

Comparison of Dyspepsia Symptoms from the Viewpoints of Persian Traditional and Modern Medicine: A Qualitative Study using Content Analysis approach

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Abstract

Background: Dyspepsia is one of the most common reasons for outpatient referrals. In Persian traditional medicine, dyspepsia is discussed as a basic gastrointestinal problem. Considering the prevalence of this disease and its diagnostic and therapeutic approaches in Persian traditional and conventional medicine, the current study aimed to compare dyspepsia based on the viewpoint of these two medical systems and provide an integrated approach to diagnose and treat this condition.

Methods: The current comparative study was conducted based on a content analysis method. The symptoms of dyspepsia were collected from literature of modern and Persian traditional medicine by note taking methods based on library research strategies, and then data were analyzed using directed content analysis.

Results: Etiologic agents of dyspepsia were more than 68% similar in the two medical doctrines. Epigastric, nausea, and vomiting were the most common symptoms, followed by heartburn, bloating, early satiety, decreased appetite, burping, and weight loss. In the Persian traditional medicine system, dyspepsia is discussed as gastric indigestion and its causes, symptoms, and treatments are also discussed.

Conclusion: Diseases causing dyspepsia are very similar from the viewpoint of Persian traditional and modern medicines. Some conditions, such as gastric dysfunction, are thought to be the most common causes of dyspepsia in Persian traditional medicine, and some of them can be categorized as functional disorders. Therapeutic approaches from Persian traditional medicine can be used to treat such conditions as an adjuvant treatment along with routine methods, and give new ideas for clinical trials.

Key words: Dyspepsia Symptoms, Traditional Medicine, Qualitative Study, content analysis

Introduction

Dyspepsia is a permanent or referring discomfort in the upper abdomen [1]. Generally, pain associated with dyspepsia is localized in the central part of the upper abdomen and is naturally different from that of other gastrointestinal syndromes, such as gastric reflux and irritable bowel syndrome [2].

Dyspepsia is one of the most common reasons for outpatient referrals to clinics. Different studies conducted worldwide showed that about 1.8–57% of people experience dyspepsia during their lifetimes [3, 4]. The prevalence of dyspepsia has been reported to be 19–41% in European countries [4], 8–14% in Asian countries [5], and about 3–30% in Iran [6].

The difference in the prevalence of dyspepsia among countries may be the result of a real difference in the incidence, diagnostic indices, or degree of accuracy in the identification of gastrointestinal tract lesions (3). Dyspepsia is diagnosed based on the latest criteria of Rome III in modern medicine. The criteria for dyspepsia diagnosis are as follows: 1. bothersome postprandial fullness, 2. early satiation, 3. Epigastric pain, 4. Epigastric burning, a criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis [7]. However, many other symptoms can indicate dyspepsia; for example, some researchers used the Leeds dyspepsia questionnaire to evaluate the prevalence of dyspepsia. Its shortened form (SF-LDQ) with eight items is also used in some studies [8].

Complementary and alternative medicine is a medical approach that is different from conventional medicine, which currently attracts more attention. The World Health Organization (WHO) and legislative bodies focused on the capacity of different countries in traditional medicine and asked for information on low cost and low risk methods for managing medical complications [9]. Persian traditional medicine, with a history of more than a thousand years, and reliable books and physicians, could be considered as a medical doctrine for development of health and hygiene.

According to literature of Persian traditional medicine, the gastrointestinal function is of great importance. Dyspepsia is among the disorders discussed and evaluated in Persian traditional medicine. According to this doctrine, dyspepsia is defined as, “incompatible and abnormal digestion” [10]. Dyspepsia is diagnosed based on the etiology and symptoms, and the principles of treatment should rely on the proper understanding of them [11]. Dyspepsia symptoms in both the Persian traditional and modern medicines can be assessed. The current comparative study helps to better understand the high prevalence of dyspepsia in different populations and provide new ideas for researchers to complete the available diagnostic criteria around the world.

