



Contents lists available at ScienceDirect

Diabetes & Metabolic Syndrome: Clinical Research & Reviews

journal homepage: www.elsevier.com/locate/dsx



Original Article

The current state of knowledge, perception and practice in diabetes management during fasting in Ramadan by healthcare professionals

Sueziani B. Zainudin^{a,b,*}, Aslena B. Hussain^c

^a Department of Endocrinology, Singapore General Hospital, Singapore

^b Department of General Medicine, Sengkang Health, Singapore

^c Nursing Division, Singapore General Hospital, Singapore

ARTICLE INFO

Article history:

Received 1 December 2017

Accepted 21 December 2017

Available online xxx

Keywords:

Health education

Diabetes mellitus

Fasting

Healthcare personnel

ABSTRACT

Aims: Obligatory Ramadan fasting is challenging in the management of Muslims with diabetes due to increased risk of complications from altered meals and activities. This study aimed to evaluate the knowledge, perception and practice of healthcare professionals in diabetes management during fasting and the outcome of education on management.

Materials and methods: We surveyed healthcare professionals enrolled in pre-Ramadan education involving an endocrinologist, diabetes specialized nurse and dietician. The survey incorporated a knowledge test on fasting and safe practices of Diabetes management during Ramadan, and collected demographic data.

Results: Eighty-eight participants were enrolled. Mean age was 41.8 ± 14.5 years, 14.9% males with a racial distribution of 44.8% Malays, 34.5% Chinese and 13.8% Indians. Fifty-two percent were Muslims. Eight percent were assistant nurses, 46% registered nurses, 5.7% advanced practice nurses, 17.2% specialist nurses, 14.9% general practitioners and 5% allied health professionals. Fifty-one percent practised in primary care setting.

Mean knowledge score was 81.1%. Eighty-four percent would counsel people with diabetes for fasting, increasing to 96.7% after education. Those who would not cited a lack of knowledge or experience. During the past Ramadan, 75.9% provided counselling or adjusted medication whilst 51.1% managed diabetes complications, with 63.8% predominantly hypoglycaemia, 11.6% predominant hyperglycaemia and 24.6% only hypoglycaemia.

Conclusions: The healthcare professionals had good knowledge and were capable in managing Muslims with diabetes during fasting themselves. They identified pre-Ramadan education by an experienced multidisciplinary team as a platform to prepare and support healthcare professionals for managing this challenging annual practice.

© 2017 Diabetes India. Published by Elsevier Ltd. All rights reserved.

1. Introduction

There is exponential increase in worldwide prevalence of diabetes, imposing further challenges in populations throughout the world. The prevalence is extrapolated to increase from 415 million in year 2015 to 642 million by the year 2040 [4], especially in the African and Middle Eastern regions which have large Muslim populations.

For Muslims, an additional challenge is the month of Ramadan where majority of Muslims perform obligatory fasting from dawn to dusk on consecutive days over a 29-day period [3]. For

temperate countries, the period of fasting varies from year to year depending on the duration of daylight hours as the fasting month advances by 12 days annually, in view of a shorter Muslim calendar when compared to the Gregorian calendar. Muslims go to great lengths to ensure disciplined fasting during this period due to the belief of spiritual rewards. In the absence of careful measured steps, the abstinence from food and fluids increases the risk of complications for people with diabetes [1] who are dependent on the balance of diet, physical activities and treatment regimen to achieve good glycaemic control. This increased risk of diabetes complications is aggravated in countries with Muslim minority where people with diabetes planning to fast might not consult their healthcare professionals due to the perceived cultural and religious barriers from a lack of understanding between the patient and healthcare professional [5].

* Corresponding author at: Division of Medicine, Sengkang Health, Alexandra Hospital, Block 20A, 378 Alexandra Road, 159964, Singapore.

E-mail address: sueziani.zainudin@singhealth.com.sg (S.B. Zainudin).

Singapore has a unique situation in the Southeast Asian region, as a multi-cultural multi-religious country with a minority Muslim population, in the midst of neighbouring countries where the majority are Muslims, namely Malaysia and Indonesia. It is a young country with rapid development in socio-economic status with the second highest prevalence of diabetes amongst the developed nations. The Singapore National Health Survey in 2010 revealed increased diabetes prevalence, especially in the Malay and Indian communities [6], which are the minority populations [7] and make up most of the Muslim population there. Noting this increasing public health burden, the health ministry had declared war against diabetes with a targeted multi-prong approach and multi-fold collaborated effort to reduce the risk of developing diabetes and diabetes complications.

