



Good Digestion is a Key Element for Healthy Hearts: An Appealing Concept from Avicenna's Viewpoint

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ABSTRACT

Traditional Persian Medicine (TPM) has a holistic approach towards the human body. Avicenna, an outstanding TPM scholar, has provided appealing concepts such as the association between the heart and gastrointestinal system. Thus, efficient functioning of the gastrointestinal tract (digestion) could influence the proper functioning of the heart and result in a healthy life. Within TPM principles, through proper processes of digestion healthy food produces a suitable amount of the humors. These are necessary for all organs, including the heart, and if this does not occur then an environment for cardiac diseases will develop. It seems wise to provide healthy food and promote good digestion via simple lifestyle considerations rooted in TPM principles to attain a healthy heart.

KEY WORDS

Digestion; Heart; Health; Traditional Persian Medicine; Avicenna

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Heart–gastrointestinal association

The association between different body organs is a fact for consideration in clinical practice. One of the main examples of these correlations is concerned with the gastrointestinal and cardiovascular systems. Recently, the association between heart and gastrointestinal system has been illustrated in studies of cardiovascular diseases (1, 2). In addition, it should be mentioned that the gastrointestinal system and its respective functions, as well as digestion following ingestion of appropriate

food and beverage, have a remarkable role in providing for and maintaining the health of the heart as a vital organ (3).

Avicenna's Viewpoint

While the body–organs relationship has been repeatedly emphasized by medieval scholars, aspects of the heart–gastrointestinal association can be considered as a medico-historical point mentioned by Avicenna.

In his impressive medical encyclopedia of scientific thought and experience, Canon of Medicine, Avicenna



has remarked on such correlations (1). In this manuscript, Avicenna mentioned the impact of gastrointestinal function, and especially digestion, on the heart and cardiovascular system within a chapter entitled "General Instructions for the Maintenance of Heart Health" (4). He emphasized that physicians should observe the clinical conditions relating to the patient's gastrointestinal system in order to find the preliminary causes of cardiovascular impairments. He emphasized the significance of history taking, physical examination, and reinforcement and improvement of the gastrointestinal system in order to relieve heart and cardiovascular diseases (5, 6).

According to the principles and concepts of humoral medicine, digestion involves four main phases, the first and second of which are concerned with the stomach and liver. Subsequently, the third and fourth stages of digestion would be performed in the blood vessels and target organs, respectively. With reference to the basics of humoral medicine, the result of digestion is the fitting production of four cardinal humors namely blood, black bile, phlegm and yellow bile in normal amounts (7, 8).

As discussed by medieval practitioners, cardiovascular conditions are highly related to the proper function of organs associated with digestion (8). Avicenna recognized the significance of digestion as a key aspect for maintenance of the body's humoral balance. He denoted that the heart and other vital organs may be affected by impaired gastrointestinal function, while appropriate nutritional intake of both food and beverage would result in an acceptable digestion followed by a healthy heart, cardiovascular and body systems. What he believed in was that appropriate digestion would result in producing the proper ratio of blood humor (Dam) that could be appropriate for cardiovascular normal function. Conversely, indigestion and malabsorption due to unhealthy digestible foods or impaired stomach function would produce excess unwanted humors, especially phlegm (Balgham). Phlegm is often spoken of as a predisposing factor for hyperlipidemia, hypercholesterolemia and other related disorders (9).

In addition to his Canon, Avicenna also deliberated the association between stomach conditions and cardiovascular diseases in his specific book on cardiovascular diseases medication, "Kitab al-Adviyat-ol-Qalbiyeh" or Medicamenta Cordialia (10, 11). He also

remarked on some medications for the management of cardiovascular system ailments, some of which are related to harmonizing gastrointestinal approaches (12, 13).

Conclusion

In conclusion, the deep effect of digestion and normal function of the gastrointestinal system on hypercholesterolemia, hyperlipidemia, fatty liver, atherosclerosis and similar conditions are transparent in traditional Persian medicine. Other than the etiological relationship between the heart and the gastrointestinal system, the impact of proper food intake and thus good digestion on the heart and cardiovascular system can be a potential concern for consideration. Some pilot studies have clarified the outstanding importance of proper digestion on heart health. Well-organized clinical trials are suggested for assessment of this valuable Persian scholar's experience..

DISCLOSURE

Conflicts of Interest: None declared.

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