A comparative study is an understanding of a phenomenon or theory along with comparisons based on descriptions and explanations of similar and opposite positions, aimed at understanding the phenomenon better and finding new ideas through the provided description and explanations [12]. In medical research, comparative studies help researchers look beyond personal limits and understand hidden aspects of many health-related difficulties, when viewed through the perspective of classical medicine, and understand the potential of complementary medicines, especially traditional Persian medicine. Considering the profound scientific and technological developments, performing a comparative study on the pathophysiology of diseases from the viewpoint of traditional and modern medicine is difficult, and possibly even impossible. Despite the significant developments in medical science during recent centuries, the diagnostic model of many diseases is not stable or consistent.

A comparison between classical and modern medicine will help to identify the similarities and differences of the disease, in definition, symptoms, diagnosis, treatment, and prevention. The current study aimed to compare and explain the symptoms of dyspepsia, based on the directed content analysis approach.

Methods

The current comparative study employed content analysis methodology. First, the symptoms and diagnosis of dyspepsia were extracted from classical medicine references. Subsequently, the gastric diseases along with their symptoms and diagnoses were extracted from “the Canon” of Avicenna. Accordingly, other reliable books on traditional medicine were also evaluated. Data, including symptoms and the equivalent words in the traditional medicine references, were provided in text tags. To analyze the data based on the content analysis, the gist of each tag was extracted and the gist that belonged to each category was collected in a new tag. In order to achieve the study aims, the extracted gist, including all symptoms and etiologies associated and related to the gastric diseases were collected in text and tables. These findings were discussed in different sessions in the researchers’ team from the viewpoint of accuracy and degree of compliance. They were then analyzed and explained after the final approval.

To increase the validity and reliability of findings, some methods, such as the review of tags by the research team, evaluation of reliable and numerous traditional medicine references, and a panel of experts were integrated. To increase the reliability of the data, the accuracy of explanations and the codifying process were evaluated by the research team. For the final consensus, the tags and codes were reviewed by the researchers’ team; cases with no consensus were discussed to make the final decision.

The inclusion criteria for the Persian traditional references were as follows:

- The author of the book should have sufficient credibility in Persian Traditional Medicine.
- The references should be gathered from different historic eras.
- The original version of Arabic texts should be available.
- The dictionaries used in the current study should cover Farsi and Arabic words.
- A panel of experts should approve the inclusion criteria and selected books.

Accordingly, 8 books were selected: *Ferdows-ul-Hikmah* by Ali ibn Tabari (236 A.H.), *Kamel-al-Sanatate Tabiat* by Ali ibn Abbas Majousi Ahwazi (4th century A.H.) [13], *Hedayat-ul-Moteallemin fi-tebb* by Rabie ibn Ahad Akhveini Bokhari (4th century A.H.) [14], *Zakhireye Khwarazmshahi* and *Aghraz-al-Tabiat* by Seyed Esmaeil Jorjani (5th and 6th centuries A.H.) [11], and *Tib-e-Akbari* by Akbar Arzani (12th century A.H.) [15].

Results

In modern medicine, dyspepsia is divided into two categories, organic and functional. The organic causes of lesions are: peptic ulcers (15%–25%), gastroesophageal reflux (5%–15%), gastric cancers (less than 3%), biliary tract diseases (rare), abdominal wall pain (rare), pancreatitis (rare), gastroparesis (rare), carbohydrate malabsorption (rare), medicines, stress, alcoholic drinks, and pregnancy; functional causes include: gastric motor function, visceral sensitivity, mental, and social causes [1, 4].

Today, the most common index to confirm the diagnosis of dyspepsia in Rome III is the continuation of each of the following symptoms for at least 3 months within the last 6 months. According to the references of classic medicine, epigastric, nausea, and vomiting are the main symptoms of dyspepsia, followed by heartburn, bloating, early satiety, decreased appetite, burping, and weight loss [7].

According to the provided definitions, it can be concluded that the definition of dyspepsia is based on the symptoms, most of which are nonspecific and can be observed associated with gastric ulcers, reflux, and gastric cancer.

