

Medicine for Managers

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Coronary Heart Disease

Coronary Heart Disease (CVD) kills more than 100,000 people in the United Kingdom every year. Nearly one-and-a-half million people have angina and nearly 300,000 have a heart attack annually. There are QOF and other targets to try to reduce these numbers.

The disease is the result of thickening and narrowing of the arteries supplying the heart and surrounding structures with blood carrying oxygen and nutrients. The usual cause of the arterial thickening is the deposition of thick fatty plaques in the artery walls. This is called atherosclerosis. Its presence compromises blood flow by increasing resistance. There are a number of factors which enhance the risk of CVD. Being old, inheriting a predisposition to the disease, and being male increase the risk. Other factors which are influenced by lifestyle include high blood pressure, raised cholesterol (and specifically the 'bad' cholesterol – low density lipoproteins, LDL), smoking, obesity, diabetes, poor nutrition and lack of exercise. The risk of CVD rises with increased blood pressure or cholesterol and it advances rapidly in patients with poorly

controlled diabetes. The disease has its origins in childhood and evidence of atherosclerotic change may be present in up to one in three young people by the age of twenty. In the UK the specific use of targets and the QOF now ensures that most patients are on risk reduction programmes and over 80% of CVD events occur in those patients who are not targeted in the current prevention strategy. Indeed dramatic reductions in the current rate of heart disease could be achieved by simple lifestyle improvements and it is essential that it is introduced in childhood and maintained throughout life. Up to eight QOF points are available if up to 70% of the patients newly diagnosed with hypertension, aged 30-74, have a face-to-face cardiovascular risk assessment using a recognised tool (e.g.

A major challenge exists to reduce coronary heart disease deaths. A variety of new initiatives should help to control the worst ravages of the disease

JBS2, QRISK or Framingham). QRISK is the favoured assessment tool. A further 5 points are available if 70% of hypertensives receive lifestyle advice on physical activity, smoking alcohol and diet in the preceding fifteen months.

Patients with CVD may experience episodes of angina (chest pain typically induced by exercise and relieved by rest), breathlessness, tiredness, lethargy, dizziness, irregular heartbeat and nausea. Clues to the presence of CVD are often obtained during routine screening checks which are undertaken in GP surgeries when raised blood pressure or cholesterol or diabetic disease may be identified. Unfortunately high blood pressure and raised cholesterol are without symptoms and in undiagnosed patients the first sign of the disease may be a heart attack (or stroke or kidney failure).

A variety of investigations can be used to identify the nature and extent of the disease. Blood pressure measurement and blood tests including fasting glucose and cholesterol give initial clues. Any suspicion of heart disease can be followed up by electrocardiogram, exercise stress testing, echocardiogram, angiography (injecting dye into the arteries to outline them) and scanning. Once a diagnosis is made strict attention to the lifestyle factors must be adopted but many patients will require medication to improve the heart's performance or some sort of surgical intervention in the form of coronary artery bypass surgery or reconstruction of the

heart arteries with the insertion of stents. Angioplasty is a technique used to dilate an area of arterial blockage with an inflatable balloon. A stent is a stainless tube which is inserted into the diseased artery and is expanded, pushing itself against the inner wall of the coronary artery thereby holding it open.

Assessment of risk is now being done using the Joint British Societies (JBS) Guidelines which is replacing the Framingham score. It is being incorporated into GP assessments. It includes lifestyle factors, blood pressure, cholesterol and blood sugar and gives a percentage risk.

A major challenge exists to bring CVD under control. The new parameters being introduced in surgeries to combat the multiple causative factors and to address such problems as obesity will hopefully control the worst ravages of the disease and will improve life expectancy.

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