

Review Article

Preventing and controlling an acute attack of migraine during the fasting month of Ramadan – An Islamic and Scientific Perspective from Prophetic Medicine

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Abstract:

Migraine is a common debilitating headache presenting with severe one-sided pulsatile and throbbing pain. It has been observed that symptoms of the migraine are commonly aggravated in summer season. Ramadan is the 9th month of the Hijri calendar, observed by Muslims all over the world as a month of fasting. Fasting in the month of Ramadan is one of the five pillars of Islam. In this paper, a concept note is prepared to look the Prophetic ways in preventing and controlling migraines during Ramadan especially during the summer season from the Islamic and scientific perspective.

Keywords: Fasting, Migraine; Prophetic Medicine; Tibb-e Nabawi; Ramadan

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Introduction:

Migraine is a common debilitating headache presenting with severe one-sided pulsatile and throbbing pain. It is a common incapacitating headache causing distress to 15% of the population. Even though migraine is treated by various medications like non-steroidal anti-inflammatory drugs and Triptans group of medicines, but unfortunately, Muslims cannot consume these tablets during the fasting time in the month of Ramadan because, as per Islamic regulations, during this month, Muslims should refrain from taking food and drinks every day at the time of fasting from dawn to sunset.

O believers! Fasting is prescribed for you—as it was for those before you—so perhaps you will become mindful of Allah. Al-Quran¹

The month of Ramadhan [is that] in which was revealed the Qur'an, a guidance for the people and clear proofs of guidance and criterion. So, whoever sights [the new moon of] the month, let him fast it; and whoever is ill or on a journey - then an equal number of other days. Allah intends for you ease and does not intend for you hardship and [wants] for you

to complete the period and to glorify Allah for that [to] which He has guided you; and perhaps you will be grateful. Al-Quran²

For those people who are doing heavy laborious, cumbersome work during the fasting time, they may get exhausted, they may easily get acute migraine attacks because of increased hypoglycemia³, heat⁴, dehydration⁵, and stress⁶ which are the well-established triggers to produce migraine. It is observed that the migraine is commonly aggravated in the summer season. The most common and important triggers are hypoglycemia³, increased heat⁴, dehydration⁵, and stress⁶. Since Muslims are not allowed to take medications for treating migraine during the fasting time, so we tried to look this problem with a novel approach of prophetic way of managing acute migraine attacks during fasting times based on the Scientific and Islamic evidence.

The pathophysiology of the migraine is still debatable. One of the established important pathophysiology of migraine is cranial vessels vasodilation producing a lot of sensory nerve discharges by the activation of trigeminal nerve terminals in meninges resulting

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in neurogenic inflammation.⁷ Prostaglandins, Kinins, Calcitonin gene related peptide (CGRP) and Substance P are released in this process producing severe one-sided pulsatile and throbbing pain.⁸

Since cranial vessel vasodilation is an important pathogenesis in migraine, increased heat can further aggravate the vasodilation.⁹ It is also reported that the hypoglycaemia can also cause vasodilation and aggravate migraine.³ Hypoglycaemia increases endothelial-dependent vasodilation through suppressing phosphorylation at threonine 495/497 site of endothelial nitric oxide synthase.¹⁰ Dehydration⁵ and stress⁶ are already the common established triggers to produce migraine. The above reasons could explain why migraine is more common in summer seasons.

According to circadian variation of migraine attack onset, people used to get migraine most commonly at the early morning as well as at the late night.¹¹ It has also been proved as a result of circadian rhythm shift in sebaceous glands activities, Ramadan fasting was linked with increased sebum production in spite of lower glycemic load, dairy products intakes, and lower sleep duration.¹²

Prophetic way of preventing an acute attack of migraine:

Effect of *Suhur* on migraine:

Suhur is the meal consumed early in the morning before dawn during the Islamic month of Ramadan, after which people fast (*Sawm*) until after sunset. Since fasting involves taking *suhur* at the early dawn.

