

How to manage asthma during Ramadan?

Comment gérer l'asthme pendant le Ramadan?

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RÉSUMÉ

Pendant le mois de Ramadan, les Musulmans doivent s'abstenir de manger, de boire et de fumer du lever (Sehour) au coucher (Fetour ou Iftar) du soleil. Parmi eux, il y'en a qui s'abstient aussi de prendre leurs médicaments prescrits par inhalation pour asthme (CIS±LABA). Ceci pourrait conduire à perdre le control de l'asthme et même à des crises mortelles. La jurisprudence islamique n'est pas unanime au sujet des inhalateurs. Certains considèrent que le produit inhalé est gazeux et ne rompt pas le jeûne. D'autres considèrent qu'il est collé à la muqueuse buccale comme les aliments et rompt le jeûne. Cependant les inhalations prescrites pour traitement de fond (CIS±LABA), sont prescrits deux fois par jour, donc le médecin pourrait et devrait indiquer à son malade qu'il pourra prendre ses inhalations au Sehour et au Fetour. L'Islam est aussi flexible; il autorise au malade de ne pas jeûner ou de rompre son jeûne en cas de maladie (crise d'asthme ou asthme non contrôlé); ou en cas de comorbidités préoccupantes. Le malade pourra jeûner un nombre équivalent de jours une fois guéri ou pourra donner de la nourriture journalière ou l'équivalent en argent à un pauvre s'il ne peut pas faire le jeûne (Rédemption). Le médecin doit expliquer à ses malades la nécessité fondamentale de prendre leur inhalations (CIS±LABA) régulièrement aussi bien pendant le Ramadan pour ne pas perdre le control de son asthme. Il doit aussi les éclairer sur l'autorisation religieuse de rompre le jeûne en cas de crise ou non control de l'asthme, comme cité dans le sacré Coran. Ramadan aussi est l'occasion pour encourager les malades à arrêter de fumer. La gestion de l'asthme pendant le Ramadan devrait faire part de l'enseignement dans les facultés de pharmacie, de médecine et des paramédicaux.

Mots-clés

Maladies respiratoires, observation du Ramadan, Rédemption, Inhalateurs, Arrêt de tabac; Curriculum

SUMMARY

When Muslims fast in Ramadan, they abstain from eating, drinking and smoking from sunrise (sehour) to sunset (Fetour or Iftar). Many Muslims also abstain from taking prescription medication during the fasting hours. This has significant implications for asthma management since to maintain asthma control patients should continue to take their preventer inhalers (ICS±LABA) as prescribed or risk acute exacerbations and even death. Islamic jurisprudence is not unanimous on whether inhalers invalidate fasting or not. The controversy is related to how the inhalers are classified. Some Muslim scholars believe that inhalers do not break the fast because of the gaseous nature of the inhaled agents. Other scholars disagree. They state that since the inhaled gases pass through the mouth and precipitate on the mucosa, they mimic food products. Consequently, they believe the use of the inhalers breaks the fast. It is important to assist patients deal with this dilemma. One approach is to help patients with the timing of their inhaler use. Most preventer asthma medications are prescribed twice daily. With good timing, patients can stick to their therapeutic regimens and still observe fasting. They can take daily preventer inhalers of ICS or ICS+LABA at Sehour and Fetour. Another approach is to remind patients that Islam is flexible and allows special consideration for patients suffering from serious illnesses or conditions, including uncontrolled asthma, asthmatic attacks, and other chronic diseases. These individuals, according to the holy Qur'an, are allowed not to fast or to break their fast and take their medications if they develop acute attacks or complications. Patients can make these days up by fasting later during the year a number of days equivalent to the number of days they had not fasted. Alternatively, if they still are not able to fast, they get redemption by feeding a poor person. Physicians should educate patients about the importance of adherence to preventer therapy during the month of Ramadan. The latter may be a golden opportunity for patients to stop smoking, a process that can be enhanced by compassionate education from the physician. Asthma in Ramadan should be considered in curriculum of nursing, pharmacy, and Medical schools.

