

Investigating the Condition of Medical Counseling and Some of Clinical Aspects of Fasting in Holy Month of Ramadan from the Perspective of Diabetic and Hypertensive Patients

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ARTICLE INFO	ABSTRACT
<p><i>Article type:</i> Original article</p> <hr/> <p><i>Article History:</i> Received: 19 May 2015 Revised: 24 June 2015 Accepted: 25 June 2015 Published: 30 June 2015</p> <hr/> <p><i>Keywords:</i> Consultation Diabetes Hypertension Ramadan Fasting Satisfaction</p>	<p>Introduction: Although fasting has manifold health benefits, at times, it might put patients' health at risk. Therefore, it is mandatory for physicians to have adequate information regarding clinical aspects of fasting, so that they can offer sound medical advice. In this study, the condition of physician consultation about fasting was analyzed from the perspective of patients.</p> <p>Methods: In this descriptive, analytical, cross-sectional study, a valid self-regulated questionnaire (Cronbach's alpha of 0.76) was completed by diabetic and hypertensive patients referring to physicians in Ramadan during 2012-2013, in Isfahan. The questionnaire included items on patient satisfaction with the quality of physician consultation about fasting, disease treatment during Ramadan, and incidence of symptoms while fasting. The patients completed the questionnaire after physician visit. Independent t-test, Chi-square, regression analysis, and one-way ANOVA were performed, using SPSS version 19.</p> <p>Results: Overall, 285 patients including 199 (69.8%) females and 86 (30.2%) males were selected. The mean score of satisfaction with physician consult was 70.50 ± 13.23. The highest score (75.36 ± 14.16) referred to physician consult, and the lowest score (66.09 ± 18.84) to patient assessment by physician. Additionally, the mean score of patients' satisfaction with specialists was higher than that of general practitioners ($P < 0.0001$). The mean score of patient satisfaction was not significantly correlated with participants' education, age, sex, disease, or disease duration. Moreover, in almost one-third of the cases, Ramadan fasting was not discussed during physician visits. Besides, the most common symptoms during fasting were fatigue and headache.</p> <p>Conclusion: The quality of medical consultation in Ramadan in Isfahan was relatively acceptable; however, it is still far from being satisfactory. It seems to be essential for physicians to pay more attention to consultation on fasting in Ramadan.</p>

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Introduction

Each year, millions of Muslims around the world abstain from consuming foods and drinks from dawn to sunset in the holy month of Ramadan. In the existing body of literature, numerous benefits of fasting for health have been mentioned (1). Also, Prophet Muhammad has said: Fast to stay healthy.

Several studies have pointed out the physical health benefits of fasting, the most important of which are summarized as follows: increasing HDL-cholesterol (2), increasing the level of Apolipoproteins that prevents atherosclerosis, improving lipid profile (3), and reducing platelet-aggregation (4).

During fasting in Ramadan, no significant change in diabetic plasma glucose, insulin, and HbA_{1c} level has been detected (5). Still, several studies have indicated that blood sugar was better controlled in diabetics in Ramadan (6); however, at times changes in eating habits, low physical activity, and incorrect medication use result in increased blood glucose (1).

Fasting doesn't have any adverse effects on controlled cardiovascular diseases, and no increases in acute cardiovascular events during Ramadan fasting have been witnessed (7).

Khosropanah et al. (8) proposed that there is no significant relationship between systolic and

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diastolic blood pressure before, at the time of, and after Ramadan. Thus, hypertensive patients with controlled blood pressure can fast as long as they are taking their medications regularly.

On the other hand, in some cases diabetic patients are not allowed to fast as follows: patients with uncontrolled diabetes, diabetes type 1, gestational diabetes, patients with history of diabetic ketoacidosis or Hyperosmolar coma, history of repeated hyperglycemia or hypoglycemia during Ramadan or before that, those who don't have enough medication compliance, as well as patients with serious diabetic complications such as coronary heart disease, cirrhosis, or chronic renal failure.

Accordingly, it is mandatory for the patients with diabetes and hypertension to visit a doctor before Ramadan; conjointly, physicians must consult them about their ability to fast, and advise them on their diet, physical activity, control of blood pressure, control of blood glucose, and the necessity of medication compliance (1).

Inappropriate fasting in Ramadan may complicate a patient's medical condition causing problems such as kidney stone, retinopathy, hyperglycemia or hypoglycemia, and peptic ulcers. Moreover, Malik et al. noted that patients visiting a doctor during the fasting month of Ramadan had more ulcer diseases, particularly duodenal ones (9).

