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Research Article

Prevalence of Gestational Diabetes Mellitus among Pregnant ladies Attended to Alfadlab Hospital, River Nile State, Sudan

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Abstract

Background:

Gestational diabetes mellitus represents a big problem to both mothers and their babies, due to the future expected consequences.

Material and method: In this study we use glucosuria as indicator to the presence of GDM among 100 pregnant ladies attended to Alfadlab hospital, during the study period (August,2019).

Result: The prevalence of gestational diabetes mellitus among the pregnant ladies involved in our study was 4%.

Conclusion: The prevalence of gestational diabetes mellitus among the pregnant ladies included in our study (4%), is low in comparison to the worldwide reports. Further studies recommended with large sample size.

Keywords: gestational diabetes mellitus, Sudanese pregnant ladies, glucosuria, Alfadlab, River Nile state.

Background:

Gestational diabetes mellitus (GDM) is known as glucose intolerance with start or first identification during pregnancy. As such, GDM is the result of routine glucose tolerance screening that is presently carried out in otherwise healthy individuals. Like other forms of hyperglycaemia, GDM is distinguished by pancreatic β -cell function that is inadequate to meet the body's insulin needs. Accessible evidence proposes that β -cell defects in GDM result from the same spectrum of causes that cause hyperglycaemia in general, including autoimmune disease, monogenic causes, and insulin resistance. Thus, GDM often represents diabetes in evolution and, as such, holds great potential as a condition in which to study the pathogenesis of diabetes and to develop and test policies for diabetes prevention [1].

It affects between 2% and 5% of pregnant women. Risk factors for GDM comprise history of macrosomia, strong family history of diabetes, and obesity [2]. It is rising in prevalence coincidentally with the theatrical raise in the prevalence of overweight and obesity in women of childbearing age. A lot of argument surrounds the diagnosis and management of gestational diabetes, making it an imperative subject to discuss as the risk of foetal and maternal consequences are increased in gestational diabetes [3].

Gestational diabetes has grave, long-term complications for both baby and mother, counting a predisposition to obesity, metabolic syndrome, and diabetes later in life. Early recognition and intervention can significantly improve outcomes for women with this condition and their babies. Unluckily, screening and diagnostic tests are not uniform worldwide, which could lead not only to underdiagnosis but also undermanagement of the illness [4].

Indisputably, there are ethnic differences in the prevalence of GDM. In the U.S., Native Americans, Asians, Hispanics, and African-American women are at higher risk for GDM than non-Hispanic white women. In India, GDM has been found to be more common in women living in urban areas than in women living in rural areas.

The tendency toward older maternal age, the epidemic of obesity and diabetes, and the decrease in physical activity and the adoption of modern lifestyles in developing countries may all contribute to an increase in the prevalence of GDM [5].

Study done by Eltoony LF et al [6] showed that; GDM was highly prevalent in Aswan Governorate with a rate of 17.5%. The major risk factors of GDM were family history of DM and previous history of GDM, increase in age >25 and multiparity and obesity.

Study done by Khalil NA et al [7] showed that; The prevalence of GDM was found to be 8% among pregnant females attending the studied rural family health centre.

Study done by Salem ML et al [8] showed that; The prevalence of GDM among included participants was estimated to be 6%.

The prevalence of gestational diabetes mellitus (GDM) in Sudan is less compared with international reports. The strongest predictor of GDM in Sudanese women is glucosuria [9].

Study done by et al among Sudanese pregnant ladies showed that; The frequency of gestational diabetes was 2%.

As there are no recent published studies about the prevalence of gestational diabetes among Sudanese pregnant ladies, and no published work about the prevalence of it among rural areas in Sudan, due to all factors mentioned above we conduct our study among the

pregnant ladies in Alfadlab, which is a rural area in River Nile state, Sudan.

Material and method:

Study design:

Hospital based- descriptive cross-sectional study

Study area:

Alfadlab hospital, Alfadlab area, Atbara Locality, River Nile State, Sudan.

Study period:

August, 2019.

Study population:

Pregnant ladies attended to Alfadlab hospital during the study period.

Sample size:

100 pregnant ladies

Ethical approval:

All participants consent to contribute in the study.

Result:

Out of one hundred pregnant ladies included in the study, the prevalence of gestational diabetes among the study group was 4 (4%). Table [1] showed the prevalence of GDM among the pregnant ladies.

Table [1]: The prevalence of gestational diabetes among pregnant ladies:

Participants	Non GDM pregnant ladies	GDM pregnant ladies	Total
Pregnant ladies	96	4	100

Discussion:

Our study showed low prevalence of gestational diabetes among Sudanese pregnant ladies in comparison to global

reports, and there is a clear increase in prevalence of gestational diabetes among pregnant ladies in compared to the study done by Shalayel MH et al [10].

Conclusion:

Our study showed increase in the prevalence of gestational diabetes among pregnant ladies in rural areas which may give an indicator to more prevalence of it among pregnant women in urban Sudanese communities.

Recommendations:

Further studies recommended with large sample size.

Acknowledgement:

We are grateful to all pregnant ladies involved in the study.

Abbreviations:

GDM: Gestational Diabetes Mellitus.

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