Key-words

Respiratory conditions, Ramadan observance, Redemption, inhalers, smoking cessation, curriculum

Asthma is a public health problem worldwide, with a high incidence, high prevalence and causing significant social and economic damage [1]. According to the 2018 global asthma network report estimates, there were 339 million asthma patients worldwide [1]. Asthma is ranked 16th for disability adjusted life years of all causes [1]. This is because asthma can lead to premature death, hospital admissions, reduced productivity and worse quality of life [1]. The prevalence of asthma varies among Muslim countries from 2.8% in Indonesia to 14.1% in Tunisia [2]. Millions of asthmatics Muslims all over the world fast during the Holy month of Ramadan [3,4]. Most Muslim countries are low or middle income countries, where the severity of asthma is high, and mortality is a serious issue [1]. There are many hindrances to the proper management of asthma in these countries. These range from non-availability or non-affordability of essential asthma medications (eg; inhaled corticosteroids (ICS)), with or without long acting bronchodilators (eg; long acting beta-2 agonists (LABAs)), as well as non-adherence of patients to ICS and add-on therapies. There is a strong need for better awareness and education of primary and secondary care physicians regarding the management of asthma, including the need for better curricula in medical schools and continuing medical education activities [5]. Special attention needs to be paid to Muslim countries in times of armed conflicts, because in such times, the care becomes emergency oriented and emergency care takes precedence over palliative or preventative treatment [6]. Asthma is a chronic disease needing daily long term preventative treatment, and, as needed reliever medication as well [5]. Unfortunately, like other non-communicable diseases, patients can die of complications, or exacerbations of asthma [6].

There are approximately 2.18 billion Muslims in the world [7]. Fasting (Sawm in Arabic) during the month of Ramadan, is one the five compulsory tenets which must be fulfilled by adult Muslims, if they are physically able to. They must fast from before sunrise (sehour) to sunset (fetour or iftar). During this period, they must abstain from eating, drinking, smoking, and all immoral vices [8]. Some Muslim asthma patients may consider that taking inhaled medications are a form of eating. If not properly educated about this by a physician or religious authority, they could get confused and interrupt their daily preventer asthma therapy [4,8]. So it is recommended that the patient should be properly educated, guided and motivated to continue his preventive

treatment. If deemed appropriate, the medication can be restricted to sehour and fetour times. Physicians should be aware of this flexibility, and should stress in educating the patient on the absolute necessity of taking these daily medications to keep his asthma under control and to avoid exacerbations [4,8].

This letter had three aims. First, to mainly guide Muslim asthma patient to adhere to their daily preventive inhaler treatment, and on managing their exacerbations, according to what is recommended in the Holy Qur'an [3,9,10]. Second, to suggest how the Ramadan can be used to improve the medical knowledge and awareness about asthma, and inculcate patient education supporting long term adherence to preventive treatment. Third, to show that Ramadan is also an opportune time to motivate patients to give up smoking [11-14].

With respect to the Holy Qur'an, there are four groups of asthma patients, in whom the rules for fasting differ from each other [4,8]: group 1 (healthy asthmatics): these are patients with well controlled asthma, who are able to fast whenever their asthma is well controlled; group 2 (patients suffering from any active disease: co- or multi- morbidities associated with asthma (eg; diabetes mellitus, arterial hypertension), patients suffering from exacerbations of asthma or having uncontrolled asthma): this group would also include patients suffering from other acute or chronic illness, either associated with the asthma, or not; group 3 (special cases): pregnant ladies, nursing mother, and children; and group 4 (patients unable to fast due to other reasons): women who are menstruating, as fasting and saying of prayers is forbidden in the days that a woman is having her monthly period. In group 1, the physician should educate patients and reinforce the need to continue their daily preventer therapy. Usually ICS with or without LABA's should be used twice per day, for which the ideal times would be at sehour and fetour [4,8-10], provided that the timings are suitably spaced. Erkeköl et al. [9], who followed 120 patients in an outpatient clinic during Ramadan, found that 90% of the Muslim patients considered it appropriate to visit doctors, and to take inhalers during this month, and most of them preferred to take their inhaled medications at sehour and fetour times. In a report from Turkey including 150 asthma patients [10], 93 (62%) chose to fast during Ramadan, and among the asthmatic fasters, 83% used their controller inhaled medications during Ramadan and preferred to use them at sehour and fetour times. In group 2, if an asthma patient develops an exacerbation

