A survey of fasting during pregnancy

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ABSTRACT

Introduction: Fasting during the month of Ramadan is compulsory in the Muslim faith. Although pregnant women may be exempted, many still choose to fast while others are more careful in practising it. This survey examines the practice of fasting among pregnant Muslim women in Singapore based on the prevalence in relation to factors such as parity, social and economic circumstances. It also analyses the factors that influence the decision to fast and the successful completion of the fast, and examines their knowledge, belief and attitudes on fasting during the holy month of Ramadan.

Methods: This is a retrospective study of all Muslim women who were pregnant and received antenatal care in our hospital during the month of Ramadan from 17 November 2001 to 16 December 2001. A four-page questionnaire was mailed to all eligible subjects in March 2002.

Results: Of 202 eligible subjects, 125 responded via mail and 57 via the phone, yielding a response rate of 90 percent. Most women chose to fast during pregnancy, and they do so with adequate support from their spouses and family members. Most of them do not experience any adversities during fasting and even if they do, most were able to overcome them. Most women adopt a positive attitude towards fasting. However, there is a lack of basic religious knowledge among many pregnant women pertaining to the Muslim law of fasting during pregnancy.

Conclusion: Doctors and health workers need to understand the religious obligations of a Muslim towards fasting during Ramadan. Only through this can a doctor adequately counsel Muslim patients and allow informed decision with regards to fasting. With respect to pregnant women, provisions are allowed for them not to observe fasting.

Keywords: antenatal care, fasting, Muslim, pregnancy, Ramadan

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INTRODUCTION

Ramadan, the ninth month on the Islamic calendar, is the month of fasting for Muslims. Fasting is compulsory as it forms one of the five fundamental obligations of a Muslim. Each and every action or deed that a Muslim performs comes under one of the five classifications of the sacred law (Appendix 1). Hence, fasting is an essential action ("wajib"). Every healthy Muslim adult, man and woman is responsible for fulfilling this fundamental obligation. However, certain groups of people are exempted from fasting. They include prepubertal children, the frail elderly, the acutely unwell, travellers who journey more than 50 miles, menstruating women, pregnant and nursing women who are worried about their health and/or pregnancy, and those with learning difficulties or mental retardation such that they are unable to comprehend the nature and purpose of the fast.

A pregnant woman is exempted from fasting if she has reasons to believe that her health or that of her foetus is in any way compromised through

Appendix 1. The Sacred Law in Islam.

	Classification	Action	Definition
1	Essential	("Wajib")	Whose performance is rewarded, and whose non-performance is punished.
2	Recommended	("Sunat")	Whose performance is rewarded, and whose non-performance is not punished.
3	Permissible	("Harus")	Whose performance is not rewarded and whose non-performance is not punished.
4	Offensive	("Makruh")	Whose performance is not punished and whose non-performance is rewarded.
5	Unlawful	("Haram")	Whose performance is punished and whose non-performance is rewarded.

doing so. However, she is expected to observe compensational fasting ("qada") after her pregnancy. The fast is nullified if a person deliberately and willingly commits an act which breaks fasting. Under such circumstances, the person must compensate for the fast at a later time, with or without penance. Some of the factors which nullify the fast include consuming any solid or liquid material, sexual intercourse, intentional vomiting, intravenous or intramuscular injections or nutrients, and vaginal bleeding or menstruation.

This survey examines the practice of fasting among pregnant Muslim women in Singapore, based on the prevalence in relation to factors such as parity, social and economic circumstances. It also analyses the factors that influence the decision to fast and the successful completion of the fast. The women's knowledge, belief and attitudes on fasting during the holy month of Ramadan are also examined.

METHODS

This survey retrospectively enrolled all Muslim women who were pregnant and received antenatal care in our hospital during the month of Ramadan from 17 November 2001 to 16 December 2001. A four-page questionnaire was mailed to all eligible women in March 2002. The questions were structured using simple language and medical jargon was avoided. Most questions required a "yes" or "no" answer. Demographical data obtained included maternal age, gestational age, parity status, marital status, and presence or absence of any medical illness. Socioeconomic data were recorded from occupational status, monthly income and type of residence. Non-respondents were recalled via telephone. Questions based on the questionnaire were asked and answers recorded by an obstetric co-ordinator.

RESULTS

Of the 202 women eligible for the survey, 125 responded via mail and 57 via telephone, giving a response rate of 90%. All respondents were married with a mean age of 30 years (range, 20 to 39 years). There was at least one working member in every family and 112 (62%) respondents were working women. Majority (55%) of the women had a household with income that is more than $2,000 per month and 93% had a household income that is more than $1,000 per month. Only 7% had a monthly income of less than $1,000 per month. All subjects resided in public housing except for one who lived in a private residence.

