

Expounding a Few Key Strategies of Imam Ali (AS) on Prevention of Diseases by Means of Improving Nutrition Style

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Abstract

Background and Objectives: A major problem in public health has been the prevalence of chronic diseases. Most of these diseases are due to lifestyle changes, especially in the field of nutrition. The Iranian Islamic teachings have extensive guidelines on the issue of healthy lifestyle and nutrition in particular. On that account, there are many sayings and traditions related to nutrition and its practices. The sayings of Imam Ali (AS) like avoiding eating when you are full, not eating your fill when mealtime, and masticating food well are among those traditions. In the light of Imam's view, the role of these health behaviors is determinative of the public health. Using the latest scientific achievements and Iranian traditional medicine, this study reviewed the teachings of holy Imam Ali (AS) concerning public health.

Methods: In this review study, authentic narratives from collections and books of hadith related to nutrition practices were examined. There were special emphases on certain portions of the teachings that were extracted. These findings were evaluated after being in accord with the latest thoughts on medical literature and well-known databases such as PubMed along with the Iranian traditional medicine sources.

Results: According to the remarks of holy Imam Ali (AS) and the Iranian Islamic teachings, the role of nutrition and its practices is outstanding in public health. These remarks can be categorized in three pivots: abstaining from eating before hunger, abstaining from filling fully the stomach when eating, and chewing food well.

Conclusion: Using the guidelines of Imam Ali (AS), new dimensions of prevention practices and treatment of chronic diseases can be achieved. Furthermore, many other hypotheses can be raised making available a wide range of scientific researches.

Keywords: Avicenna, Imam Ali (AS), Medical Hadith, Nutrition, Prevention, Traditional Medicine

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Introduction

Thanks to tremendous advances in medical knowledge, many infectious diseases have been controlled or eradicated in the last hundred years. However, due to the change in lifestyle factors and human nutrition in the world and also owing to the impact of technology on creating inactive lifestyle, chronic non-communicable diseases are more and more prevalent. Diabetes, hypertension, malignant diseases, obesity and overweight are among chronic diseases that make up a lot of human population nowadays. And there is no sign of reduction in symptoms (1). Therefore, any scientific knowledge and experience that would help improve lifestyle

factors and reduce the burden of diseases should be utilized. On the other hand, feeding practices play an important role in prevalence of chronic diseases (2,3). However, Iranian Islamic teachings have extensive guidelines on the issue of the healthy lifestyle and nutrition in particular. Nutrition plays a key role in the Iranian Islamic lifestyle and hence there are lots of instructions regarding the implementation of healthy diet (4-6). To prevent diseases, this article explained the strategic remarks of Imam Ali (AS) concerning proper nutrition practices. In doing so, the latest scientific findings as well as documentation of traditional medicine were

used to make comprehensible the remarks of Imam Ali (AS).

Methods

This was a review study. Ahadith about health and nutrition practices were studied and extracted from reliable sources like Makarem al-Akhlaq, al-Kafi, Teb-u-Nabi, Al-khesal, Bihar al-Anwar, Mafatih Al-Hayat, and Comprehensive Medical Traditions. After comparing these traditions, it became specified that there were much emphasis on some Ahadith and their frequencies were higher or they were recommended emphatically by several Imams and the Prophet (pbut). Imam Ali's recommendation on the subject of nutrition practices could be mentioned as an example. After gathering of the findings, they were classified into three pivots including abstaining from eating before hunger, abstaining from being surfeited with food, and chewing food well. After identifying the highest possible number of medical strategies in this area, the latest resources and recent scientific papers as well as Iranian traditional medicine were collected in regard to those recommendations. The study examined the up-to-date scientific resources for books and articles on nutrition like Krause's Nutrition Principles and Robinson's Basic Nutrition along with nutrition physiology and gastrointestinal books such as Guyton Physiology. Besides, internal and external databases such as Iran Medex, ISC, Web of Science, Google Scholar, and PubMed were used. The key words such as Mastication, Eating behaviors, Nutrition, Chewing, and Prevention were put into service to get articles from databases. Furthermore, the main sources of traditional medicine of Iran like Avicenna's Qanoun, Razi's Manafe-al Aqzie, and Aqili Khorasani's Kholasat-al Hekmah were studied in this research. The findings were compared to each other based on inductive reasoning and finally the results were obtained from them.

Result

The recommendations of Imam Ali (AS) regarding nutrition practice and its impact on diseases were amongst strategic guidelines.

They were on the subjects of abstaining from eating before hunger, abstaining from being surfeited with food, and masticating food well. The Imam (AS) affirmed that these health behaviors were determinant of public health (7). Thus, the study was conducted in three following issues.

A) Abstaining from eating before hunger

One of the important recommendations of medical traditions and Iranian traditional medicine is about abstaining from eating before hunger. Accompanied with the latest researches, the role of this behavior has been confirmed in preventing diseases (8-10). In a healthy person, hunger sensation and appetite are indicative of previous food digestion and they show that the body is now prepared to attract the next meal (9,11). In this regard, Avicenna states that having a meal on undigested food makes the order of the gastrointestinal tract to be impaired. As a result of the fact that digested and undigested foods mix together and then they are absorbed by mesenteric vessels (Masaryqa) and will cause a variety of complications and diseases (9,12).