or goes into respiratory crisis, he/she is permitted to break his fast, or not to fast altogether [3,4,8], so that he/she can take rescue medications orally, by injection, or as needed. It is noteworthy that fasting does not trigger asthma attacks, nor does it increase hospitalization due to asthma [3]. Patients of group 3 are advised not to fast. While for prepubescent children (eg, under the age of 12 years), fasting is not obligatory. In group 4 patients have the option of feeding a poor person as compensation for not fasting for as many days as the lady or does not fast [4]. Asthmatic patients in groups 2 and 4, should follow guidance from the Holy Qur'an for compensation. Several Quranic verses state that God wants you to be in harmony, and your life to be easy. The following is a translation from the verses of Surat Al-Baqarah (2:183,184) in the Holy Quran: "O you who believe in God, Fasting is prescribed for you, as it was prescribed for those before you, so that you may guard (against evil), for a certain number of days. But whoever among you is sick or on a journey, then (he shall fast) a (like) number of other days; and those who are not able to do it may effect a redemption by feeding a poor man".

The occasion of Ramadan should be utilized to train general practitioners about asthma management in the month of fasting, and to encourage patients to be able to continue their fasting with proper guidance [3]. It is important to consider that, even a patient with controlled asthma, might still need to use a reliever inhaler (eg, a short acting bronchodilator) during the daytime when he is fasting [4]. Unfortunately, Islamic jurisprudence is divided on whether inhalers invalidate a fast or not. Some Islamic websites recommend the use of pressured metered dose inhalers (MDIs) inhalers during fasting [15,16], but do not mention dry powder inhalers [17,18], while others do not support the use of inhaled medication during fasting [19-21]. If the patient is hesitant, then the treating physician can advise the patient to seek religious advice, in addition to the pharmacological suggestion [8].

Since smoking is forbidden from sunrise to sunset, Ramadan month is a favorable opportunity to help quit all forms of tobacco smoking, including smoking of cigarettes, of narghile (shisha or hookah) or cigars. There is also less passive smoking in Ramadan [4,8], and this is an ideal occasion to discourage smokers from smoking at home or indoors, aiming primarily at protecting children and non-smokers [11,12].

Fasting is beneficial for asthma. Askari et al. [22] proved

that not only C-reactive protein levels decreased with fasting, but also wheeze, as well as enhancing self-satisfaction and spirituality. During Ramadan, patients should be monitored regularly and followed up carefully for asthma control at regular visits [9]. Therefore, the patients should be informed about the beneficial effects of fasting on their disease, and the permissible drugs which can be used while fasting [10]. It is interesting to note that Muslim women in Denmark used praying as an alternative to medications for controlling asthma symptoms while fasting during Ramadan [13]. However, the women did not perceive religion and treating asthma with medicine as mutually exclusive, but rather as coexisting for the shared goal of controlling asthma symptoms while allowing them to fast easily [13].

Fasting during Ramadan could also help Muslims living in Far Eastern countries like Singapore, to shift from their traditional food-based treatment of asthma (eg; frog in a coconut) to MDIs, explaining that inhaler hours could be managed for Sehour and Fetour, and that it is not food [14]. Even some Muslim fatwa, as mentioned above, consider that taking an inhaler does not break the fast because it is only aerosol and not food.

RECOMMENDATIONS

Stable asthma patients should be advised by their physician to continue taking daily preventer inhalers (ICS with or without LABA) twice daily in Sehour and fetour to maintain asthma control. Patients with uncontrolled asthma or those who suffer from acute attacks should be advised not to fast especially during attacks and severe crises. They should be reminded that, as permitted in the Holy Quran, they may make up these days by fasting later in the year a number of days equivalent to the days they had not fasted. They can also provide food to poor people as compensation for their not fasting. Other individuals who could be exempted from fasting are pregnant women, nursing mothers and children. Keeping in view the aforementioned observations, physicians should take the occasion of Ramadan to educate patients about adherence to daily preventers, and smoking cessation. It is also recommended to include management of asthma in the month of Ramadan in the curriculum of nursing, pharmacy and medicine, to help achieve the World Health Organization's plan for prevention and control of non-communicable diseases [23], and support global

guidelines, like the global initiative for asthma [5]. Fasting in the Holy Month of Ramadan has a beneficial impact on physical and mental health.

