

FACULTY ORATION

Ethnic Variations of PCOS: A Paradigm Shift in **Women's** Health

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I am deeply humbled by the singular honour bestowed upon me by the Faculty of Medicine, Colombo to deliver the Faculty Oration 2011. In keeping with our University's vision "to be a centre of excellence that creates new knowledge", I shall do my best to briefly share with you how our local research encouraged the international medical community to adopt a more holistic approach to the practice of Women's Health. I dedicate this lecture to our magnificent teachers, mentors and colleagues who inspired us to carry the mission forward from our pioneers. They supported us to speak and write of a holistic approach to Medicine, a connected view of education and service and take on the role of the dedicated Sri Lankan academic and clinician. I salute them.

Polycystic ovary syndrome (PCOS) is the commonest endocrine disorder of young women. It has appreciable impact on their wellbeing and quality of life, fertility and reproduction, and most importantly on long term metabolic and cancer risks. Currently well acknowledged worldwide as a "condition of our times", PCOS was described in the 18th century as a hormonal oddity. Despite an explosion of research on PCOS since the late 1980s, there was a notable paucity of data from the South Asian region. Pioneering a sustained commitment to the study of PCOS in South Asian women from sabbatical days in the late 1990s, has paved the way to show that South Asians manifest at a much younger age with more severe symptoms than white Europeans. The finding of a markedly greater insulin resistance in these young South Asians than the older and heavier white Europeans was further ratified by the study of a large database of indigenous Sri Lanka women (n=469) with PCOS. A sizeable proportion of Lankan women were afflicted by the metabolic syndrome from their 3rd decade of life. A constant finding of central obesity, along with hypertension and abnormal lipids, having greater metabolic significance than

BMI, added a new dimension to the phenotype of PCOS in South Asians. We also found that ageing has a major impact on worsening of the metabolic problems, whilst gestational diabetes is closely interwoven with PCOS. These landmark findings inspired others, particularly from mainland China and Thailand, to study the Asian woman with PCOS in greater depth. It further inspired us to study the community prevalence of PCOS in the Gampaha District (6.3%); which was published in American Journal of Epidemiology in 2008. This study is now widely acknowledged as the most scientific approach to the determination of the epidemiology of PCOS conducted worldwide since the 1990s. Dissemination of these findings in terms of ethnic variations of the one and the same condition, culminated in the 1st Asian meeting on PCOS held in Hong Kong in 2009. Sharing of country specific data helped further confirm a Asian phenotype but with substantial difference between South Asians *versus*. South-East Asians and East Asians.

We also found a notable “culture of silence” among young affected pre-marital rural women in Sri Lanka, determined by socio-cultural influences, with a significant affection of their quality of life by the hirsutism rather than their obesity. This added a new dimension to approaching the problem of PCOS among South Asian women; in that they require particular attention to metabolic complications by mandatory screening pre-conceptionally, weight reduction and maintenance through healthy diet and lifestyle through education and motivation and appropriate attention to cosmetics. Since 2007, the Royal College of Obstetricians & Gynaecologists (RCOG), European Society of Human Reproduction & Embryology (ESHRE) and American Society for Reproductive Medicine (ASRM) dedicated a session to discuss ethnic variations in the expression of PCOS in their study group sessions. This aspect is highlighted in the 3rd Consensus PCOS Workshop Group report of ESHRE/ASRM due to be published shortly. Neighbouring India also recognised the importance of our findings and invited us to share our findings and research methodology at scientific fora organized by Endocrinologists and Gynaecologists alike. I am indeed grateful to our Faculty for providing me this opportunity to share these thoughts with my teachers, peers and students.

What does the future hold? Collaborative research on assessing biomarkers of the metabolic derangements and genotyping with regional networking on the impact of PCOS on pregnancy outcome, long term follow up of mother and offspring, prevention and control of the metabolic syndrome are forthcoming.

A multi-disciplinary approach to research, a sustained commitment from collaborators and funding bodies, painstaking data collection and analysis, dissemination of results through publication and presentation with translation of research findings into practice to benefit afflicted young women who suffer in silence have been our sheet anchor. There is more to learn and more to do. May our Faculty grow from strength to strength!