In like manner, an Indian prospective randomized study in which all the cases were evaluated by upper gastrointestinal endoscopy advocated that Ramadan fasting might be hazardous in patients with peptic ulcer disease as well as patients with active chronic ulcers. (10) Thus, Physicians must have enough information about fasting effects on acute and chronic diseases, correct medication use, and life style changes during Ramadan (11).

Further, physicians must bear in mind the fact that a large number of patients in Ramadan change their medication regimen, which can cause side effects and medication interactions (12).

For a proper consultation, making a careful evaluation of patients' condition along with earning patients' trust is crucial for physicians. In a physician consult, creating a safe and active ambience and providing a dynamic physician-patient interaction are of utmost importance. An agreeable interaction with patients has an

effective role in patient satisfaction, treatment results, medical costs, and clinical efficiency.

Patients' satisfaction with their consultation can lead to increased medication compliance. Various studies hold that physician's knowledge and his communication skills have a key role in patients' satisfaction (13).

Spiritual belief and practice can both directly and indirectly influence interaction among health, disease processes, and treatment. Indeed, the bio-psycho-socio-environmento-spiritual model is based on the fact that physical, psychological, social and spiritual environment of each individual can influence his health; therefore this issue should be taken into consideration while treating patients (14, 15).

Given the importance of fasting in our society and the fact that physicians can play an indispensable role in informing patients about the adverse or beneficial effects of fasting on their health, evaluation of physicians' knowledge about fasting as well as their consultation method seem to be vital.

The aim of this study was to investigate the condition of physician consult about fasting from the perspective of patients with diabetes and hypertension.

Material and methods

This is a descriptive, analytical, cross-sectional study. The statistical community included patients with diabetes type 2 and hypertension going to general physicians or specialists in Isfahan (internists or cardiologist) during 2012-2013.

A self-made questionnaire was given a sample of 300 patients to estimate patient satisfaction. The four topics covered by the questionnaire are as follows: the quality of medical consultation about fasting (listening and answering to patients' questions, consulting them about life style, devoting enough time to the patients, encouraging patients, physicians' bad reaction, patients' satisfaction with consultation, physicians' good behavior in consultation period ...), assessment of patients' condition by physicians (considering patients' willingness and ability to fast, asking about patients' drug histories and food diets, evaluating the risks of fasting for patients), how to train patients for fasting (offering advice to patients on drugs and diets, explaining about benefits of fasting and

fasting complications in diseases, giving recommendations to prevent symptoms while fasting, considering applicability of their advice, resolving patients' ambiguities during consultation), the interaction between physician and patient (listening and answering to patients' questions, giving enough time to patients, encouraging patients to comply with physician's guidance, physicians' grim interaction with patients who are less satisfied with their guidance, patients' satisfaction with consultation, physicians' patience in consultation period.)

In addition, physicians asked about incidence of symptoms in patients while fasting such as fatigue and headache and their severity.

The questionnaire's face and content validity was investigated by four community-medicine specialists, two general physicians, and two patients. It was completed by 10 patients for its reliability (Cronbach's alpha = 0.76.)

Afterwards, the list of general physicians and specialists (internists and cardiologists) as well as the list of clinics and offices were extracted from Isfahan's medical council. Consequently, by simple random sampling 20 clinics and offices as well as 15 patients in each center were selected.

The questionnaire was taken to the related centers during the holy month of Ramadan and the research project was explained for the patients after their visit. Then, they were asked whether they had inquired the physician about fasting or not. If they had not asked any questions about fasting, they completed the questionnaire which assessed the causes of not asking (patients' ability to decide, consulting a physician in the past, physician's hastiness during the visit). Others completed the main questionnaire.

Likert scale was applied in the questionnaire. Mean score of patient satisfaction with medical consultation was ranked as follows: 10-39: weak, 40-59: moderate, 60-79: good, 80-100: excellent.

In order to describe the data, mean (\pm SD) was utilized. Furthermore, independent t-test, Chi-square, regression analysis, and one-way ANOVA were performed to analyze the data.

Results

Overall, 285 patients including 199 (69.8%) men and 86 (30.2%) women, stated that fasting

had been discussed during their visits. Those participants stating that no conversation concerning fasting had occurred (almost one-third), weren't included in the study.

According to the collected data, 76.2% of patients were under diploma, 22.8% had diploma to master's degree, and 1% had higher education. What's more, 120 (42.1%) patients were with diabetes, 42 (14.7%) patients with hypertension, and 123 (43.2%) patients with both.

