Editorials

A collective failure of medical practice?

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The European Society of Cardiology has launched an ambitious programme of 11 surveys to monitor the quality of management of various forms of cardiovascular disease in Europe. They span the gamut of heart failure to stroke. The results of the first of these Euro Heart Surveys, directed at the management of prevention of recurrence of coronary artery disease, are reported in this issue[1]. The authors of the report conclude that we, as European cardiologists, are not living up to the standards of treatment that were developed and adopted, only 2 years ago, by the ESC in an alliance with other major European scientific societies. Not mincing their words, the authors conclude that the survey shows ‘that integration of coronary heart disease prevention into daily practice is inadequate, reflecting a collective failure of medical practice’. Is that a fair conclusion?

The survey, called EUROASPIRE II (European Action on Secondary and Primary Prevention by Intervention to Reduce Events), is a logical extension of an earlier European survey (EUROASPIRE I), published 3 years ago, but the methodology also reflects that of an American study, as yet not published in a definitive form. It is, moreover, a good example of a follow-up of a process of formulation and implementation of recommendations for the secondary prevention of coronary heart disease in Europe[2]. For the purposes of the EUROASPIRE II survey, David Wood and his colleagues identified clusters of hospitals, serving specified geographical areas, each with more than half a million inhabitants in 15 countries across Europe. One of the hospitals was a university hospital with interventional cardiology and cardiac surgery, and one or more were associated general hospitals that received patients with acute myocardial infarction or acute myocardial ischaemia each accounted for about a fourth of the qualifying events. Short of death, patients were therefore in the serious end of the clinical spectrum of coronary artery disease, and it is not likely that any of them wanted it to get any worse. How well, then, did we do in our attempts to prevent progression and recurrence of disease? Not as well as we all would have liked, but also not quite as bad as we all might have feared.

First, the bad news. Information essential to prevent recurrence of disease was less than complete in medical records, and it was even less complete in the discharge documents that ensure communication between hospitals and physicians in primary care. Whether or not the patient smoked, for example, was addressed in only 60% of discharge documents. The relevance of such information was, nevertheless, apparent from the interview conducted at least 6 months after the qualifying event, because about 20% of patients were still smokers. Similarly, 80% were overweight (body mass index \(>25\) kg \(\cdot\) m\(^{-2}\)), and 31% were frankly obese (BMI \(>30\) kg \(\cdot\) m\(^{-2}\)), at the time of the interview. Smoking and overweight are clearly associated with increased risk of coronary heart disease, and smoking cessation as well as weight loss are not possible if the physician does not convey to the patient how important they are. By the time the interview in EUROASPIRE II was conducted, the charts or discharge documents indicated that 12% of smokers had not been advised to stop smoking, and 43% of overweight patients had not been advised to lose weight.

What makes these findings worse, especially those concerning overweight, emerges from a comparison of the results of the present survey with those of the first survey in the EUROASPIRE series. The reader will have to go to a forthcoming issue of The Lancet for that comparison[3]. Based on the results from the nine countries participating in both surveys, the comparative study shows that the prevalence of smoking increased slightly from 19% to 21% during the 3–4 years that elapsed between the two studies. Smoking rates increased in young patients, especially. The prevalence of overweight also increased slightly, from 78% to 81%, and frank obesity increased
satisfactorily high according to the second. Use of antiplatelet drugs was already 30% of patients in the 58%. Similarly, ACE inhibitors were prescribed to 63% of patients. This change comprised an almost hyperlipidaemia approximately doubled from 32% to 63% of patients. Admit
tedly, patients may have received good advice that, for one reason or another, was not recorded, but the authors are right to conclude that the data, as they stand, indicate that too many opportunities for reducing the risk of recurrence of coronary heart disease by non-surgical and non-pharmacological measures have been missed.

