Ramadan and diabetes: helping to ensure safe fasting

Lesley Barrow

Introduction

This study highlights the gulf that exists between the needs of Muslim people with diabetes who wish to fast during Ramadan and the knowledge of, and advice given by, health professionals on the subject. The challenge for health professionals is to offer effective therapeutic options so that people with diabetes who wish to fast during Ramadan can do so safely. At the present time, this need is not being met.

The Ramadan fast, during which no food or drink is consumed during daylight hours, is one of the five pillars of the Islamic faith. Fasting is believed to encourage self-control, purification, spiritual strength and awareness of those less fortunate (Maqsood, 1995). Ramadan lasts for one lunar month, and this year begins in mid-October.

Those who have health problems are exempt from fasting and this can include people with diabetes. However, often people with diabetes do not regard their condition as an illness and therefore do not expect exemption from fasting (Lakhdar, 1998).

In Lothian, Scotland, approximately 1% of the population are Muslim (General Register Office for Scotland, 2003). A majority of these people are of South Asian origin. Their chances of having diabetes are four times that of the Caucasian population (Mather et al, 1985). They are more likely to develop the complications of diabetes (Mather et al, 1998) and to develop them earlier in life (Singh, 1986). It is therefore essential that health professionals are aware of aspects of culture and belief that can affect the diabetes control of someone who is Muslim, and tailor their treatment and advice accordingly.

It became apparent at our diabetes centre that some Muslim patients were concerned about fasting during Ramadan, but did not know how to change their treatment or lifestyle to fast safely. At the same time, some health professionals appeared unworried about these concerns and considered Ramadan irrelevant in diabetes care.

Aims of the study

A study was undertaken to find out what health professionals knew about Ramadan and what advice they might give someone who wished to fast. We also wanted to find out whether Muslims with diabetes did wish to fast, and how they managed their diabetes during fasting. At the time we did not connect these two lines of enquiry. It was only later that it became apparent that the results could be compared.

Method

Health professional questionnaire

Forty health professionals (23 medical staff, 12 diabetes specialist nurses and five dietitians) working in diabetes care in the Lothian area were sent a questionnaire (*Figure 1*) asking them about their knowledge of Ramadan and what advice they might give people wishing to fast.

Patient questionnaire

The diabetes database was searched for Pakistani or Bangladeshi names as the ethnicity of individual patients was very poorly documented at that time. It was assumed that these patients would probably be Muslim. A questionnaire was sent to each of the 63 people selected (*Figure 2*).

ARTICLE POINTS

1 Fasting at Ramadan is vital to the Islamic faith, but can have medical consequences for people with diabetes.

2 Muslim people with diabetes wish to fast at Ramadan and wish to do so safely.

3 Health professionals have poor knowledge of Ramadan and do not change medications for the fasting month.

4 The majority of Muslim people with diabetes fast whether they know how it might affect their diabetes or not, thereby putting themselves at risk.

5 Health professionals' lack of awareness of the needs of Muslim people with diabetes at Ramadan needs to be addressed.

KEY WORDS

- **Diabetes**
- **Ramadan**
- **Fasting**
- **Risk reduction**
- **Education**

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Results

A total of 25 health professionals and 24 Muslim patients returned completed questionnaires. The results from the health professionals are summarised in *Table 1*, and those from the patients in *Table 2*.

Discussion

At the time of sending the questionnaire to patients, the diabetes database had minimal recordings of ethnicity, hence the small number of questionnaires sent out. Also, the poor response from patients may have been due to the fact that the introductory letter and questionnaire were written in English, which might not have been the first language of many patients, or the targeted patients were not Muslim, there being no listing for religion on the diabetes database. Of those patients who replied to what was an anonymous questionnaire, the majority supplied their names and addresses so that they could have further information on fasting and diabetes. This in itself revealed a strong desire for more knowledge on the subject.

Less than a third of the health professionals knew the date for Ramadan, despite the questionnaire having been sent out in the month before the event. The results demonstrate that all the patient respondents wished to fast and nearly three-quarters did fast, reflecting what other studies have shown (Burden and

RAMADAN HEALTH PROFESSIONAL QUESTIONNAIRE

When does Ramadan start this year? .....

How long does it last? .....

