



Gestational Diabetes Mellitus (GDM) status in the Makkah City Western Saudi Arabia

Fayaz Ahmed Sahibzada

**Consultant Clinical Nutritionist & Senior
lecturer UQU Holy Makkah KSA**

- **Background**
- **Objectives**
- **Methodology**
- **Results and Discussion**
- **Conclusion**
- **Recommendations**

Background

Gestational Diabètes Mellitus Global Heath issue

Country	GDM Prevalence	Reference
Saudi Arabia	12.5%	(el-Hazmi and Warsy 2000)
Bahrain	15.5%	(Al Mahroos, Nagalla et al. 2005)
United Arab Emirates	9.2%	(Ezimokhai, Joseph et al. 2006)
Iran	4.7%	(Hossain, Kavar et al. 2007)
Global Average	2-5%	(Scobie 2007)

Objectives

- To know the Gestational Diabetes Mellitus (GDM) status in Makkah.
- To know the relationship between diet and Gestational Diabetes
- To know the relationship between overweight/ obesity with GDM

Methods

- Location of study
- The study was conducted in Al-Noor and Maternity & Children and hospitals of Makkah city SA
- Total sample selected for the study 100 subjects
Fifty(50) subjects were selected from each hospital

Criteria for sample selection

- The basic criteria for subject selection was a pregnant mother (second or third trimester) from each hospital randomly selected for the study
- Procedure for data collection
- Approximately 100 subjects were randomly selected for the study. All the subjects were interviewed and a questionnaire was completed to collect the demographic, life style and anthropometric information

Dietary intake data

- Dietary intake data was collected by using a food frequency and food recall method to know the consumption of food groups / week
- For example the subjects were asked how many times they consumes Fruit, milk , meat and bread by (a standard serving size) / week
- The question also raised regarding junk food consumption

Over weight and Obesity data

- Weight, height data measured by using standardized protocols. BMI was calculated and subjects were classified as underweight, healthy weight, overweight or obese .
- Average weight gain in pregnancy second – 3rd trimester was detected from the present weight
- Blood investigation
Information regarding BGL were collected from the patient records files

Statistical analysis of data

- The data collected were entered and analyzed using SPSS program. Numerical data were expressed as mean \pm SD .

Table (1): Results

GDM status in Al-Noor Hospital

No. of subjects	No. of GDM patients	GDM 50
50	7	14%

Table (2): GDM status in Maternity and Children Hospital

No. of subject	No. of GDM patients	GDM 50
50	9	18 %

Table (3): GDM status in Makkah

No. of subjects	No. of GDM patients	GDM %
100	16	16 %

Dietary intake data

Name of hospital	No. of subjects	Food group eaten / week			
		milk	meat	fruit and vegetable	bread and cereals
Al-Noor	50	10.78±6.36	9.66 ±6.91	14.42± 9.83	39.34 ±11.03540
AL-Weladah	50	10.22 ±5.14	8.68 ±8.04	15.47 ±13.04	41.30 ±13.51

