

Sociodemographic Factors Affecting Early Pregnancy Metabolic Syndrome Among Pregnant Women in Anuradhapura District

Jayasinghe H. M. I. U.¹✉ Dissanayake A. K.², Agampodi S. B.¹

Abstract

Research on early pregnancy metabolic syndrome (MetS) is scarce in the local context. Recent scientific evidence shows that MetS in pregnant women has adverse implications on pregnancy outcomes. Therefore, exploring the epidemiology of MetS in different parts of the world is crucial in understanding its effect on pregnancy and its outcomes in specific obstetric populations. On this background, our study aimed to evaluate the sociodemographic characteristics among pregnant women with MetS in their early pregnancy, in rural Sri Lanka. We analyzed the baseline sociodemographic data collected from participants of the Rajarata Pregnancy Cohort to achieve this objective. Pregnant women registered before the completion of 12 gestational weeks and those below 18 completed years were included for the analysis. Women with a history of myocardial infarction, stroke, hypothyroidism, autoimmune disease, asthma, and who are on long-term steroid therapy were also excluded. Diagnosis of MetS was made by International Diabetes Federation (IDF) criteria. 2639 participants were included in this analysis. Their mean age was 28.1 years (SD-5.4) and the median period of amenorrhea was 8.0 weeks (IQR-3). Of them, 143 pregnant women were identified as having MetS according to IDF criteria (5.4%, 95%CI-4.6-6.4). A higher prevalence of MetS was reported among ethnic Tamils (18.5%, CI-8.2-36.7) and women with second or more gravida (6.2%, CI-5.2-7.4). Kahatagasdigiliya, Kekirawa, Galenbindunuwewa, and Ipalogama MOH areas had MetS prevalence of 8.8%, 8.6%, 8.3%, and 8.2%, respectively, while Thalawa had the least prevalence (1.2%). In the bivariate analysis, the prevalence of MetS was significantly associated with age ($p<0.001$), ethnicity ($p<0.001$), gravidity ($p=0.01$), and the area of residence ($p=0.04$). However, the multivariable analysis shows that only ethnicity and age at conception are the predictors of having MetS at the first visit of this obstetric population. The observed differences in geography and gravidity were due to the confounding effect of ethnic distribution and age at conception. In conclusion, the significant prevalence of MetS among this rural Sri Lankan obstetric population and the associated predictors of age and ethnicity warrants further extensive evaluation for MetS in this population to uplift the health of females.

Keywords: *Antenatal, metabolic syndrome, pregnancy, socio-demographic predictors*

¹Department of Community Medicine, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka

²Department of Gynecology and Obstetrics, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka

✉ Corresponding author: hmiujayasinghe@gmail.com