Abstract 9

Impact of changes in diet and lifestyle patterns on the occurrence of gestational diabetes mellitus among pregnant women attending obstetric clinic, Teaching Hospital, Jaffna

Ragavi U[1], Myvily N[1], Yatheeshan S[1], Sangeerthanan I[1], Shehara NKA [1], Arasaratnam V[2], Coonghe PAD[3]

[1]*Faculty of Medicine, University of Jaffna*
[2]*Department of Biochemistry, Faculty of Medicine, University of Jaffna*
[3]*Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna*

Background and objective: Gestational Diabetes Mellitus (GDM) commonly occurs in pregnant women; leading to severe complications to both mother and the foetus. Understanding the role of dietary and lifestyle pattern in the development of GDM is crucial for better risk assessment and management. This study aimed at determining the impact of dietary and lifestyle changes on the development of gestational diabetes by assessing the dietary and lifestyle changes before and during the current pregnancy in women with and without GDM.

Methods: This is a hospital-based descriptive analytical study carried out at the Obstetrics Clinic, Teaching Hospital, Jaffna. An equal number of GDM (204) and non-GDM (408) women at the third trimester were enrolled using random sampling method. To ensure unbiased selection, pregnant women in each list of the daily clinic admission book were randomly selected using systematic sampling method. An interviewer-administered questionnaire validated by supervisors was used to collect information on socio-demographic details, pre-pregnancy BMI, dietary patterns, physical activity levels, alcohol use, smoking, family support and previous gestational diabetes, before and during the pregnancy. Data was analysed using SPSS version 21.

Results: Majority were between 19 and 34 years (53.1%), with a mean age of 28.68 (±4.91) years, within BMI 18.5 to 24.9kgm^{-2}, unemployed, and had education above G.C.E (O/L). Higher number of the GDM mothers were non-vegetarians (50.3%, $p>0.05$) consumed fast-food (64.5%, $p=0.001$), sugary beverages (61.2%, $p=0.03$), consumed frequent meal (51.7%, $p=0.14$) while were highly concerned eating healthy food ($p<0.001$). Mothers with GDM consumed less amounts of fruits, vegetables, green leaves, cereals and legumes (71.4%, $p=0.036$); 83.8%, $p<0.001$; 68.9%, $p=0.001$ 84.6%, $p=0.001$ respectively), water (45%, $p=0.21$), Women with GDM consumed starchy foods (56.2%, $p=0.37$), and fatty foods (49.4% $p = 0.37$) in high amount. Women with GDM, reduced regular exercise (51.6%, $p=0.742$) and daily activities (62.9%, $p=0.008$). Family support was low to the women with GDM (71.4%, $p=0.001$).

Conclusion: This study showed that unhealthy eating habits and reduced of physical activity increased the risk of developing GDM. Pregnant women must be advised to include fruits, vegetables, grains, and legumes while avoiding fast food and sugary drinks. Further should be encouraged to carry out regular physical activity.

Keywords: gestational diabetes mellitus, life style modification, healthy diet, physical activities, maternal and foetal health