Dietary data

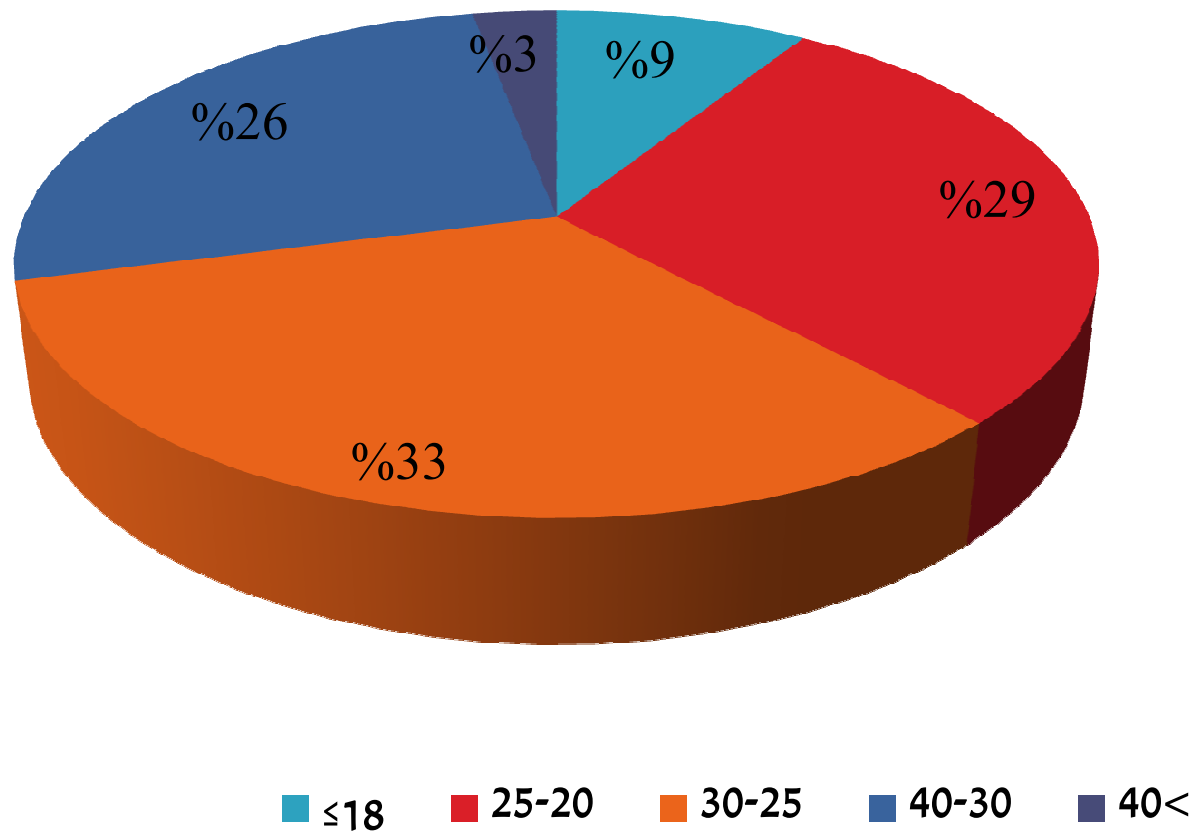
- The dietary intake showed that the milk, meat, fruits and vegetable intake of the subjects per week is below than the normal while the bread and cereals intake is normal, the consumptions of junk food like soft drinks, tea, chips and juices is more than the healthy food.

Table (5):BMI data

Name of hospital	Numb. of subjects	BMI ranges Kg/m ²				
		≤18	20-25	25-30	30-40	>40
Al-Noor Hospital	50	7	16	19	6	2
Maternity Hospital	50	2	13	14	20	1
Al-Noor and Maternity hospitals	100	9	19	33	26	3

BMI DATA

BMI ranges in Al_Noor and Maternity hospitals



Conclusion

- This study shows that the Gestational Diabetes Mellitus (GDM) is increasing in Makkah and there is a risk of Type 2 Diabetes
- The dietary intake data showed that dairy, meat, fruit and vegetable intake of the subjects is less than normal
- Obesity emerged as a major risk factor for Gestational Diabetes Mellitus (GDM).
- The advanced maternal age, family history of diabetes, and obesity were the main significant risk factors for Gestational Diabetes Mellitus (GDM).
- Preventive measure must be adopted to overcome the risk of GDM and DM in future.

Recommendations

- Follow the healthy eating & healthy life style
- Plan the pregnancy
- Monitor blood sugar level regularly
- Seek nutritional counseling regarding the healthy eating & to maintain body weight.
- A broad level study is recommended to know the GDM status in the kingdom



Acknowledgement

- Dean Faculty of Applied medical Sciences & Head of Clinical Nutrition Department UQU
- Dr Hassan Bukhari ex HOD
- Group of students
- Reham MohamadBardisi
- Abrar Abed Baskran
- Afrah Mohammed Al-Harhi
- Amani Fahad Al-Luhaybi
- Areej Salem Al-matrafi
- Eman Mohamed Godom
- Lujain Majdi Baslom

Questions ?



My contacts

Email fdanish@hotmail.com

fazada@uqu.edu.sa

Department of Clinical Nutrition Faculty of Applied Medical
Sciences Umm Al Qura University Holy KSA

Thank You