There were 116 multigravidas and 66 primigravidas surveyed. More multigravidas fasted compared to primigravidas. 30% of primigravidas did not fast at all, compared to only 3% of multigravidas who did not fast at all. Results of prevalence based on parity are shown in Table I.

Table I. Prevalence of fasting in Ramadan in 2001 (n=182).

Duration of fast (days)	No (%)	Multigravida	Primigravida
Did not fast	24 (13)	4	20
1 - 10	24 (13)	16	8
11 - 20	31 (17)	22	9
21 - 29	43 (24)	29	14
30	60 (33)	45	15
At least 1 day	158 (87)	112	46

All respondents surveyed were aware that fasting during Ramadan is essential, or "wajib" in Islam, for a healthy adult man or woman. Table II shows the respondents' understanding of the Islamic law governing fasting in healthy pregnant women.

Table II. Knowledge of law of fasting during pregnancy (n=182).

Variable	No (%)
Essential	122 (67)
Recommended	29 (16)
Permissible	26 (14)
Offensive	5 (3)
Unlawful	0 (0)

Sixty (33%) women did not know that fasting is essential and compulsory in a healthy pregnancy, where the mother is not worried about both her health and her pregnancy. They misunderstood the law and wrongly believed that fasting in pregnancy is optional. All respondents were aware that they were allowed to repay their "fasting debt" after delivery.

Of the 24 women who did not fast at all, their reasons for not doing so are shown in Table III.

Table III. Reasons for not fasting (n=24).

Reasons	No. (%)
Pregnancy	11 (46)
Co-existing medical problems	9 (38)
Fasting in pregnancy is not compulsory	1 (4)
Personal reasons	1 (4)
Severe vomiting and bleeding complications	1 (4)
Too busy with work and activities	1 (4)

The results of patients' perception on the harmful effects of fasting during pregnancy are shown in Table IV.

Table IV. Perceived harm of fasting in pregnancy (n=182).

Perceived harm	No. (%)
To own health	29 (16)
To foetus	29 (16)
To both self and foetus	20 (11)
Not harmful	143 (79)

The results of what patients thought were the most dangerous risk of fasting during pregnancy are shown in Table V.

Table V. Most dangerous risk of fasting in pregnancy (n=182).

Risk	No. (%)
Feeling weak due to lack of nutrition	91 (50)
Adverse effects to foetus	49 (27)
Fear of inability to perform daily activities	14 (8)
Dangerous to general health	12 (7)
No risk	16 (9)

Fifty-five (30%) women were adversely affected during their fast (Table VI). Nine (17%) women were not able to overcome these adverse effects of fasting. Of these, five had severe giddiness and four had nausea and vomiting. All respondents were able to tolerate hunger and thirst, and weakness and fatigue.

Table VI. Adversities encountered during fasting.

Adversity	No (%)
Giddiness	25 (45)
Nausea and/or vomiting	15 (27)
Hunger and/or thirst	8 (15)
Abdominal pain	3 (5)
Weakness and fatigue	3 (5)
Fever	1 (2)

Fifty-two (29%) women experienced some form of nullifying factors, which invalidated their fast (Table VII). Some experienced more than one nullifying factor.

Table VII. Nullifying factors during fasting.

Factor	No. (%)
Severe vomiting	21 (12)
Blood-taking	15 (8)
Taking medications	14 (7)
Vaginal examination	11 (6)
Bleeding per vaginum	6 (3)

Thirteen (7%) spouses were against their wives fasting during pregnancy and nine (5%) families were against it; while 3% of both spouses and family members objected to it. A large majority of husbands and family units were supportive. About 52% of women found fasting during pregnancy to be more challenging and difficult as compared to fasting during the non-pregnant state; the rest did not feel any difference. 21% will eat more during the pre-dawn hours and 25% will eat more on breaking fast at sunset, as compared to when they are not pregnant. 12% will eat more both during the pre-dawn hours and upon breaking fast.

DISCUSSION

The Islamic practice of fasting during the month of Ramadan requires healthy adults to completely abstain from taking food and drink between sunrise and sunset daily. This is an essential action, or "wajib", as it is one of the five fundamental pillars of Islam. All respondents surveyed understood this fundamental law. However, there are exceptions to this law, one of which is fasting in the pregnant state. According to the Mufti, the religious leader of the Muslims in Singapore, the Islamic Law on fasting during pregnancy maintains that a pregnant woman who is in good health, capable of fasting and does not feel any worry about herself or to her foetus, is required and expected to fast like any ordinary woman. She is permitted to abstain from fasting if she is worried for her own health, the health of her foetus, or the health of both herself and her foetus. If she breaks her fast, she should perform the compensational fasting or "qada", which refers to fasting for the days missed after her pregnancy is over, after the current Ramadan.