Among patients, 45(15.8%) had fasted the whole month of Ramadan (30 days), 62 (21.8%) had fasted some of the days, and 177 (62.4%) hadn't fasted at all.

Based on our findings, there is no significant relationship between physician gender and patient satisfaction.

Figure 1 shows the mean score of patients' satisfaction with medical consultation about Ramadan fasting.

The mean score of patient satisfaction with specialists was 81.36 (14) and for general practitioners was 73.53 (15) (P-value <0.001). There was no significant linear correlation between patients' age and the mean score of patient satisfaction (P-value=0.5).

There was no significant correlation among patients' gender, level of education, kind of disease, disease duration, and the mean score of patient satisfaction (P-value=0.09).

According to the results, 123 (30%) patients said that fasting was not discussed during their visit, 70 (59.6%) patients believed that they could make their own decision on this matter, 8

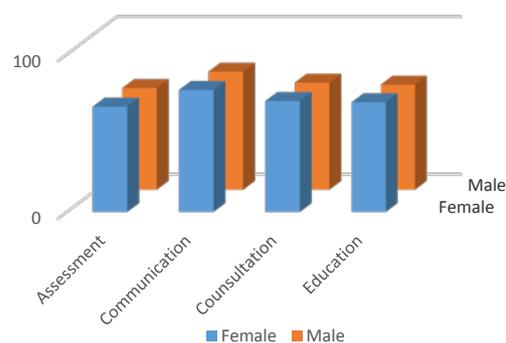


Figure 1. Diabetic and hypertensive patient's satisfaction mean score of medical consultation for ramadan fasting in 2012-2013

(6.5%) patients stated that they had not discussed fasting due to physician's haste, and

45 (36.6%) patients said that they had consulted a physician on this issue the year before.

As can be noted below, Tables 1 and 2 show the patients' and physicians' points of view on fasting.

Regarding patient satisfaction, maximum satisfaction was obtained through listening to patients and giving thorough answers to them. On the other hand, factors such as adequate explanation about diet, prevention of symptoms incidence during fasting, and life style changes caused minimum satisfaction.

As the data indicates, 128 (45%) patients had less non-drug compliance while fasting, and 99 (34/9%) patients said that they suffered from sleep disorders during fasting period. In 130 (46%) patients, changes in sleep time had caused some irregularities in treating their disease. Furthermore, 90 (31.6%) patients stated that they didn't take their medications regularly and on time while they were fasting. Table 3 shows the frequency of symptoms in patients while fasting. As indicated in the table, 46 (33.4%) patients said that they broke their fast immediately after incidence of symptoms, 22(15.9%) patients broke their fast due to severity of symptoms, while 62 (50.7%) patients continued fasting even in severe situations.

Patient strategies used during incidence of symptoms are as follow:

Taking analgesics 42 (31.8%), resting more 65 (49.2%), changing diet 18 (13.6%), and taking other medications 7 (5.4%).

Discussion

The purpose of this study was to investigate diabetic and hypertensive patients' satisfaction with medical consultation on fasting. According to the obtained results, the overall satisfaction with physician practice was relatively high (especially satisfaction with physician-patient interaction and their consultation on fasting in Ramadan). This might be as a result of long

practice experience or the continued postgraduate teachings on communication. Quite in line with our findings, Shams and Zamani showed that the rate of patient satisfaction with physicians who had adequate communication skills training was higher than that of others (16).In Malaysia, the level of medical staff's knowledge on medical treatment (the use of inhaler, drip infusion, injection, ear, and eye and nose drops do not break the fast) of fasting patients was satisfactory (17). Additionally, three studies (Heidary, Qom - Ghodejani, Isfahan- Barikani, Tehran) showed a desirable physician-patient interaction (18-19) and two other researches pinpointed a moderately good one (20-21). Some studies indicated that answers to patients' questions about their diseases and treatments were moderately acceptable (18).

Our findings revealed that physicians' humor and their careful listening and answering to patients' questions about their diabetic management, result in higher level of patient satisfaction. In the most researches in Iran,

Table 1. Physicians 'points of view about fasting clinical ability in 2012-2013

Physician view	Frequency	Percent
Recommend to fast	20	7
Getting judgment to myself	80	28.1
Disagree to fast	185	64.9
Total	285	100

Table 2. Diabetic and hypertensive patients 'points of view about fasting ability due to their diseases in 2012-2013

Patient view	Frequency	Percentage
I can fast	67	23.4
I can fast if treatment changes	32	11.3
I can't fast	186	65.3
Total	285	100

Table 3. The Frequency of presented clinical symptoms of diabetic and hypertensive patients during Ramadan fasting in 2012-2013

Symptoms	Severe	Moderate	weak	Without symptoms
	Frequency (percentage)	Frequency (percentage)	Frequency (percentage)	Frequency (percentage)
Fatigue	52(34.9)	25(16.8)	30(20.1)	42(28.2)
Headache	39(26.4)	26(17.6)	31(20.9)	52(35.1)
Angriness	31(20.9)	27(18.2)	26(17.6)	64(43.2)
Depressed mood	32(21.6)	18(12.2)	18(12.2)	80(54.1)

physicians' sense of humor satisfied patients (18, 21, 22). However, in two researches this factor didn't play any specific role (13, 15).