From the viewpoint of Persian traditional medicine, if the digestion is incompatible and does not proceed normally, the condition is called dyspepsia. Complications associated with digestion are explained as poor digestion, indigestion, and no digestion (*Tekhmeh* in the Persian traditional references) and include a wide spectrum of dyspepsia. Hence, in case of poor digestion, food remains in the stomach longer than normal. Although the stomach delivers its contents to the small intestine in a delayed manner, the stomach contents are qualitatively normal and the food is digested sufficiently, and is useful for the body. In dyspepsia, the quality of digestion changes and the stomach contents do not have a normal quality; therefore, the food cannot be used by the body, and it is recognized as waste materials, which are excreted in different ways via

the excretory mechanisms and organs. No digestion refers to the status in which the eaten food cannot be digested and is not affected by gastrointestinal secretions; in other words, the eaten food cannot be absorbed and accordingly, the body excretes it through vomiting or diarrhea.

From the viewpoint of Persian traditional medicine, dyspepsia has different causes and one of the most important ones is associated with food (qualitatively and quantitatively). The style of eating and drinking refers to the following points: insufficient chewing, lack of sufficient time intervals between meals, eating snacks, taking different types of food during a meal, drinking plenty of fluids during a meal, eating hot and cold food simultaneously, eating slow-digesting and fast-digesting foodstuff during a meal, sleeping after a meal, eating food while one is angry or in a rage, taking a bath, exercising or having intercourse after a meal, drinking water while fasting, eating food when one is not hungry, and overeating. Other causes of dyspepsia are as follows: weakness of stomach, abnormal humors in the stomach, mental disorders, obesity, pregnancy, sleeplessness, abnormal and extensive sleeping, gastric ulcer, gastritis, weakness of the stomach muscles, stomach tissue damage, and a congenital small stomach.

According to Persian traditional medicine, symptoms of dyspepsia are as follows: heartburn, bloating, early satiety, decreased appetite, and burping (*Jeshaa*); according to the aforementioned results and evaluating the symptoms of dyspepsia based on modern medicine, it can be concluded that epigastric, nausea, and vomiting are the main symptoms of dyspepsia, followed by heartburn, bloating, early satiety, decreased appetite, burping, and weight loss. The most important symptoms of the disease based on Persian traditional medicine are stomachache, nausea, and vomiting followed by burping (*Jeshaa*), bloating, decreased appetite, early satiety, stomach heaviness, heartburn, and thirst.

Discussion

Definition of dyspepsia: According to modern medicine, "Dyspepsia is a permanent or recurring discomfort in the upper abdomen," which explains, "how the disease is" and provides a "description," and explains dyspepsia based on some symptoms. According to Persian traditional medicine, dyspepsia is, "If the digestion is incompatible and does not go on its normal way," which is different from the definition provided by modern medicine. The definition in traditional medicine explains "the quiddity" of the disease and provides an image of its nature [1, 10].

Symptoms of dyspepsia

By evaluating and comparing the symptoms of the disease between the two medical doctrines, many symptoms of dyspepsia in the Persian traditional medicine are similar to those of modern medicine, such as epigastric, which refers to stomachache in Persian traditional medicine. In addition, nausea, vomiting, bloating, early satiety, heartburn, and burping are other symptoms. In contrast, some symptoms in traditional medicine that are not mentioned in modern

medicine include thirst (intensity of thirst) and stomach heaviness. However, some symptoms in modern medicine that are not mentioned in Persian traditional medicine include weight loss [1, 10, 11, 13, 14, 15].

Among the symptoms of the disease, epigastric, nausea, and vomiting are the most frequent ones followed by heartburn, bloating, early satiety, decreased appetite, burping, and weight loss. From the viewpoint of Persian traditional medicine, some symptoms cause dyspepsia, among which stomach ache, nausea, and vomiting had the highest frequency followed by bloating, decreased appetite, burping, heartburn, stomach heaviness, early satiety, and thirst. When comparing the symptoms between modern and traditional medicine, it becomes clear that the frequency of diseases causing dyspepsia is almost similar between the two doctrines. Some symptoms, such as burping, had a higher frequency in Persian traditional medicine compared with modern medicine, and heartburn was more frequent in modern medicine compared to traditional medicine.