*“Eat the pre-dawn meal (suhur) as there is blessing in it”*¹³

Surely, there is a blessing in *suhur* as it rectifies hypoglycaemia and dehydration thereby preventing early morning migraine. The early morning migraine may thus be avoided by this process. It also confirms the prophet saying!

Effect of *Iftar* on migraine:

Iftar is the evening meal with which Muslims end their daily Ramadan fast at sunset. It is customary in all cultures in the Islamic world that dates are frequently used to break the fast.

Prophet advised to break the fast with dates:

*“When one of you breaks his fast, let him break it with dates for they are blessed. If they are not found, let him break it with water for it is pure”*¹⁴

By taking *iftar* with dates, late night migraine may be

avoided as dates are easily digested, provides a quick source of energy and nutrients, and mainly it can help in quick returning of body's blood glucose to normal levels. So, it also proves the prophetic quote “dates are blessed”. In this process, iftar helps in preventing late night migraine by rectifying hypoglycaemia and dehydration via dates and water.

Stress is one of the important triggers for migraine. It is observed that Muslims seem very happy during breaking of the fast. Stress is reduced at that time as things are made permissible for him of food, drinks, and intimate relations with the spouses that were forbidden for him earlier during his fast. Prophet's saying that a man feels happy at the time of breaking the fast:

*“There are two times of happiness for the fasting person: when he breaks his fast, he is happy and when he meets Allah, he is happy”*¹⁵

So, in conclusion the *iftar* meal like *Suhur* meal at sunset rectifies hypoglycaemia, dehydration, and stress, thereby preventing the occurrence of late-night migraine.

Effect of good deeds during the days of fasting on stress:

The Messenger of Allah said, *“Whoever feeds a fasting person will have a reward like that of the fasting person, without any reduction in his reward.*

¹⁶ *“The prophet was asked which charity is best? He replied “Charity in Ramadan”.* ¹⁷ *“The Prophet Mohamed (PBUH) was the most generous amongst the people, and he used to be more so in the month of Ramadan”*¹⁸

These prophetic statements advise persons to do more good deeds in Ramadan. If we see the effects of good deeds, they naturally make us contemplate about the rewards in hereafter. By doing so and emulating the prophet, our hearts will be at peace and our stress is reduced. So, good deeds during the days of fasting helps in preventing the migraine by rectifying the stress which is one of the important triggers for developing migraine.

Effect of sins during the days of fasting on stress:

*“Nay! But on their heart is the Raan (covering of sins and evil deeds) which they used to earn” - Al-Quran*¹⁹

Sins produce a negative effect on the heart and soul. So, naturally one's heart and soul would not be at peace, and it increases the stress, which may result in migraine.

Managing acute migraine attacks with cold application:

Since increased heat is one of the important triggers for migraine, it is established in scientific studies that the cold application may be effective in some patients suffering from acute attack of migraine.²⁰

Here we can understand the similarities between fever and migraine as both can be produced by increased heat and both of these can be managed by application of cold. In one research article it was revealed that tepid sponging without antipyretics was effective in reducing fever effectively during the first thirty minutes.²¹

This method of treatment was already initiated by our beloved prophet 1400 years ago:

*“Fever is a breath of Hellfire. Therefore, cool it with water.”*²²

*“If any of you comes down with fever, let him sprinkle cold water on himself for three consecutive nights before daybreak.”*²²

*“Fever is a bellow of the heat of the Hell, so remove it from you with cold water.”*²²

So, it proves that the prophetic medicine is the important basis for the innovations in modern medical science. Therefore, Muslims should try this methodology of cold application if they encounter acute migraine attacks during fasting. They can also try ablution (wudu) with cold water, as ablution provides a positive impact on our heart, soul, and entire body by keeping it refreshed.