	Please tick box Yes	No
Do you ask Muslim patients with diabetes whether they will fast during this time?	☐	☐
If a Muslim patient with diabetes wishes to fast, do you advise him/her to change his/her treatment if:		
1. he/she is treated with diet and exercise alone?	☐	☐
If your answer is Yes, please specify how you would change treatment:		
2. he/she is treated with diet, exercise and biguanide?	☐	☐
If your answer is Yes, please specify how you would change treatment:		
3. he/she is treated with diet, exercise, biguanide plus other oral hypoglycaemics?	☐	☐
If your answer is Yes, please specify how you would change treatment:		
4. he/she is treated with diet, exercise and insulin?	☐	☐
If your answer is Yes, please specify how you would change treatment:		
5. he/she is treated with diet, exercise, insulin plus oral hypoglycaemics?	☐	☐
If your answer is Yes, please specify how you would change treatment:		
Do you give specific advice about		
a) hypoglycaemia?	☐	☐
b) overeating?	☐	☐
c) resting?	☐	☐
d) home blood glucose monitoring?	☐	☐

Which groups of people who are Muslim and have diabetes would you positively encourage to fast (if any) during Ramadan?

Which groups of people who are Muslim and have diabetes would you positively discourage to fast (if any) during Ramadan?

Thank you for taking the time to answer these questions. If you want to make any further comments about Ramadan, please use the reverse of this questionnaire.

Figure 1. Ramadan health professional questionnaire.

Burden, 1998; Sulimani, 1998). But less than half of the health professionals in this study asked their patients if they wished to fast.

While the majority of health professionals would advise changes in treatment for Muslim people with diabetes taking sulphonylureas or insulin, this was mainly dose adjustments and timing of treatments. Transferring the larger dose of a sulphonylurea to before the evening meal and a smaller dose to before the early morning meal can certainly help some people to fast safely during Ramadan (Belkhadir et al, 1993). Fasting can be beneficial for overweight patients on oral hypoglycaemics, helping weight reduction and overall improvement in diabetes control (Laajam, 1990; Mafauzy et al, 1990).

Qureshi (2001) has described how short-acting prandial regulators, such as rapaglinide, can be substituted effectively for longer acting sulphonlyureas in the fasting month. Also, it has been shown that the use of analogue insulins, such as lispro, not only reduces the risk of hypoglycaemia when fasting in Ramadan (Akram and De Verga, 1999), but also evens out the postprandial peak of hyperglycaemia when the fast is broken at sunset (El-Ghazali,1998). However, only a minority of the respondent health professionals in this study would make such treatment changes.

Other aspects of the Ramadan fast, such as tiredness and overeating at break of fast, were neglected by health professionals, although nearly half of the patient respondents described feeling tired and one sixth admitted to overeating. Hyperglycaemic foods, especially Indian sweets, are more often eaten at the evening meal during Ramadan (Qureshi, 2001), and overeating at night may occur (Chandalia et al, 1987). It is important therefore that health professionals advise patients appropriately about diet during this time.

Azizi and Siahkolah (1998) suggest a 3D approach to treating a patient who fasts:

- Drug regimen adjustment
- Dietary control
- Daily activity advice.

Strict attention to these three areas can allow people with type 2 diabetes, and also some with type 1 diabetes, to fast safely. Appropriate education is the key. Beshyah et

PAGE POINTS

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RAMADAN PATIENT QUESTIONNAIRE

		Please tick box Yes	No
1.	Do you take tablets for your diabetes?	☐	☐
2.	What is the name of your tablets?		
3.	Do you take insulin?	☐	☐
4.	What is the name of your insulin?		
5.	Are you a Muslim?	☐	☐
6.	Do you fast at Ramadan?	☐	☐
7.	If you fast, do you change or stop taking your tablets or insulin?	☐	☐
8.	Have you ever had a hypo (low blood sugar) when fasting?	☐	☐
9.	Is the kind of food you eat different from usual during Ramadan?	☐	☐
10.	Do you eat more sweet things during Ramadan?	☐	☐
11.	Do you feel tired during Ramadan?	☐	☐
12.	Would you like to fast but have not done so before because of your diabetes?	☐	☐
13.	Would you like to know more about how you can fast safely?	☐	☐

If your answer to question 13 is Yes, please write your name, address and telephone number in the space below.

If you wish to make any comments about your diabetes and Ramadan, please write them on the reverse of this questionnaire.

Figure 2. Ramadan patient questionnaire.

PAGE POINTS

1 Beshyah et al (1992) suggested that health professionals need to have knowledge of what Ramadan entails if they are to give advice about treatment options at this time.

