Gender and myocardial protection

Host School/Institute: Department of Cardiology, Northern Clinical School
Project Code: NCS7

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Description of Project:

Men are more likely to have a coronary event than women (Access Economics 2005) and die from coronary heart disease (CHD) at an earlier age than women. Premenopausal women have a relatively low risk; after menopause risk increases, suggesting oestrogen is cardioprotective. However, the mechanisms whereby oestrogens and androgens modulate cardiac (patho)physiology are poorly understood, and there is considerable controversy over the cardioprotective effects of oestrogen administration. Slight reductions in androgen levels have also been reported after menopause, although there is even less information about the direct cardiac effects of physiological levels of androgens. The aim of this study is to establish the role of gonadal steroids in modulating ischemia-reperfusion cardiac damage, a currently conflicted area. The proposed studies are part of a larger project to determine cardioprotection in an experimental animal model of myocardial infarction. The summer scholar will be supervised in the laboratory techniques required for these studies which involve animal handling and collating and analysing the results.

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