with normal troponin levels.

The authors assigned their patients at random to normal medical treatment or to such medical treatment plus angioplasty or coronary artery bypass graft. What they found was that the additional treatment made no difference to the outcome. In other words, it was useless except from the economic point of view of those carrying it out. However, they did find that the risk of fatal or non-fatal heart attack and stroke was considerably increased in the small percentage of patients whose troponin levels rose by more than 25 per cent during the study.

Perhaps one day the knowledge of an increased 5-year risk of fatal or nonfatal heart attack or stroke will become useful, for progress is constantly being made. But if you were a patient with stable angina and Type II diabetes, would you want to know that your risk of fatal or non-fatal heart attack or stroke in the next five years was 29.1 per cent rather than 12.9 per cent? What would you do with this information if you had it? If the figures were 100 per cent and 1 per cent respectively, they might be of some use, for many of us want to settle our affairs before we die; but, apart from increasing our level of anxiety slightly, what use to us are the figures? Of course, if we fell into the 12.9 per cent risk group, we might feel slightly better, for, regrettably, it is a comfort to us to know that others are worse off than we.

There was a curious omission in the paper, as in many other papers of this type. Initially, 2368 patients were recruited but only 2285 of them 'were successfully analyzed for troponin concentrations.' Why were the other 83 (3.6 per cent) not successfully analysed? Were their samples lost in transit, put in the wrong bottles, mislabeled, etc.? If this is what happens during trials, with all their elaborate checks and a plethora of staff, what happens in normal circumstances? This is an important point, for it means that the benefits to be expected from medical practice in normal circumstances are

thereby slightly overestimated by comparison with the benefits found in trials.

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