Diseases causing dyspepsia are similar in both medical doctrines; however, there are also some differences. The most common causes of dyspepsia were evaluated in the current study and accordingly, out of 16 main causes from the viewpoint of modern medicine, 11 (75.68%) causes were mentioned in traditional medicine. Conversely, there were some causes for the disease in traditional medicine, which were not available in modern medicine, such as stomach dysfunction, loss of eaten food humors, and retropharyngeal secretions [7, 1, and 10].

Stomach dysfunction is among the diseases that should be diagnosed by para-clinical assessments and it seems that a major part of functional disorders can be placed in this category. In the Persian traditional medicine, stomach dysfunctions were discussed; for example, there were 12 dysfunctions for the stomach and some of them were similar to those of Rome III, such as cool and wet temperaments. Weakness and looseness in the stomach wall and tissue is another disease mentioned in traditional medicine, but not available in modern medicine. Since disorders of the tonicity of stomach muscles are the most common para-clinical finding, conducting more qualitative and quantitative studies is recommended.

Conclusion

Diseases causing dyspepsia are similar in modern and Persian traditional medicine. Some of them, such as stomach dysfunction, are common in dyspepsia and most of them can be categorized as functional diseases. Using Persian traditional therapeutic approaches can be used along with routine treatments, in addition to providing interesting ideas for clinical trials.

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References

1. Talley NJ C, Koch K, Koch M, Nyren O, Stanghellini V. Functional dyspepsia: a classification with guidelines for diagnosis and management. *Gastroenterol Int.* 1991;4:145-60.
2. Drossman D, Corazziari E, Talley N, Thompson W, Whitehead W. Rome III: the functional gastrointestinal disorders diagnosis, pathophysiology, and treatment: a multinational consensus. McLean, VA, Degnon. 2000.
3. Kumar A, Pate J, Sawant P. Epidemiology of functional dyspepsia. *The Journal of the Association of Physicians of India.* 2012;60 Suppl:9-12.
4. Jones RH. Approaches to uninvestigated dyspepsia. *Gut.* 2002;50(SUPL. 4).
5. Ho KY, Kang JY, Seow A. Prevalence of gastrointestinal symptoms in a multiracial Asian population with particular reference to reflux-type symptom. *Am J Gastroenterol* 1998; 93:1816-22
6. Khoshbaten M, Hekmatdoost A, Ghasemi H, Entezariasl M Prevalence of gastrointestinal symptoms and signs in northwestern Tabriz, Iran. *Indian J Gastroenterol*2004;23:16870
7. Drossman D, Corazziari E, Delvaux M, Spiller R, Talley N, Thompson W, et al. Rome III: The functional gastrointestinal disorders. McLean, Virginia: Degnon Associates. Inc; 2006.
8. Bitwayiki R, Orikiiriza JT, Kateera F, Bihizimana P, Karenzi B, Kyamanywa P, et al. Dyspepsia prevalence and impact on quality of life among Rwandan healthcare workers: A cross-sectional survey. *South African medical journal = Suid-Afrikaanse tydskrif vir geneeskunde.* 2015;105(12):1064-9.
9. World Health Organization. WHO traditional medicine strategy: 2014-2023. Printed in Hong Kong SAR, China. 2013
10. Avesina. Qanoun Fi Al-Tibb. Soroush Press, Tehran, Iran; 2008.
11. Esma'il JS. Zakhireh kharazmshahi. Qom, Iran: Rehabilitation Institute of Natural Medicine; 2012.
12. Denzin N.K. & Lincoln Y.S., Handbook of Qualitative Research SAGE publications, London. 1994
13. Ahvazi A. Kamil al-Sanate al-Tebie. Tehran: The institute of Islamic Studies; University of Tehran-McGill University; 2009.
14. Akhaveini Bukhrari. Hidayat al-Muta'allimin fit-Tib. Mashhad: Mashhad University Press; 1344 H.S.
15. Arzani A. Teb e Akbari. Qom, Iran: Jalaledin Publication; 2008.