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Ramadan fasting and diabetes: An observational study among Turkish migrants in Belgium

Bart Peeters[a,*], *Els Mehuys*[a], *Inge Van Tongelen*[a], *Elien Van Bever*[b], *Lore Bultereys*[b], *Dirk Avonts*[c], *Güven Yıldız*[c], *Jean Paul Remon*[a], *Koen Boussery*[a]

[a] *Pharmaceutical Care Unit, Faculty of Pharmaceutical Sciences, Ghent University, Harelbekestraat 72, B-9000 Ghent, Belgium*
[b] *Faculty of Pharmaceutical Sciences, Ghent University, Harelbekestraat 72, B-9000 Ghent, Belgium*
[c] *Department of Family Medicine and Primary Health Care, Faculty of Medicine and Health Sciences, Ghent University, De Pintelaan 185, B-9000 Ghent, Belgium*

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ABSTRACT

Aims: To investigate (i) Ramadan participation, (ii) provision of Ramadan-related advice by healthcare providers, (iii) medication use during Ramadan fasting among Turkish migrants with diabetes in Belgium.

Methods: This pilot observational study was conducted among a convenience sample of 52 Turkish migrants with diabetes in Belgium. Two questionnaires collected information on socio-demographic characteristics, diabetes-related characteristics, current hypoglycaemic medication with dosing regimen, participation in the past Ramadan, reasons for (non-)participation, use of hypoglycaemic medication during the past Ramadan, advice from their healthcare providers about fasting during Ramadan and follow-up of this advice.

Results: Sixteen patients (31%) had fasted during the past Ramadan. Main reason for Ramadan participation was reinforcement of faith (12/15), while the main reason for non-participation was having diabetes (34/36). About 56% of the study population had received recommendations from their healthcare provider(s) about fasting and diabetes during Ramadan. The most commonly provided advice was not to participate in Ramadan, followed by modification of drug therapy. Only 3 patients ignored the advice of their health professionals. In addition, only 60% of those who actually fasted received recommendations about intake of diabetes medication during the Ramadan. Most fasters continued their medication dose unchanged (87% of OHA users and 80% of the insulin users).

Conclusions: This pilot study found a low prevalence of Ramadan fasting among Turkish migrants with diabetes in Belgium. We also found that provision of advice by healthcare providers could be improved. Larger scale studies are warranted to confirm these findings.

* *Corresponding author at*: Universiteit Gent – Eenheid Farmaceutische Zorg – Vakgroep Geneesmiddelenleer – Faculteit Farmaceutische Wetenschappen, Harelbekestraat 72, 9000 Gent, Belgium. Tel.: +32 9 264 80 73.
E-mail address: b.peeters@ugent.be (B. Peeters).

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1. Introduction

Muslims who fast during Ramadan must abstain from food and drink from dawn to sunset for about 30 days. Although the Koran exempts chronically ill from fasting, many Muslims with diabetes still wish to fast. A large study conducted in 13 Muslim countries on 12,243 individuals with diabetes – the EPIDIAR study – showed that 79% of type 2 and 43% of type 1 diabetes patients actually fast during Ramadan [1].

During the past decades, the number of Muslims living in Western Europe has steadily grown due to immigration from Muslim-majority areas such as the Arab region and Turkey [2,3]. However, literature on Ramadan fasting among Muslim migrants with diabetes living in Western countries is limited. An interview study of patients' and general practitioners' (GPs) attitudes towards Ramadan fasting in France found that Muslim patients consider Ramadan participation important, and revealed a large cross-cultural gap between GPs and their patients [4]. Another study, conducted among 27 Arab Americans with type 2 diabetes, found suboptimal diabetes management during Ramadan fasting [5].

This pilot observational study was conducted among a convenience sample of Turkish migrants with diabetes in Belgium. Our specific research questions were: (i) what is the proportion of patients who fast during Ramadan, and what are their motives to (not) participate in Ramadan?, (ii) do they receive recommendations from their healthcare providers about Ramadan participation, and (iii) how do those who actually fast use their diabetes medication during Ramadan?

2. Patients and methods

2.1. Study design

This observational study was carried out from June 2010 till October 2010 in Ghent, Belgium's third largest city where approximately 10% of the inhabitants are of Turkish descent. Approval for the study was granted by the Ethics Committee of Ghent University Hospital, and all patients gave written informed consent.

2.2. Patients

Recruiting ethnic minorities can be difficult, therefore we used several recruitment sources [6]. We recruited patients from general practices and community pharmacies having a large proportion of Turkish patients, and from the Department of Endocrinology and Diabetology of Ghent University Hospital. In addition, we used face to face recruitment via volunteers from the local Turkish community to access housebound patients and patients with limited contact with health services. Patients were eligible for participation when fulfilling the following inclusion criteria: (i) aged 18 years or older, (ii) born in Turkey or have at least one parent born in Turkey, (iii) reported to be Muslim, and (iv) using oral hypoglycaemic agents (OHA) and/or insulin in treatment of type 1 or type 2 diabetes.

2.3. Data collection

Patients who agreed to participate completed two self-administered questionnaires. The first questionnaire was given to the participants 7 to 1 week(s) before the start of Ramadan, while the second was given immediately after the end of Ramadan. Patients were asked to complete them and post them back to the research centre. Those who did not initially return the questionnaires were reminded by telephone. Respondents could complete the questionnaires in the language of their choice (Dutch or Turkish; the Turkish version was obtained via back-translation). For illiterate patients, questions contained in the questionnaires were read out by the investigators or by any literate person easily accessible to them.

The first questionnaire collected information on socio-demographic characteristics, diabetes-related characteristics, and current hypoglycaemic medication with dosing regimen. The GP of each patient was requested to provide the patient's most recent HbA1c. The second questionnaire included questions on participation in the past Ramadan, reasons for (non-)participation, use of hypoglycaemic medication during the past Ramadan, advice from their healthcare providers about fasting during Ramadan and follow-up of this advice.

3. Results

Sixty-six patients completed the first questionnaire. Fourteen of them did not return the second questionnaire, resulting in a final sample of 52 patients. Socio-demographic and diabetes-related characteristics of patients who did not return the second questionnaire did not differ significantly from patients who did, except for gender (more women among those who did not return the second questionnaire; Fisher's exact test, $p < 0.05$).

3.1. Sample description

The socio-demographic and diabetes-related characteristics of the participants are shown in Table 1. Approximately 60% of the sample was female. About three quarters had a low educational level and was unemployed. Half of the study population was treated with OHA alone, and half used insulin (alone or in association with OHA). Thirty-seven percent had at least one Turkish speaking healthcare provider. The HbA1c level was good (HbA1c < 7%, <53 mmol/mol) in one third of the respondents, and insufficient (HBA1c > 8%, >64 mmol/mol) in another third.

3.2. Participation in Ramadan

Almost 80% of our sample (40/51; total *n* is 51 since 1 participant did not complete this item) considered participation in Ramadan as (very) important (rating on a 5-point Likert scale). Most patients (46/52; 89%) were aware of the exemption from fasting for chronically ill. Sixteen patients (31%) had fasted at least 15 days during the past Ramadan. Eleven of them were treated with OHA alone (11/16; 69%, 4 with a combination of OHA plus insulin (4/16; 25%) and 1 with insulin alone (1/16; 6%).