Polycystic Ovary Syndrome: An Opportunity to Reduce the Incidence and Burden of Ischemic Heart Disease among Young Women?

Kristi Panchuk\textsuperscript{a}, RN, MN, PhD Student; Martha Mackay\textsuperscript{b}, RN, PhD; Karin Humphries\textsuperscript{c}, MBA, DSc; Anthony Cheung\textsuperscript{d}, MD; Priscilla Taipale\textsuperscript{a}, RN, MSN, PhD Student

\textsuperscript{a}UBC School of Nursing, Vancouver, BC
\textsuperscript{b}Clinical Assistant Professor, UBC School of Nursing; The Heart Centre, St. Paul’s Hospital
\textsuperscript{c}Associate Professor, UBC Faculty of Medicine, Vancouver, BC
\textsuperscript{d}BC Women’s Centre for Reproductive Health

Background. Over the past 40 years, improvements in cardiovascular (CV) mortality have been of greater magnitude for men than for women. Most concerning is the high rate of mortality in young women who experience ischemic heart disease (IHD). Since IHD is largely preventable, it is imperative that researchers identify the age- and sex-specific conditions that contribute to IHD. One such condition may be polycystic ovary syndrome (PCOS), which affects between 7% and 18% of women of reproductive age. Many studies demonstrate that PCOS worsens women’s risk profiles for CV disease, particularly when risk factors persist beyond menopause. However, intermediate risk factors do not necessarily translate into poor CV outcomes and it is unclear if PCOS contributes to IHD among younger women. This literature review outlines how current evidence about the effect of PCOS on CV outcomes is inconclusive because of the challenges associated with diagnosing PCOS during and after midlife, the confounding effect of obesity on the manifestations and sequelae of PCOS, and the relatively low incidence of IHD among women under 65 years of age.

Purpose. We are planning a study that will address the research question: Are women with premature IHD more likely than controls to have had signs of PCOS during their reproductive lives? The case–control design, comparing the prevalence of putative PCOS among women with known acute coronary syndromes (ACS) with that among women without ACS, is novel.

Implications. The findings from this study may identify which young women would derive the most benefit from early screening, to reduce the incidence and burden of CV disease and to help formulate primary and secondary prevention strategies.