

One month continuous glucose monitoring (CGM) record of a patient with diabetes mellitus during Ramadan fasting

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Introduction: Muslim fasting during the month of Ramadan involves abstinence from eating and drinking during daylight hours with major changes in daily life and implications on overall glycaemic control.

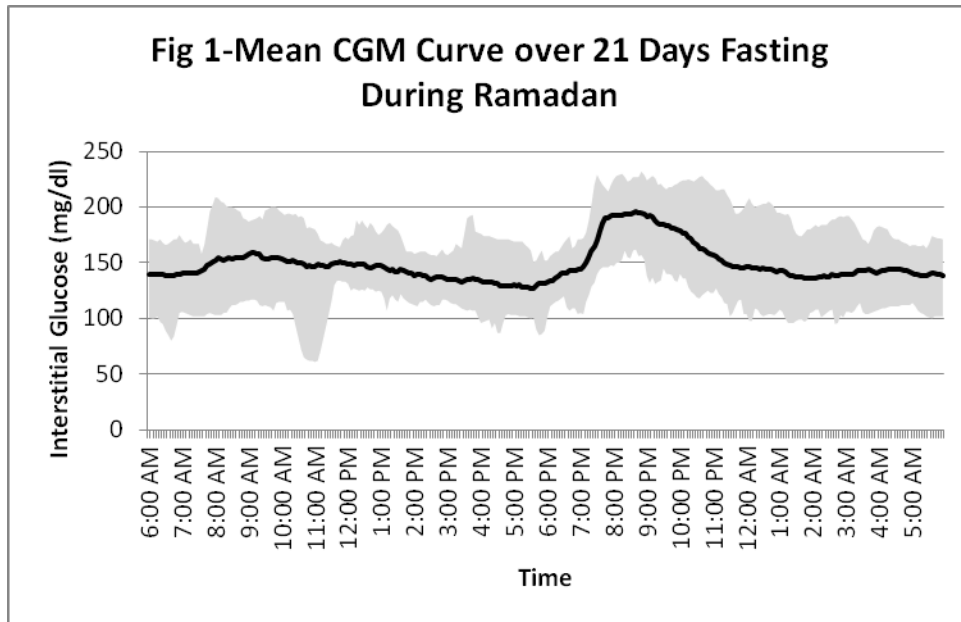
Methods: We present CGM data on a female patient with type 2 diabetes mellitus on metformin & sitagliptin (age 32, BMI 34.6 kg/m², HbA1c 6.6 %) throughout Muslim holy month of Ramadan (21 fasting days, 8 non-fasting days-patient exempted because of menstrual period).

Results:

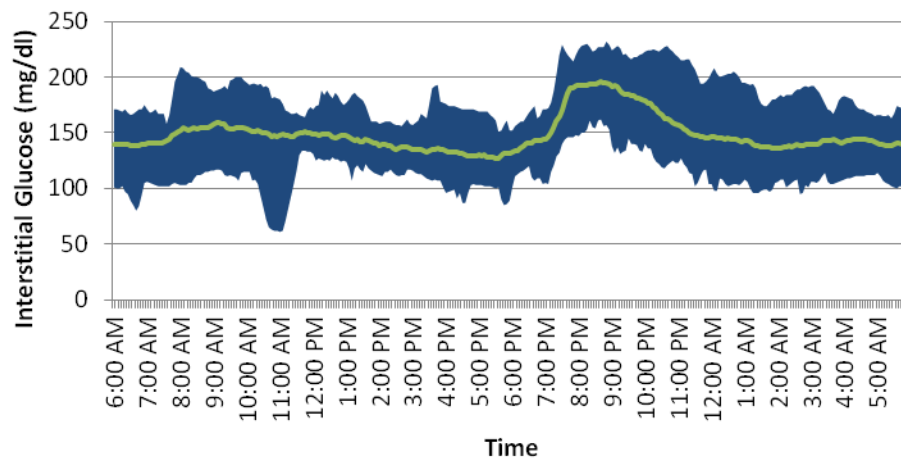
The steep glucose excursion at iftar (breaking of the fast) time occurred on all fasting days (fig 1). A similar pattern was observed on non-fasting days. There were no significant differences in calculated high and blood glucose index (HBGI & LBGI) in fasting & non-fasting days. Mean amplitude of glycaemic excursions (MAGE) was 80.15 and 106.32 during fasting & non-fasting days.

Conclusion: This is the first real-life whole Ramadan CGM description in a patient with type 2 diabetes mellitus. Our patient had observed near- fasting in spite of religious exemption during

her menstrual period. Our observational study highlights day to day variations and the differences in fasting and non-fasting periods in the same patient.



**Fig 1-Mean CGM Curve over 21 Days Fasting
During Ramadan**



	Fasting days (n=21)	Non-fasting days (n=8)
Mean IG (mg/dl)	148.5 ± 16.3	150.6 ± 20.7*
Hypoglycaemia (% time)	0.1%	3 %
HBGI	4.1	5.0*
LBGI	0.1%	0.8%*
MAGE	80.15	106.32

* not significant