2 The present study demonstrates that health professionals do not have this knowledge.

3 Appropriate education is the key to safe fasting during Ramadan.

4 Health professionals must also be prepared to explore the newer oral hypoglycaemics and insulins available, which can enable people to fast safely.

al (1992) suggested that health professionals need to have knowledge of what Ramadan entails if they are to give advice about treatment options at this time. The present study demonstrates that health professionals do not have this knowledge. 'The behaviour adopted during Ramadan suggests that to ensure safe fasting the most important factor in the management of these patients with diabetes is education' (Lakhdar, 1998).

It is important that health professionals are not only knowledgeable about Ramadan but are also prepared to explore the variety of newer oral hypoglycaemics and insulins available, which can enable people to fast safely. Patients treated with sulphonylureas or insulin are at risk if they fast without support and advice (Burden and Burden, 1998).

Conclusion

This study has shown that the needs of those wishing to fast during Ramadan are not being met.

Table 1. Results of the health professional questionnaire

Subject	%
Knew date for Ramadan	32%
Knew length of Ramadan	68%
Asked patients if they wished to fast	44%
Did not advise change of treatment for those on diet and exercise	88%
Did not advise change of treatment for those on diet, exercise, biguanide	52%
Advised change of treatment (dosage/timings) for those on diet, exercise, biguanide and a sulphonylurea	92%
Advised change of treatment (dosage/timings) for those on diet, exercise and insulin	100%
Advised change of treatment (dosage/timings) for those on diet, exercise, insulin and oral hypoglycaemic agents	96%
Would suggest change to prandial regulators, analogue insulins, different regimens	24%
Advised about hypoglycaemia	84%
Advised about overeating	36%
Advised about resting	40%
Advised about home blood glucose monitoring	76%
Would not encourage people to fast	44%
Would positively discourage fasting for those with type 1 diabetes or unstable diabetes or pregnant, or having problems with hypos, or have complications	84%

Comments

- 'Stress to patient that under Islamic law there is no obligation to fast if they have diabetes.'
- 'I believe we should all be more proactive in asking about Ramadan, but it is not always clear in records if someone is Muslim. Therefore don't know if it is PC to ask Asians/others if they are practising Muslims.'
- 'I can live with [a patient having] poorer control for a month every year.'
- 'Patient often brings subject up.'
- 'I've never ever discussed fasting/Ramadan in a diabetes clinic.'

As a result, certain service developments are being initiated:

- Over the past 8 months, all clinic patients at the Western General Hospital diabetes centre have been asked to fill in a questionnaire regarding their ethnicity, following the guidelines of the Scottish Diabetes Core Dataset (Scottish Executive, 2003). Accurate data on ethnicity are now accruing.
- Before Ramadan last year, all consulting rooms were supplied with the Diabetes UK advisory leaflet on Ramadan for health professionals (Fact Sheet 19, available on www.diabetesuk.org.uk). These fact sheets will be supplied again this year for Ramadan in October.
- A leaflet about Ramadan for patients has been produced in English, Urdu, Bengali, Arabic and Turkish, and will be distributed at the diabetes centre to other Lothian hospitals and to GP surgeries.
- A weekly nurse-led drop-in clinic for South Asians will run from August to November, encouraging people with diabetes and their carers to come and discuss any concerns they may have about diabetes. The facility will be advertised by flyers to local mosques, temples and ethnic minority community groups. A multilingual interpreter will be present. Written information, videos and audio-tapes about diabetes will be available in relevant languages.

With these initiatives we hope to provide better informed care for people who wish to fast during Ramadan, and in so doing provide a more equitable service for South Asian people with diabetes. ■

Table 2. Results of the patient questionnaire

Subject	%
Wishing to fast	100%
Treated with diet and exercise	17%
Treated with diet, exercise and a biguanide	21%
Treated with diet, exercise a sulphonylurea with/without a biguanide	29%
Treated with diet, exercise and insulin with/without an OHA	33%
Had hypos during Ramadan	13%
Admitted to overeating/eating more sweet things during Ramadan	13%
Felt tired during Ramadan	42%
Wishing to know how to fast safely	100%
Fasted	71%
Altered their treatment during Ramadan	36%

Comments

- 'I have fasted during the Holy month previously, which led to some complications, resulting in hospitalisation.'
- 'I would like to fast but am concerned that my sugar count would not be controlled and [I] may end up in a hypo situation. With my employment position this would be unacceptable.'
- 'After opening the fast, I felt very tired and cold. I used to take my tablets and insulin with food in the morning and also in the evening after food, but the sugars were not very controlled.
- 'Observation from previous Ramadan. A lower than usual intake of food results in the sugar level staying at a low/safe level.'

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