A Cross-Sectional Study Based On Association Between Dietary Intake And Prevalence Of Gestational Diabetes Mellitus In Urban Areas Of Beawar

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Abstract-

Background & objectives- *During pregnancy, it's essential to eat a solid, adjusted diet and gives child proper nutrients to grow and develop. Diet can influence the health of the baby and can likewise impact a baby's wellbeing into adulthood. In the event that a developing child is deficiently fed in the womb, this expands the risk of coronary illness, diabetes and hypertension in adulthood. The aim of present study is to evaluate the effect of proper diet management in pregnancy on prevalence of Gestational diabetes Mellitus in Beawar.*

Materials and Methods- *Data was collected from govt. and private hospitals like Amrit kaur hospital, private maternity homes, primary health centers and anganwadies etc. A total no of 300 women were given a well prepared questionnaire to examine their dietary habits during pregnancy. The data were analyzed using statistical software.*

Results- *The overall Prevalence of GDM was 12.66% in which 42.10% (22) from urban areas and 57.89% (16) from Rural areas of Beawar.*

Interpretation &Conclusion- *This study concludes a higher incidence of GDM with improper management to Diet. Study highlights the compulsion for developing awareness about GDM and proper nutrition during pregnancy.*

Keywords- Gestational Diabetes Mellitus, Prevalence, Nutrition, Dietary habits etc.

I. INTRODUCTION

Gestational Diabetes Mellitus(GDM) refers to the condition that occurs when a woman experiences glucose intolerance for the first time during pregnancy. GDM become major health concern and is expanding day by day all over the world. The latest report of American Diabetes Association reveals that 15-20% of all pregnant ladies suffer with GDM. It is possible for a woman to acquire a disease known as increasing insulin resistance during a healthy pregnancy. This condition is induced by placental hormones, which are responsible for ensuring that the baby obtains sufficient nutrition for healthy growth and development. As a means of compensating for insulin resistance, maternal β-cells increase the overall number of cells, insulin synthesis, and insulin release. This allows them to maintain glucose homeostasis regardless of the presence of insulin resistance. Usually ladies with gestational diabetes mellitus show no side effects except for certain ladies might exhibit expanded thirst, expanded urination, exhaustion, sickness, bladder contamination, yeast diseases and obscured vision and leads to the risk of obesity, type 2 diabetes and possibly adult cardiovascular disease in infant and increases rate of caesarean delivery and prenatal injury. The written history of diabetes in pregnancy throughout the course of recent years is basically the story of the acknowledgment of the unfavourable impacts of hyperglycaemia on both mother and baby. It leads to the risk of obesity , type 2 diabetes and possibly adult cardiovascular disease in infants. The presence of fasting hyperglycemia (>105 mg/dl or >5.8 mmol/l) might be related with an expansion in the risk of intrauterine fetal death during the last 4-8 months of development.

Nutritinal deficiency and improper diet regulation directly affected to the health of the mother and the foetus. Poor dietery habits cause vitamin deficieny, anemia, Preeclimpsia, Gestational diabetes mellitus, death in the mothers and poor development, mental retardation, low birth weight , stillbirth etc. in the babies. Therefore proper diet management is a key factor for healthy pregnancy and proper health of both the mother and the baby.

II. METHODS AND PROCEDURE

The present study was done in government and private hospitals of Beawar region namely Amrit Kaur Government Hospital, Shree Maternity Child Hospital and Jain fertility Child ICU Hospital. These health centres were randomly selected for the study. Ethical permission was acquired by institutional ethical comitttee. This study was conducted between the periods of 11 months from July 2021 to May 2022.

A total number of 300 respondents were included in this study. In this study a well prepared questionnaire was given to the pregnant women who visited the hospitals for antenatal check-up. Data of registered pregnant women were collected from hospital and their information data were collected through face to face interview. The respondents were asked to give information about sociodemographic details of patient includes - living status, education, occupation, age and Family history of diabetes, history of hyperglycaemia, accessibility of antenatal records and glucose evaluation during the pregnancy. Pregnancy related data and glycaemic status during the list pregnancy were taken from antenatal records while result status of appearance and non appearance of diabetes was assured by medical reports and postpartum blood sugar test reports. The resulting data have been analyzed through SPSS 16 and MS excel.