In our study, most respondents fasted during their last pregnancy. 87% of them fasted at least a day and 74% successfully completed at least 20 days of Ramadan. This is despite the fact that only 67% of them correctly understood the Islamic Law on fasting in pregnancy. 30% of them had thought that fasting in pregnancy is not compulsory, but is either a recommended ("sunat") or permissible ("harus") action. Various reasons, such as good social support, may explain this. Positive encouragement from their spouses and families is observed in more than 90% of respondents. Other reasons include the convenience and camaraderie of fasting as a family unit during Ramadan, the difficulties of fasting outside the Ramadan when no one else is fasting, and the social pressure exerted from outside the family. The respondents were also highly motivated to fast, even though 30% of them had faced adverse reactions.

The main complaints were giddiness, nausea and vomiting; 80% of them were able to overcome their adversities and continued fasting. This high prevalence of fasting in pregnancy is also observed among women in Birmingham[1], where more than 75% of women fasted during their pregnancies.

The fear that fasting is harmful to either the pregnant mother and/or the unborn baby largely explains the small proportion of women who did not fast. 11% of respondents felt that fasting harms both the mother and the baby. A multiparous woman is more likely to fast compared to a primigravida. This is likely because a primigravida, experiencing pregnancy for the first time, is more apprehensive and cautious about fasting. A study on the metabolic changes in Asian Muslim pregnant mothers in Britain who fasted confirmed that there were departures from normal ranges. At the end of the fasting day, the biochemical levels of glucose, insulin, lactate and carnitine were significantly reduced and the levels of 3-hydroxybutyrate, triglycerides and non-esterified fatty acids were significantly raised[2]. However, these biochemical changes did not seem to produce any difference in clinical outcome. Though the number of women studied were small (11 fasting and 11 non-fasting women), it was shown that there were no difference in pregnancy outcomes in birth weights of the babies. Cross et al also found that the mean birth weight of term babies born to Muslim mothers did not change, irrespective of the gestational age at the beginning of Ramadan[1]. However, their study had assumed that all the Muslim mothers fasted during Ramadan from 1964 to 1984, and did not take into consideration the difference in length of time from sunrise to sunset. While the number of hours from sunrise to sunset in a tropical country like Singapore is 12 hours, in a temperate country, it is longer in summer and shorter in winter.

Hence, healthcare givers face the daunting task of providing accurate and appropriate medical advice to women who wish to fast during their pregnancies. On the one hand, the doctor has to determine the general good health of the mother, the unborn baby, and the pregnancy prior to and during the fast. In the presence of co-existing medical conditions, the doctor also has to ensure that the medical condition and medication schedule will not be compromised by the fast. On the other hand, the doctor has to be sensitive to the patient's wish to fulfill her religious obligation. It is far better that the patient fasts with the knowledge of her doctor and hence, closer monitoring by her doctor may be instituted than if she fasts against medical advice and returns to consult the doctor only when the whole Ramadan is over. Therefore, it is important that the doctor provides a careful explanation and counselling which will allow a Muslim woman to make an informed decision whether to start and/or continue her fast during pregnancy.

In conclusion, the majority of Muslim mothers surveyed chose to fast during their pregnancy, even though a third of them did not fully understand the Islamic Law. Slightly more than one-half found fasting during pregnancy definitely more difficult, and a third experienced some form of adversity and nullifying factors. However, these difficulties were readily overcome by positive attitudes towards fasting, the overwhelming spousal and family support, and the strong sense of religious obligation. In Islam, fasting is mandatory for the fit and healthy adult. Likewise, for the healthy pregnant mother, fasting is "wajib" when she has fulfilled the responsibility to ensure that her health, her pregnancy and her unborn baby are not compromised by fasting. When there is a doubt or uncertainty of the possible health risks, medical advice should be sought and seriously considered.

In the presence of medical illness, compliance to medical advice and treatment to ensure that the mother, pregnancy and foetus remain healthy is very important as there are provisions in Islam to exempt fasting. The onus is on the mother to make that informed decision to fast. However, in the absence of any identifiable medical risks or complications, the doctor may find it difficult to advise with certainty. There is still no definite evidence that fasting from sunrise to sunset during pregnancy can adversely affect the clinical outcome of the pregnancy or baby. In this circumstance, a holistic approach may be best where the doctor considers all factors, the medical, social and religious needs of the patient, and along with common sense and common knowledge, advises the healthy pregnant mother.

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