In addition, our previous study [8] had shown that there is unsafe self-management practices amongst Muslims with diabetes who fasted during Ramadan, indicating a need to bridge the gap between diabetes knowledge and the practice of self-management. Hence, to achieve a targeted approach of safer fasting, it is essential to determine the current status of the diabetes management during the Ramadan fasting by healthcare professionals in order to provide better care and improve outcomes through supporting these patients for their day to day needs during this period.

With this aim in mind, we proceeded to evaluate the current status of the knowledge, perception and practice of healthcare professionals in managing Muslims with diabetes during fasting in Ramadan and the effect of support with pre-Ramadan education on their practice.

2. Methods

The study is approved by the local institutional ethics committee and performed in accordance with the ethical standards of the Declaration of Helsinki.

2.1. Participants and settings

This is a cross-sectional study conducted over three healthcare professional education sessions in May 2015.

The participants were healthcare professionals enrolled in a pre-Ramadan diabetes educational session; each session lasted for half a day, consisting of topics on preparation for Ramadan fasting by an experienced specialist team including a guide on religious obligation and exemption, risk profiling and medication adjustment by an endocrinologist, self-care with monitoring of blood glucose and identification of diabetes complications by a diabetes specialist nurse, and recommended dietary modifications and meal planning by a dietician.

Waiver of consent was obtained.

2.2. Questionnaire

The study was conducted using a self-administered questionnaire by a study team member prior to the educational session followed by another questionnaire after the session.

The questionnaire was available in English language. The pre-session questionnaire took between 10 and 15 min to complete. It was divided into 3 sections; consisting of baseline data collection, knowledge assessment and attitude evaluation.

Data collected included demographic data, type of profession and practice, location of practice, type of people managed (proportion of Muslims, proportion with diabetes and types of diabetes treatment managed) and previous professional education on Ramadan fasting for diabetes.

Knowledge assessment consisted of sections on the pathophysiology of fasting and the safe practices on diabetes

management during Ramadan. The questions were derived from our previous survey assessing the knowledge in diabetes management during Ramadan [8], designed based on the recommendations from the consensus statement by American Diabetes Association for the management of diabetes during Ramadan Update 2010 [2]. There were 7 questions assessing the knowledge of the pathophysiology of fasting and general knowledge on Ramadan, and 11 questions assessing the knowledge of safe practices and management of diabetes during Ramadan. The participants were required to answer a total of 18 questions with a 'Yes', 'No' or 'Don't Know' as the response. The maximum score was 18.

The section on the attitudes and beliefs on management of diabetes during Ramadan was assessed but not scored.

A further short questionnaire consisting of 3 questions on attitudes and further needs for managing people with diabetes during fasting in Ramadan was conducted after the session, which took 2 min to complete.

2.3. Statistical analysis

Data was analysed using the IBM SPSS Statistics version 23.0 (IBM Corp, Armonk, NY, USA). Descriptive statistics was used to describe healthcare professional demographics, practice characteristics, patient demographics and disease characteristics. Percentages and frequencies were used for the categorical variables whilst means and standard deviations were calculated for the continuous variables. Correlation analysis was performed to determine correlation between scores and demographics, or practice characteristics. Linear regression with check for multicollinearity was performed. For reliability analysis, internal consistency was assessed using Cronbach's coefficient α . The criterion for accepting Cronbach's alpha was a score above 0.7.

Table 1
Baseline demographics and characteristics of participants.

Gender	Number (%)
Male	13 (14.7)
Female	75 (85.2)
Ethnic Distribution	Number (%)
Malay	40 (45.4)
Chinese	30 (34.1)
Indian	12 (13.6)
Others	6 (6.8)
Religion	
Islam	46 (52.3)
Christianity	18 (20.5)
Buddhism	9 (10.2)
Hinduism	5 (5.7)
Others	10 (11.3)
Healthcare Professional Type	
General practitioner	13 (14.8)
Advanced practice nurse	5 (5.7)
Specialised care nurse	15 (17.0)
Registered nurse	44 (50.0)
Assistant nurse	7 (8.0)
Allied health professionals	4 (4.5)
Practice setting	
Primary Care	45 (51.1)
Specialist Care	41 (46.6)
Others	2 (2.3)
Prior education on management of diabetes in Ramadan	
Yes	60 (68.0)
No	28 (32.0)

Download English Version:

<https://daneshyari.com/en/article/8658767>

Download Persian Version:

<https://daneshyari.com/article/8658767>

[Daneshyari.com](https://daneshyari.com)