III. RESULT AND DISCUSSION

The overall Prevalence of GDM was 12.66% in which 42.10% (22) from urban areas and 57.89% (16) from Rural areas of Beawar. According to Table: 1 Most of the pregnant ladies are belongs from 25-30 years of age and 58.6 % (176) were employed.

Table 1: Sociodemographic characteristics of respondents

characteristics	n (%)
Age	
<20	54 (18)
20-25	87 (29)
25-30	94 (31.3)
>30	65 (21.6)
Education	
Illiterate	58 (19.3)
Primary	97 (32.3)
Secondary	92 (30.6)
Higher	53 (17.6)
Occupation	
Employed	176 (58.6)
unemployed	124 (41.3)
GDM found in trimester	
First	96 (32)
Second	112 (37.3)
Third	92 (30.6)
Gravida status	
Primigravida	117 (39)
Multigravida	173 (57.6)
Residential status	
Urban	164 (54.6)
Rural	146 (48.6)

Table 1: Represents the Socio-demographic characteristics of respondants.

Figure 1 Revealed that Most of Pregnant ladies 86% intake fruits and vegetables and 78% women follow diet chart given by doctors. 76% women consumed milk and dairy products. Most of the women intake fast food 64% and 36% did not consume fast food during pregnancy.

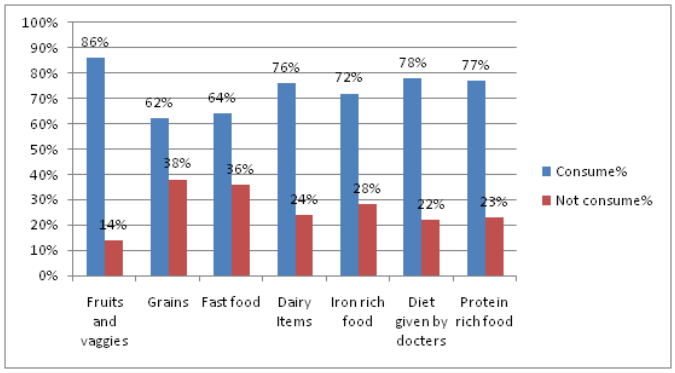

Figure 1 Dietary intake of pregnant women

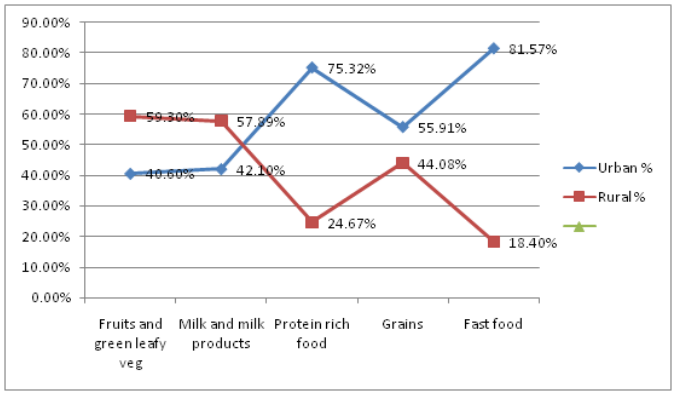

Figure 2 Food Intake Differences in Urban and Rural areas of Beawar

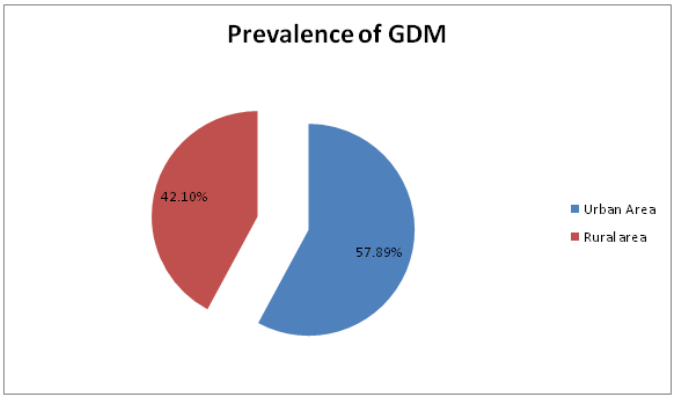

Figure 3 Prevalence of GDM

IV. CONCLUSION

The study reveals that Consumption of Fast food Intake is directly affected the Prevalence of Gestational Diabetes Mellitus. Prevalence of GDM was higher in urban areas in compare to rural areas due to poor dietary Habits.

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