

WORKSHOP 13-14 SEPTEMBER 2001

Primary prevention of coronary heart disease through self-medication with cholesterol-lowering agents

Introduction

Coronary heart disease is the leading cause of death in men over the age of 45 years and women over 65 years throughout Europe. Cardiovascular diseases account for considerable disability and loss of productivity and, in the context of an ageing population, play a major part in the increasing costs of healthcare in the European economy¹.

There is now overwhelming evidence that reducing risk factors through lifestyle changes and therapeutic interventions can slow the development of coronary heart disease both before (primary prevention) and after (secondary prevention), the first clinical event such as myocardial infarction².

Guidelines on coronary heart disease risk

The last ten years have seen a major shift away from addressing individual risk factors for coronary disease (e.g. smoking, hypertension) with individual guidelines, towards an assessment of absolute risk, based on an integrated evaluation of all relevant risk factors². Although this has the potential to be complicated, risk assessment tools designed as tables, charts and software programs are in fact simple for healthcare professionals to use.

Reducing cholesterol as a strategy for secondary prevention of coronary artery disease (i.e. after a first coronary event) is a clear priority in all the major guidelines dealing with heart disease. There is also consensus that patients with raised cholesterol and a high risk of suffering their first coronary event should also have their cholesterol reduced as part of a risk-reduction strategy. While there is clear benefit to primary prevention at levels of risk higher than 1.5% per year, this would mean that a substantial proportion of the population becomes eligible for treatment³. Table 1 below illustrates this for the UK population.

Table 1.

Proportion of UK population between the ages of 35 and 69 with a predicted risk factor of 1.5%, 3% and 1.5-3% per year, and who have a serum total cholesterol level >5.5mmol/l.
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Risk level	Men	Women	Total
1.5%	26.9%	8.6%	19.6%
3.0%	5.7%	0.4%	3.4%
1.5% - 3.0%	21.2%	8.2%	16.2%

National guidelines prioritise cholesterol lowering in primary prevention for those at very high risk (3% and above) [e.g. in the UK: Standing Medical Advisory Committee – the Use of Statins: www.doh.gov.uk/cmo/statins2.htm]. However, the treatment of those at lower risk is generally acknowledged as desirable when resources allow.

If people with raised cholesterol and a predicted annual risk factor of greater than 1.5% were aware of the fact, it is likely that a proportion would choose to adopt strategies to reduce their risk. For some, effective cholesterol lowering medications may be necessary and this could be an option for self-treatment.

Screening for high cholesterol in the population

As well as the costs of treatment for this lower risk group, there is also the cost of identifying them through screening. Population screening (for example of those above 45 years) in the physician-led primary healthcare environment would produce a considerable strain on this resource. Since there is not a clear consensus to treat and reimburse treatment at the lower levels of risk, there is currently no incentive to undertake screening in doctors' offices.

The popularity of herbal remedies and foods that make 'heart healthy' claims suggest that there is a widespread interest in strategies to reduce coronary heart disease in the general population. At present, this is not usually informed by any assessment of risk and the claims that people rely on are often not evidence-based.

If treatments with proven efficacy in reducing the level of coronary risk were available for self – medication this situation might change in the following ways:

- Screening for primary prevention populations at relatively low risk (e.g. >1.5% and < 3.0% annual risk) becomes logical because there is now a choice available to them should they need it. This screening could also logically occur where people access self-medication i.e. in pharmacies.
- Assessment of risk should lead to adoption of strategies tailored to the individual. Clearly, those at high risk or with co-existing occult diseases (e.g. hypertension and/or diabetes) would be directed into physician care. However, those with high cholesterol or smoking as risk factors could be managed in the pharmacy setting with advice on diet, exercise, smoking cessation and with access to effective cholesterol lowering medication if necessary.

Collaborative Care through Pharmacies

Primary prevention of coronary artery disease through self-care does nonetheless require the intervention of a health care professional to assess risk, advise on action and monitor progress. Pharmacists are currently an underused resource for preventative medicine but experience with smoking cessation suggests that they may be very effective in such a role.

In order to offer a complete service it is likely that pharmacies will need to be specially equipped to be a 'healthy heart' centre. Testing equipment for hypertension, diabetes and cholesterol would be necessary together with trained staff and adequate privacy. Record keeping would be an important aspect of this service, both for monitoring progress and to record interventions and adverse events.

Discovery of occult diseases (e.g. hypertension or diabetes) or very high coronary risk would require physician referral and this should be facilitated by the relationship that generally already exists between pharmacist and local primary care physicians. When medication is necessary, records of this should also be shared with the individual's doctor to preserve the value of the single patient record.

For those individuals with moderate risk and risk factors (such as smoking or raised cholesterol) that can be managed through pharmacies, there should be no impact, other than record sharing, on physician resources. However if targets (e.g. adequate cholesterol reduction) are not met, then physician referral remains an option.

The integration of the pharmacist into preventative health strategy could provide substantial benefits to public health but with little impact on healthcare budgets and resources. This model of 'collaborative care' between pharmacists and primary care physicians has the potential to be applied to other indications that require testing or long term follow up.

Summary

Coronary heart disease is one of the commonest conditions afflicting the European population and is a major cost in terms of mortality and morbidity and as well as economically. Effective preventative measures and treatments are available, but currently only those at high risk are targeted for these interventions. On epidemiological and clinical grounds, there are clear benefits to treating at lower levels of risk to prevent the first coronary event in an individual. However to achieve this would require screening and treating a substantial proportion of the population and this would place a considerable burden on the physician-led primary care resource.

Although coronary heart disease is serious, those at moderate risk (i.e. an annual risk of a coronary event of $>1.5\%$ – $<3\%$) are not actually ill but look and feel well. Interventions in these individuals should aim to continue their sense of well being and need not involve a doctor and the consequent labelling of healthy people as 'patients'.

Pharmacies are a logical setting to provide screening, advice and self-treatment for this essentially normal population. Pharmacies offering preventative care will need to be adequately equipped in terms of space, testing technology and trained staff, and with the capacity to keep records and share these with local primary care physicians. In this setting people should be offered the full range of effective treatment options tailored to their risk factors and response. There are clear targets for cholesterol reduction and this could be monitored in a pharmacy setting.

The individual generally meets the costs of self - care and many people already choose special foods or other supplements in an attempt to prevent disease. However, if self-care requires long-term medication, it may be necessary to consider other funding options for those that cannot afford to treat.

Self-medication to preserve health, managed through pharmacies, has the potential to provide major benefits to public health and to reduce healthcare costs. Cholesterol lowering to prevent coronary heart disease appears to be a good intervention to test this model.

References

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