MEDICAL PRACTICE

Contemporary Themes

Strategies for reducing coronary heart disease and desirable limits for blood lipid concentrations: guidelines of the British Hyperlipidaemia Association

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Mortality from coronary heart disease has changed appreciably in several countries over the past two decades. Some countries, such as the United States, Finland, Australia, and Israel, have shown dramatic reductions while others, mainly in eastern Europe, have shown the opposite trend. Such shifts in the mortality from this disease over only a short time are partly the result of changes in the prevalence in the community of the three main risk factors: cigarette smoking, high blood lipid concentrations, and hypertension. Decreases in their prevalences have been attributed to the success of national policies aimed at the general population to stop cigarette smoking and to promote the consumption of a diet low in saturated fat. To reduce the prevalence of premature coronary heart disease these policies must be complemented by strategies designed to identify and treat those at high risk. Selecting criteria for intervention in individual cases is a question that has been addressed by experts and consensus policies and policies for detecting and controlling hyperlipidaemia have been published for the United States,[1,2] Europe,[3] and Britain.[4]

The British Hyperlipidaemia Association, aware of these statements, has prepared its own guidelines, which reflect the views of physicians running lipid clinics across the country. Although recognising the fundamental importance of lowering plasma cholesterol concentrations in the British population as a whole, the association has focused primarily on the management of patients with hyperlipidaemia in general practice. We propose that the following procedures be used to define and treat hyperlipidaemia in Britain.

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Strategy for the general population

The British Hyperlipidaemia Association advocates adopting the approaches described in the reports of the Committee on Medical Aspects of Food Policy and the National Advisory Committee on Nutrition Education, which were designed to improve health oriented behaviour in the entire population.[5,6] These emphasised stopping cigarette smoking, improving nutrition, reducing body weight towards the ideal weight, and promoting regular exercise; the availability of appropriate dietary advice is central to such approaches.

The association recognises that the distribution of blood cholesterol concentrations in the United Kingdom is too high. As risk of coronary heart disease is comparatively low at concentrations of $\leq 5{\cdot}2$ mmol/l[7] this value should be taken as the optimal value for subjects in the general population.[1-3]

Strategy for individual subjects and those at high risk

A strategy for individual subjects, which would complement that for the general population, would be facilitated if all adults had their blood lipid concentrations measured at least once, preferably before the age of 30. Those found to have plasma cholesterol concentrations greater than 5·2 mmol/l but below 6·5 mmol/l should receive general dietary counselling and advice on other risk factors when appropriate. Those with cholesterol concentrations greater than 6·5 mmol/l should receive clinical care, except when the raised total cholesterol concentration is solely due to an increase in high density lipoprotein cholesterol concentration (above 2·0 mmol/l). We emphasise that for any given cholesterol concentration the relative risk is less in women than in men and that the extent to which the risk is reduced by intervention diminishes with increasing age.

Treatment should always begin with reinforcement of the dietary advice outlined above. Less than 30% of energy from food should come from fat, with saturated fat contributing less than 10% of the total. Foods rich in soluble fibre are recommended.

Treatment with drugs that lower lipid concentrations is rarely justified if the plasma cholesterol concentration is below 6·5 mmol/l; and comparatively few patients with values within the range 6·5-7·8 mmol/l need pharmacological intervention. When treatment with drugs is introduced it should always be done in conjunction with changes in diet. Such treatment is most commonly required for patients with familial hyperlipidaemias who have baseline plasma cholesterol values exceeding 7·8 mmol/l, possibly in association with hypertriglyceridaemia. The aim of treatment is to achieve the target plasma cholesterol concentration of 5·2 mmol/l. This is particularly important for younger patients (aged less than 30), for those with familial hypercholesterolaemia or a family history of coronary disease, or if other risk factors such as diabetes or hypertension are present. The potential risks associated with prolonged treatment with drugs should always be considered.

Treatment of hypertriglyceridaemia remains controversial, and selection of a triglyceride concentration above which intervention is necessary is arbitrary. Mild hypertriglyceridaemia (3·0-6·0 mmol/l) is commonly the result of obesity or overindulgence in alcohol. If the fasting serum triglyceride concentration persists above 3·0 mmol/l when these and other underlying causes have been dealt with specific intervention may be warranted, especially if the high density lipoprotein cholesterol concentration is reduced (less than 1·0 mmol/l). Vigorous treatment by diet, and if necessary with drugs, is appropriate when triglyceride values are $\geq$6·0 mmol/l as these are associated with an increased risk of pancreatitis.

Recent studies have shown the value of a combination of changes in diet and treatment with drugs in the secondary prevention of coronary heart disease.[8,9] Special attention should therefore be paid to the treatment of patients with hyperlipidaemia and coronary artery disease who have undergone bypass grafting or angioplasty.

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(Accepted 26 October 1987)

Risk assessment: its role in the prevention of coronary heart disease: recommendations of the scientific and medical advisory committee of the Coronary Prevention Group

The Coronary Prevention Group believes that population and individual or high risk strategies are complementary and not alternative approaches to the prevention of coronary heart disease. The greatest benefits are likely to come from population measures. The group endorses the view that risk assessment is an important part of reducing the burden of coronary heart disease in the community and it recognises the existence of current examples of good practice.

Recommendations

- Appropriate risk assessment should be carried out at general practice and hospital level by obtaining a family history of coronary heart disease and related disorders and assessment of smoking habits. The blood pressure of all adults should be tested at least every five years.
- A serious national discussion is urgently needed about the assessment of risk factors in children and young people in the United Kingdom.
- Priority should be given to making blood cholesterol measurement available to those at particularly high risk of coronary heart disease.
- The Coronary Prevention Group recognises that there will be increasing popular demand for serum cholesterol testing. Such testing should be available on request. A person's desire to know his own blood cholesterol concentration may well help him to modify his future risk.
- All forms of risk assessment, including serum cholesterol measurement, should be accompanied by facilities for appropriate advice on diet, smoking habits, exercise, etc.

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Copies of the group's policy statement are available, price 50p, from the Coronary Prevention Group, 60 Great Ormond Street, London WC1N 3HR, on receipt of a large stamped addressed envelope.