The results of this study show that patient satisfaction score regarding patient training (for patients' symptoms and how to prevent them during fasting, and for their lifestyle) was low. In two studies in Isfahan the lowest satisfaction referred to patient training and treatment history (16, 23).

Less satisfaction with the patient training process may be due to the fact that Physicians have not been trained how to care their patients according to the cleared program, do not manage so that when their attention is focused on the diagnosis and treatment of a patient, his training is neglected. Another reason for physicians' inadequate attention to patient training is visits' short duration which is caused by various factors (overcrowded clinics, physician's impatience, tariffs, etc.).

In fact patients need to have proper information about their nutrition, changes in their medications, control of their thirst, and the time of breaking their fast. They might have some wrong beliefs about their diseases and feel guilty about breaking their fast. Therefore, their belief must be modified.

A major problem in patient training is the ongoing controversy concerning the effects of fasting on patients with diabetes and hypertension (24). Ramadan-focused training was proved beneficial for empowering diabetics to change their lifestyle during Ramadan (25). Ahmedani et al. observed a reduction in the number of acute diabetes complications due to changes in drug dosage and timing, dietary counseling, and patient training (26). They recognized time of hypoglycemic and hyperglycemic episodes (before sunrise) and proposed a need for more focused training efforts. Also time of Physical activity of diabetics for prevention of hypoglycemia (avoid before meals) is important (27).

In this research, patient satisfaction with evaluation of their condition is acceptable but it is less than other components of consultation.

Results of some researches in Iran (Ghodejani, Isfahan- Norosana, Fasa- Haghigat, Tehran) showed moderately desirable history taking by physicians (11, 17). However, these items for Ramadan fasting are not acceptable in

many researches, for instance, approximately 44% of the cases in the study didn't receive any recommendations from their healthcare providers about fasting and diabetes in Ramadan. The most commonly provided advice was not too fast, followed by some modifications in drug therapy. In addition, only 60% of those who fasted received actual recommendations about intake of diabetes medication during Ramadan (28).

Our analyses suggest that rate of satisfaction with specialists was higher than that of general physicians. This finding indicated that more knowledge about chronic diseases in specialists impresses their consultations.

In about one-third of cases in our study, no conversation between physicians and their patients about Ramadan fasting was reported. Gaborit et al. evaluated medical consultation about Ramadan fasting with diabetics in France. Similarly, results of their study indicated that in one-third of the cases this matter wasn't raised in patient-physician interactions (29).

In the aforementioned study, 30% of diabetic patients fasted in spite of their physician's recommendation (in our study rate of refusal was 6%). These diverse findings are due to cultural differences between the two societies, and differences between physicians' religions and their patients' in France. In this study, one half of the patients whom were prohibited from fasting, believed that they could fast in Ramadan (there were none in our study).

Diet is also a challenge in Ramadan; Méghit Khaled noted that patients with diabetes in Kuwait changed their diet in Ramadan, consuming more sweets and drinks (30). Half of our patients didn't do their diabetic diet in Ramadan.

Some patients complained about their sleep pattern in Ramadan. Studies show that fasting changes circadian rhythm, decreases sleep depth and day consciousness (31). It can also be due to changes in hormonal levels, diet habits, and sleep times (32). Bahammam et al. found that eating food only at night increases body temperature during night (unlike the normal routine) which can change sleep patterns (33).

Our findings indicated that the most common symptoms of fasting are fatigue and headache. In a study conducted in Kuwait, fatigue was common, as well (30). Controlling fatigue

through behavioral and medical methods can probably help to fast with fewer problems.

Conclusion

Overall, medical consultation about fasting with diabetic and hypertensive patients in Isfahan with religious backgrounds is not taken into consideration sufficiently. It seem mandatory to train patients, conduct more researches, and prepare lifestyle guidelines for Ramadan fasting. Also continuous physician training for these issues is of utmost importance.

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