The good news, if that is the appropriate term, is that we are using good drugs more liberally. The comparison of the two EUROASPIRE surveys suggest a welcome propensity to use drugs in greater harmony with the state of the evidence from randomized clinical trials. Pharmacological treatment of hyperlipidaemia approximately doubled from 32% to 63% of patients. This change comprised an almost threefold increase in the use of statins, from 19% to 58%. Similarly, ACE inhibitors were prescribed to 30% of patients in the first survey and to 43% in the second. Use of antipatelet drugs was already satisfactorily high according to the first survey, and it was virtually unchanged by the time of the second survey (86%). A reciprocal change in the use of \( \beta \)-blockers and calcium antagonists reflected greater appreciation of the state of the evidence, since use of \( \beta \)-blockers increased from 54% to 66%, whereas use of calcium antagonists fell from 36% to 26%.

Yet another set of data indicate that some of us might have under-estimated the quality of routine clinical work inside and outside hospitals. Until recently there have been no data mandating prescription of lipid-lowering drugs before discharge after an acute myocardial infarction, but there was concern that statins, especially, might not be started outside hospital if they were not started before discharge. The data from EUROASPIRE II suggest that we have exaggerated this particular concern, because the use of lipid-lowering drugs increased from 43% at discharge to 61% at the time of the interview at least 6 months later.

There are two reasons for concern about the state of the pharmacological management of patients with serious coronary heart disease, however. The first is that we are still not using drugs enough. The authors draw attention to this concern, and it is a familiar one: recommended levels of blood pressure and blood lipids were not achieved in enough patients. At the time of the interview, more than half of patients had blood pressure exceeding 140/80 mmHg, virtually irrespective of whether or not they had been given drugs that lower blood pressure. Similarly, 58% of all patients had concentrations of serum cholesterol exceeding 5 mmol. l\(^{-1}\), and of those given lipid-lowering drugs, almost 50% continued to have cholesterol >5 mmol. l\(^{-1}\).

Not all patients should be on all drugs. Some should, for various reasons, not be on any. And only over-treatment could bring all patients below recommended levels of blood pressure and serum cholesterol. Having said that, however, the data are clear. There is substantial under-treatment, and the degree of under-treatment varies substantially between countries. In Belgium, more than half of patients were not on lipid-lowering drugs, and 77% continued to have cholesterol >5 mmol. l\(^{-1}\). In contrast, 76% of Swedish patients were on lipid-lowering drugs, and 40% of them continued to have cholesterol above recommended levels.

This range of treatment frequencies is very large, and even in Sweden there was evident under-treatment. Nevertheless, there is probably no such thing as one correct level of therapy, and we should be tolerant of variations in medical practice. Indeed, one of the purposes of the Euro Heart Survey programme is to understand European diversity in terms of risk of disease and in terms of diagnostic and therapeutic practice. Moreover, it has been an explicit purpose of the European recommendations for prevention of coronary artery disease in clinical practice\(^ {23} \) that they should be adapted to national traditions and resources. Over-treatment or, more commonly, under-treatment is not a failure only of medical practice. Policies for reimbursement of expenditures for lipid-lowering drugs are restrictive in several European countries including Belgium, and Belgian physicians have not had the same opportunities to practice evidence-based medicine as their Swedish colleagues. The under-treatment demonstrated in EUROASPIRE II is therefore also a reflection of failed health care policies.

The second reason for concern about the current cardiovascular drug scene is that we are using drugs too much. Thus, there is a paradox. Drugs are not being given to enough patients or in high enough doses in consideration of reasonable goals of blood pressure and cholesterol, but they are also being used too much in consideration of reasonable alternatives. The overall impression from the two EUROASPIRE surveys is that a pattern of unchanged (smoking) or increasing prevalence (obesity) of risk factors, due to the way we live, has emerged in Europe, and that
drug therapy simultaneously is replacing efforts to change that way of life. Have we as cardiologists, and have we as citizens of Europe, accepted drugs as a way out of a complex set of circumstances that are conducive to the appearance and maintenance of coronary heart disease?

If that is the case, it is a collective failure not only of medical practice and health care policy. It is a failure of broader policies as well. They include policies that are supposed to regulate agriculture and education. That is because agricultural policy, as an example, determines the production of tobacco and the production of animal fats, and educational policies determine, as another example, the degree to which we teach our children to be physically active. The EUROASPIRE II data, and a plethora of data from other epidemiological studies, therefore suggest a much larger context in which to consider the flow of patients with coronary heart disease.

References