With regard to food and undigested proteins, recent scientific resources show that large peptides and proteins have to flee the hydrolysis untouched and undigested. They enter the bloodstream ports and then antibodies are formed against these proteins. Although the exact mechanism that leads to food allergen is not well known, it has been made clear that the incomplete digestion of certain foods can lead to the production of immunoglobulin response (13). The new research shows that habit of today's consumers tending to eat, when they are not hungry, can cause damage to their health. During this study, 45 student volunteers were asked to eat high-carbohydrate meal. Before that, level of their hunger was determined. Blood glucose levels at regular intervals after eating were measured so that the effect of food becomes distinct on the participants' health. After consumption of carbohydrate foods, their blood glucose levels were on the rise. Due to the bad impact of a rapid rise in blood glucose levels on the destruction of cells in the human body, a relatively minor increase is recommended.

According to the findings of the study, participants with moderate levels of hunger who began to eat their food had lower glucose levels resulting in healthier conditions in comparison with those who were not hungry and took food (10).

B) Abstaining from being surfeited with food
Abstaining from being surfeited with food or from filling fully the stomach is one of the strict codes in religious teachings and Imam Ali's recommendations (8,14). In this regard, Avicenna (Ibn Sina) says it is necessary that people refrain from filling the stomach and when the appetite exists, it is better to desist from food so that the stomach can digest the food perfectly and digestion not to be impaired (9).

Also recent resources have made clear that one of the factors for early depletion of food from the stomach is related to large amounts of food in the stomach (15). In Canada, a study conducted on 1498 children showed that overeating and filling up the stomach with food caused obesity and overweight and this eating habit would remain stable in their old age (16).

C) Masticating food well

There are great emphases on masticating food well in medical Ahadith and traditional medicine as well as recent researches. To take heed to these issues can prevent a variety of diseases (7,9,17). Chewing reduces the size of food particles and mixes the food with saliva and prepares food for the gastric digestion (13, 18). In this regard, Hakim Aghili Khorasani believes that food should be masticated well and swallowed slowly since the beginning of the digestion of food is in the mouth and chewing well increases the rate of digestion in the stomach (11).

Recent studies also suggest similar results in modern medicine. A cross-sectional study was conducted in Nagayama city of Japan among six thousand volunteers from 2009 to 2010. It was hypothesized that there are direct relationships between chewing the food properly along with eating at low speeds and the prevention of type II diabetes (17). Another study which was conducted on 17 volunteers showed that chewing had significantly positive impact on the improvement of cognition,

memory, and concentration (19). A study was conducted on 4012 people in the city of Isfahan and it revealed that one to five teeth losses significantly increase the risk of irritable bowel syndrome (20). Also, a study was conducted in South Korea on 89 young women. Since the speed of eating varies in inverse proportion to the chewing frequency, for those with speed of eating in less than 13 minutes, the risk of functional dyspepsia would increase significantly compared with the control group (21).

Discussion

Findings from this study indicated that three special recommendations of Imam Ali (AS) including forbearing from eating before complete digestion of previous food and before hunger sensation, abstaining from being surfeited with food, and masticating food well could greatly affect on body's health (7,8). In traditional medicine of Iran, Avicenna and other practitioners had useful discussions about failure to comply with this nutrition practice and the diseases caused by that bad behavior (6,9,12).

Antibodies against food proteins in the peripheral blood of healthy people are regarded as indicative of some of the undigested food proteins passing through the portal system. They are not hydrolyzed and are attracted by the system. These antibodies can cause immune complex formation and inflammation (13). In a systematic review in 2015, the important role of inflammation has been mentioned in chronic diseases (22). In addition, new researches suggest that eating food when someone is sated with that leads to rapid increase in blood sugar. It highlights the role of food interactions and is helpful in explaining the Imam's saying (10).

There are many references in modern sciences recommended by Imam Ali (AS) on the subject of avoiding gluttony and filling fully the stomach while mealtime. For example, it has been made clear in recent scientific resources that filling up the stomach with food is one of the reasons that demonstrates rapid gastric emptying (15). Furthermore, Avicenna states that filling fully

the stomach impairs digestion (12,9) and causes the habit formation of overeating and obesity in adults (16). There are various researches regarding the third recommendation of Imam Ali (AS), or good chewing. It indicates that the risk factors or odds of various diseases are on the increase by not chewing well and are diminished by good chewing. These results have been mentioned both in medical traditions and in Iranian medicine along with the latest studies (11,13,17,23).

Conclusion

Considering the high prevalence of chronic diseases due to the changes of life style as well as the insufficiencies of current medicine teachings in modifying the life style of society, it is necessary to apply teachings and scientific documentation of all medical schools related to public health. At the present time and in the current researches the role of inflammation has become more salient in chronic diseases. It is largely influenced by unhealthy diet. But based on the religious teachings in healthcare and medical traditions of Iran, in addition to the type of food, nutrition practices are effective in causing inflammation and chronic diseases. In this regard, there have been few new researches. Since Iranian Islamic patterns and instructions have been integrated with public culture and beliefs of people in some way, they can have an important role in improving public health, if proper scientific explanation to be made available. Hence, they can be the subject of new scientific researches in the field of public health, helping develop useful and effective knowledge for human healthcare.

Conflict of interest

The authors declare no conflict of interest.

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No.

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