Managing acute migraine attacks with methodologies involving constant touching/rubbing at the site of pain:

To explain this concept from a scientific perspective, we need to start with the Gate Control Theory of Pain developed by Melzack and Wall in 1965.²³ Pain sensation is regulated by pain receptors called nociceptors, which are nothing but the nerve endings of first-order neurons in the pain pathway. The axons of these neurons of small-diameter nerve fibers are of 2 types. 1. Fast fibers – A-delta, which is responsible for the initial sharp pain sensed at the time of injury, and 2. Slow C-fibers, which are responsible for a dull pain which lasts for a long time.

First-order neurons travel to the spinal cord via spinal nerves, where they synapse with second-order neurons, which, together with third-order neurons, tend to transmit pain signals to the brain. There is a

“nerve gate” located in the dorsal horn of the spinal cord called substantia gelatinosa, that controls the pain signals passage to the brain. This nerve gate consists of interneurons that inhibit second-order neurons, thereby reducing pain signal transmission.

When pain receptors are activated, they not only activate second-order neurons, but at the same time, they will inhibit the inhibitory interneurons, resulting in opening of the pain gate, thereby allowing transmission of pain signals. Now, if the same area is also stimulated by other, non-noxious stimuli, such as pressure, touch, or changes in temperature using hot/cold packs; a different type of nerve fiber – large diameter A-beta, is activated, and this process reactivates the inhibitory neurons, resulting in stopping of the pain signal transmission by closing the pain gate at substantia gelatinosa. This mechanism lies behind the pain-relieving effect of skin rubbing as well as the application of heat or cold packs. Since an acute attack of migraine produces severe one-sided pulsatile and throbbing pain, it may be relieved by skin rubbing as well as by giving constant pressure at the site of pain and also by applying cold packs at the same area, according to the concept of Gate Control Theory of Pain.

Now let’s see how the Prophet approached migraine from Islamic books:

Abu Naim said in his Prophetic Medicine book, that our prophet used to get affected by migraine headaches, and it would stop him from going out of his house for 1-2 days at a time.²²

The prophet said during the illness that preceded his death: *“Oh my head!” He used to tie a piece of cloth around his head.*²² As a result of tying a piece of cloth around the head, by providing constant pressure at the site of pain, it may help in soothing the pain of migraines by closing the gateway of pain as a result of reactivating the inhibitory neurons, resulting in stopping of the pain signal transmission.

In another hadith the Prophet taught us the dua for treating pain,

*‘Place your hand at the place where you feel pain in your body and say, Bismillah (in the name of Allah) three times and seven times (in Arabic) I seek refuge with Allah and with his power from the evil (pain) that I find and that I fear’*²⁴

This methodology is also exactly the same as above. It will activate the touch nerve fiber – large diameter A-beta, that in turn reactivates the inhibitory neurons,

stopping the transmission of pain signals by closing the pain gate at substantia gelatinosa.

It again proves the fact that prophetic medicine is an important backbone for the development of the concept of the Gate Control Theory of Pain. So, Muslims should practice this technique of tying a piece of cloth around the head as well as applying constant touch/skin rubbing at the pain site to manage the acute attack of migraine during the fasting period.

Conclusion:

God has provided a beautiful solution of circadian rhythm and setup in preventing migraine which is secretly hidden in the methodology of fasting. By doing proper fasting during the month of Ramadan and by amplifying it with good deeds during this period, one can overcome the summer migraine by the blessings and grace of almighty Allah. There is a hadith: Allah has said, 'every act of a person is for himself, but fasting is for me. That is why I will reward it.'²⁵

To conclude this, Muslims should follow these

prophetic etiquettes of controlling acute migraine attacks. Instead of breaking the fast because of migraine pain, these prophetic methodologies may help them in completing the fast by reducing the severity of pain occurring due to migraine attacks.

Say, 'O Prophet, ' "If you 'sincerely' love Allah, then follow me; Allah will love you and forgive your sins. For Allah is All-Forgiving, Most Merciful." *Al-Quran*²⁶

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