

PRACTICAL MANAGEMENT OF DIABETIC PATIENT DURING RAMADAN

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ABSTRACT

The fasting period of Ramadan among Muslims requires specific attention particularly for diabetic patient. To limit detrimental activities associated with diabetes which incorporates major risk during fasting, health education, regular glucose monitoring and adjustment of treatment regimens should be standardized weeks prior to Ramadan. This brief review will provide an updated and recommended management of diabetes during Ramadan.

Keywords : Ramadan, Fasting, Diabetic, Management

INTRODUCTION

Fasting in Ramadan is obligatory for all healthy Muslim adults. No food or drink can be consumed between sunrise and sundown (The Holy Quran). This year, 2017, Ramadan is probably to start between 25th to 27th May. Many Muslims around the world wish to fast during Ramadan due to religious reasons, though some of them suffer from chronic diseases like diabetes and hypertension. It is the responsibility of the medical professionals to empower diabetic patients to make an informed choice and, if possible, an evidence-based decision regarding safe fasting in Ramadan.

Eligibility of Fasting of Diabetic Patient

Most of the uncomplicated diabetic patients can fast during Ramadan safely (Jaleel *et al.*, 2011); but to remain healthy after fasting, patient needs to ensure the following issues before Ramadan

1. Pre-Ramadan assessment at least three months before Ramadan
2. Ramadan focused structured health education and motivation
3. Patient centered individualized management plan
4. Proper follow-up

Pre-Ramadan Assessment

Managing an individual patient with diabetes during Ramadan is a major challenge. Patient with type 1 and type 2 diabetes who are allowed or choose to fast

should be given specific information on the risk of fasting as a diabetic patient and inform the specific guidelines on therapeutic changes through health education (Beshyah and Sherif, 2005). The control of diabetes during Ramadan fasting has to be taken into consideration properly in advance of the holy month by means of assessment of:

1. Physical well-being.
2. Glycemic repute: symptoms; blood glucose profiles and HbA1c.
3. Complications and co-morbidities

Major Risks Associated with Fasting in Patients with Diabetes

- Hypoglycemia: Predominant increase in type 1 patients and in insulin-treated type 2 patient. This is due to confined carbohydrate intake towards ongoing action of previously administered insulin or other long acting oral hypoglycemic agent.
- Hyperglycemia: mainly in the evening time complication occur due to over eating and in day time complication arise due to alarm able reduction of the doses of insulin or oral hypoglycemic agents.
- Diabetic ketoacidosis or hyperglycemic hyperosmolar states that this may be caused due to absolute or relative insulin deficiency or due to related inter current illness.
- Dehydration and increased threat of thrombosis:

especially within the poorly controlled or the elderly and in environments of high temperatures specifically whilst fasting period is long.

Diabetes Education during Ramadan

Structured, organized and planned diabetes education is a vital tool for the management of diabetes in the course of the fasting month and after breaking the fast during Ramadan. In a retrospective study (Bravis, Hui & Salih, 2010), patients who acquired diabetes education had less weight gain and fewer episodes of hypoglycemia compared with the group that did not obtain training prior to Ramadan. Diabetes training, which includes using point-of-care (POC) glucose testing, result in fewer episodes

of hypoglycemia between the start of Ramadan and the cease of fasting (Ahmedani, Haque & Basit, 2012). Diabetes education also helps in overcoming definite obstacles for better diabetes care including the misconception that puncturing one's skin for blood glucose checking all through the fast could break the ritual of fasting (Masood, Sheikh & Masood, 2014).

Modification and Adjustment of Anti Diabetic Drug

The recommended guideline for Anti Diabetic drug modification and adjustment dose (before Ramadan, during Ramadan and after Ramadan) is summarized in Table 1.

Table 1: Pre-Ramadan, During Ramadan and Post Ramadan modification and adjustment of Anti Diabetic Drug

	Pre-Ramadan		During Ramadan
Oral Anti Diabetic Drug	Patients on "diet and exercise"	→	Modify time & intensity of exercise & Ensure adequate fluid intake
	Metformin 500 mg thrice daily	→	<ul style="list-style-type: none"> • At Iftar: 1,000 mg • At Suhuur: 500 mg
	DPP4 inhibitor	→	As usual at night
	SGLT2 inhibitor	→	As usual at night
	Glinide	→	As usual at night
	Sulfonylurea Once Daily: Morning dose	→	At Iftar: Full Morning dose
	Sulfonylurea Twice Daily: Morning & Evening dose.	→	<ul style="list-style-type: none"> • At Iftar: Full Morning dose • At Suhuur: ½ Evening dose
Insulin	Premixed insulin 30		
	Morning: (30 U)	→	At Iftar: Full Morning Dose (30 U)
	Dinner: (20 U)	→	At Suhuur: ½ Dinner Dose (10 U)
	Split Mixed (R+N)		
	R+0+R	→	R+0+50%of R
	N+0+N	→	N+0+50%of N
	R+R+R	→	R+R+50% of R
	0+0+N	→	0+0+50% of N
Basal Analogue	→	At the same time 20-30% dose reduction	
Post Ramadan			
Change back therapeutic regimen to its previous Pre Ramadan schedule Watch for hyperglycemia specially during the 3 day festival (EidulFitr)			

Misconceptions about drawing blood and insulin injections during the fast

Islam permits diabetic patient to undergo blood test everyday while fasting (Muslim Health Service, 2016). Patients should monitor their blood glucose even in the course of the fasting to detect subclinical hypo and hyperglycemia. If blood glucose is referred to be low (<70mg/dl), the fast must be broken (Tourkmani *et al.*, 2016). If blood glucose is noted to be (>300mg/dl), ketones in urine must be checked and medical recommendation must be pursued (Masood *et al.*, 2012)

CONCLUSION

In conclusion, most of the physicians had given the opinion that Ramadan fasting is acceptable. If patient with diabetes desire to fast, it is vital to advise them to undertake regular monitoring of blood glucose levels all through the fasting to reduce the danger of hypoglycemia or hyperglycemia. Fundamental knowledge of diabetes care is important for the patient to allow physicians to teach hands on the practical points regarding safe fasting to these individuals.

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