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Heart Disease in Women *By Dr. F Stewart & Dr. C Wasywich*



The Problem

Cardiovascular disease is the leading cause of death for women in New Zealand. Coronary heart disease mortality in Maori is twice that rate of New Zealanders of European origin with rates in Pacific people and Indian people also higher. With the escalation of diabetes incidence in these groups the ethnic disparity is expected to widen. Mortality rates in women are similar to men but women tend to develop coronary problems and die from heart disease on average 10 years later than men.

Identifying coronary disease in women can be difficult. Only about 75% of women who have a myocardial infarction present with a typical history of chest pain compared to about 85% of men. There is a lower perception of risk for myocardial infarction in women. In a telephone survey 44% of women thought that they were unlikely to have a myocardial infarction in their lifetime and 55% perceived that their risk of breast cancer was equal or greater than their risk of heart disease. In NZ women have been shown to present later than men to hospital with an acute myocardial infarction due to a delay in recognising the symptoms, self-treatment and obtaining reassurance from others first.

Diagnosis

It is often difficult to identify women with coronary heart disease. The Women's Ischaemic Syndrome Evaluation trial found that typical symptoms of chest pain were more common in older women. However, common atypical symptoms were fatigue, sleep disturbance and shortness of breath particularly on exertion. Functional limitation to < 4.7 Mets (the ability to carry shopping up 2 flights of stairs) predicted 67% of future events.

Predictors of higher cardiovascular risk included the presence of diabetes (this results in a mortality risk for age similar to men), metabolic syndrome, elevated hsCRP, Hb <110, premenopausal systolic BP elevated (RR 5.4) and premenopausal oestrogen deficiency (anovulatory cycles RR 7.4).

Women tend to be more symptomatic and functionally limited than men from chest pain. Persistent symptoms of chest pain even in the presence of a normal coronary angiogram has a worse prognosis than women whose chest pain resolves with a normal coronary angiogram. Management of these women is difficult. Women are more likely to experience coronary vasospasm that usually responds well to amlodipine and nitrate

therapy and are more likely to have diffuse coronary disease or small vessel disease with apparently normal coronary angiograms. Diffuse coronary disease can now be detected with cardiac CT, IVUS (intravascular ultrasound) or OCT (Optical Coherence Tomography) and may respond to stenting although the treatment is usually medical.

Management

Management of menopausal symptoms especially vasomotor symptoms in women is challenging. Hormone replacement therapy has been associated with an increased risk of stroke, and with combined oestrogen and progesterone an increased risk of cardiac events. This risk is particularly significant in women with established coronary disease. The effect is likely to be due to an increased thrombotic risk and increased inflammation due to the HRT. Unfortunately women who have severe persistent vasomotor symptoms have been found to have an increased risk of stroke, increased aortic calcification (a sign of developing vascular disease) and reduced flow mediated arterial dilatation (reduced compliance in the arterial walls). These are all independent markers of increased risk for a cardiovascular event. A review of the Women's Health Initiative study has shown that women with moderate to severe hot flushes had a higher rate of stroke and coronary events when treated with HRT compared to women with no or mild flushes. There is no established role of any HRT preparation for the prevention of coronary disease.

Management of established coronary disease in women is the same as for men. We now have good evidence that statins are equally effective in women as in men. NZ data shows that women are treated equally with men once they present with a cardiac event to hospital unlike many other parts of the world. The challenge remains increasing the awareness of a woman's cardiac risk so that she will present with symptoms or for risk factor management before an event occurs.

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