REFERENCES

1. Global asthma network 2018. The global asthma report. The Auckland New Zealand: Global Asthma Network 2018.
2. Lai CK, Beasley R, Crane J, Foliaki S, Shah J, Weiland S; International Study of Asthma and Allergies in Childhood Phase Three Study Group. Global variation in the prevalence and severity of asthma symptoms: phase three of the International Study of Asthma and Allergies in Childhood (ISAAC). *Thorax*. 2009;64(6):476-83.
3. Bener A, Colakoglu B, Mobayed H, El Hakeem A, Al Mulla AA, Sabbah A. Does hospitalization for asthma and allergic diseases occur more frequently in Ramadan fasting: a population based study (2000-2004). *Eur Ann Allergy Clin Immunol*. 2006; 38(4):109-12.
4. Mohammad Y, Yusuf MO. Dedicated to our Western colleagues, and Eastern Asian colleagues: how to deal with asthma and COPD patients during Holy Ramadan. *ECPRM* 2017; 4:4-7.
5. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention. www.ginasthma.org. Last access: May 10th 2019.
6. Devi S. Syria's health crisis: 5 years on. *Lancet*. 2016;387(10023):1042-3.
7. The world's Muslim population. www.muslimpopulation.com. Last access: May 10th 2019.
8. Mughal F. Out of hours: Ramadan. What it means for general practice. *Br J Gen Pract*. 2014; 64(624):356.
9. Erkekol FO, Celik GE, Keskin O, Güllü E, Mungan D, Misirligil Z. Fasting: an important issue in asthma management compliance. *Ann Allergy Asthma. Immunol*. 2006;97(3):370-4.
10. Aydin O, Celik GE, Onen ZP, et al. How do patients with asthma and COPD behave during fasting? *Allergol Immunopathol (Madr)*. 2014; 42(2):115-9.
11. Mohammad Y. Passive smoking interference with wheezing and asthma: short review of current knowledge. *Pulmonol Respir Res*. 2015; 3:2.
12. Mohammad Y, Shaaban R, Hassan M, Yassine F, Mohammad S, Tessier JF, Ellwood P. Respiratory effects in children from passive smoking of cigarettes and narghile: ISAAC Phase Three in Syria. *Int J Tuberc Lung Dis*. 2014;18(11):1279-84.
13. Druedahl LC, Yaqub D, Nørgaard LS, Kristiansen M, Cantarero-Arévalo L. Young Muslim women living with asthma in Denmark: a link between religion and self-efficacy. *Pharmacy (Basel)*. 2018;6(3).
14. Connett GJ, Lee BW. Treating childhood asthma in Singapore: when West meets East. *BMJ*. 1994;308(6939):1282-4.
15. Fasting and Asthma. <https://www.asthma.org.uk/advice/living-with-asthma/fasting/>. Last access: May 10th 2019.
16. Islam: Question and Answer. Types of asthma medication and the ruling on taking them during the day in Ramadan. <https://islamqa.info/en/78459>. Last access: May 10th 2019.
17. Using a puffer for asthma does not invalidate the fast. <https://islamqa.info/en/37650>. Last access: May 10th 2019.
18. Arab News Online. <http://www.arabnews.com/node/215842>. Last access: May 10th 2019.
19. Use of an inhaler and steam treatment while fasting. <http://www.islamweb.net/eramadan/articles/140750/use-of-an-inhaler-and-steam-treatment-while-fasting>. Last access: May 10th 2019.
20. Fasting - asthma inhaler. <https://www.muftisays.com/qa/question/128/answered-fasting--asthma-inhaler.html>. Last access: May 10th 2019.
21. Using inhaler while fasting in Hanafi Madhab. http://www.muftisays.com/blog/Muadh_Khan/3370_13-07-2013/using-inhaler-while-fasting-in-hanafi-madhab.html. Last access: May 10th 2019.
22. Askari VR, Alavinezhad A, Boskabady MH. The impact of "Ramadan fasting period" on total and differential white blood cells, haematological indices, inflammatory biomarker, respiratory symptoms and pulmonary function tests of healthy and asthmatic patients. *Allergol Immunopathol (Madr)*. 2016;44(4):359-67.
23. Global action plan for the prevention and control of non-communicable diseases 2013-2020. World Health Organization. ISBN 978 92 4 150623 6 (NLM classification: WT 500).