



A Brief Review of Therapeutic and Diagnostic Applications of Enema in Iranian Traditional Medicine and Other Complementary Medicines

Hamideh Khorrampazouh (Ph.D), Seyed Musa al-Reza Hosseini (MD), Mohammadreza Noras (Ph.D)

Department of Persian Medicine, Faculty of Complementary and Persian Medicine, Mashhad, Iran.

ARTICLE INFO

Article type

Systematic review

Article history

Received: 5 Aug 2017

Revised: 6 Oct 2017

Accepted: 31 Oct 2017

Keywords

Enema

Complementary medicine

Integrative medicine

Persian medicine

ABSTRACT

Introduction: Enema or 'hoqne' is a therapeutic approach used for a wide range of diseases in the Iranian traditional medicine. The use of this method dates back to thousands of years to Hippocrates and Galen. The aim of this study was to review the history of enema and its methods and indices in the Iranian medicine and other complementary medicine.

Methods: This review study was conducted on the Iranian medicine textbooks and articles published in the international databases, including Google Scholar, PubMed, Embase, and Scopus, as well as the Iranian databases, such as SID and Magiran. The searching process was performed using the following keywords: 'Hoqne', 'Enema', 'Vasta', 'Basta', and 'Complementary and Alternative Medicine (CAM)'. There was no limitation regarding the publication data of the included studies.

Result: In the Iranian medicine, the term "hoqne" is equivalent to enema. Enema is used in various diseases of the brain, respiratory system, digestive system, urogenital system, and musculoskeletal system, as well as systemic diseases. Enema is one of the five main therapies in the Indian medicine or Ayurveda. In other types of complementary medicine, including Chinese medicine, this procedure has therapeutic applications. Although enema has been recognized as a diagnostic method in modern medicine, it has been considered as a therapeutic approach in the recent years.

Conclusion: According to the findings of the reviewed studies, enema is a major therapeutic focus in complementary medicine, part of which has been confirmed in the recent studies. Given the low side effects and high success rate of this treatment, it can be used as a supplemental therapy for the management of poisoning, febrile seizures, prolonged functional constipation, and chronic kidney disease, as well as the prevention of swelling. However, this theory requires further investigation and targeted clinical trials. This method has been recently identified and updated as a preventive and therapeutic modality.

Please cite this paper as:

Khorrampazouh H, Hosseini MR, Noras MR. A Brief Review of Therapeutic and Diagnostic Applications of Enema in Iranian Traditional Medicine and Other Complementary Medicines. *Rev Clin Med.* 2018;5(1):29-32.

Introduction

Enema has been considered as a simple and accessible diagnostic and therapeutic modality for centuries, which returns to Hippocrates and Galenus (1). Today, enema is widely used in In-

dia and China (2,3). In modern medicine, enema is used in the diagnostic and therapeutic stages of some diseases (4). According to the literature, this method originates from Egypt or Greece. Re-

***Corresponding author:** Mohammadreza Noras.

Department of Traditional Medicine, Faculty of complementary and Iranian Traditional Medicine, Mashhad, Iran.

E-mail: norasmr@mums.ac.ir

Tel: +985136038550

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

sources related to the use of enema were found in the oldest medical texts in Papyrus Ebers around 1500 BC and Papyrus Chester Beatty around 1200 BC. In the Ayres Papyrus, enema is reported to be applied for about 20 cases of stomach and intestinal diseases (4).

Coffee enema is a traditional method, used by Doctor Max Gerson for the first time in 1930 for cancer treatment and detoxification (5). Different types of enema applications are described by name and mechanisms in the current scientific resources. The therapeutic application of enema include the evacuation of intestinal contents and constipation. Regarding the diagnostic purposes, this procedure is used along with imaging techniques (with contrast media) to determine the exact location of the fistula, intestinal tumors, and lesions.

In the resources of the Iranian medicine (derived from the oldest Persian medicine book), there are numerous manuscripts discussing enema under the name of 'hoqne'. In other medical resources, enema has been introduced as one of the treatment methods, which has found a special scientific status due to its growing trend in India and China.

The complementary and alternative therapies have obtained an increasing application among the people and patients. Complementary medicine involves interventions that are less common in the medical field, such as the use of herbal medicine, nutritional approach, and mind-body interventions, including yoga and manual exercises (e.g., massage, acupuncture, and homeopathy) (6).

With this background in mind, the present review study was conducted with the aim of providing an integrated approach to the World Health Organization by extracting the materials related to enema and its application in the Iranian traditional medicine and other medical articles and setting a ground for further research, especially in the field of the Iranian medicine.

Methods

The searching process was performed in the international databases, including Google Scholar, PubMed, Embase, and Scopus, as well as the Iranian databases, such as SID and Magiran, using the following key words: 'Hoqne', 'Enema', 'Vasta', 'Basta', and 'Complementary and Alternative Medicine (CAM)'. No limitation was considered regarding the publication date of the articles. The retrieved studies were categorized according to enema definition, therapeutic and diagnostic applications, and complications. To evaluate qualitative control, separate articles were extracted by two researchers.

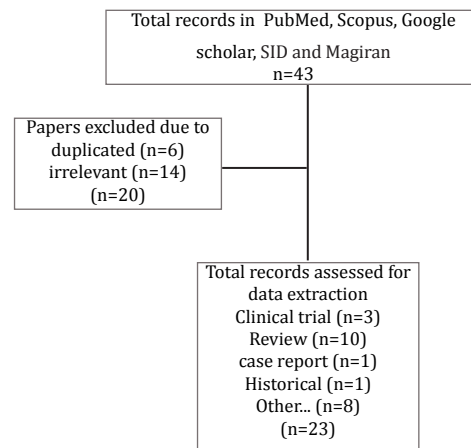


Figure 1. Flow chart of article inclusion process.

Results

Application of enema in traditional medicine and modern research

Diagnostic application

Enema is used to detect many diseases with ultrasound or computed tomography (CT) scan. For example, a scan with gastrografin enema can be used to determine the exact location of the colon fistula (7). Furthermore, water enema CT has been used to track the lesions around the ileocecal anastomosis, such as inflammatory lesions, stenosis, and perforations. The sensitivity, specificity, and diagnostic accuracy of this method have been confirmed by statistical tests (8). Barium enema facilitates tumor detection. The implementation of double-contrast barium enema is a good way to detect the tumors larger than 3 cm or those with environmental periphery (9).

Therapeutic application

In some diseases that are described below, enema has been used as a therapeutic approach:

1. Intestinal invagination in children: this is performed with air, barium, and saline enema. Many studies have been conducted in this area, and the effects and safety of various methods have been compared. In these studies, normal saline enema under ultrasound guidance has been demonstrated to be a simple, effective, and rapid method for the treatment of invagination. This therapeutic procedure can significantly reduce the risk of radiation, anesthesia, and surgery, and therefore can be considered as the first-line treatment for invagination. The comparison of the use of normal saline instead of barium revealed that the use of saline is a simple and safe method for the treatment of children with invagination (10,11).

2- Coffee enema: It is currently used in Thailand, especially for the treatment of a wide range of diseases, such as cancers, allergies, asthma, urticaria,

migraines, dyslipidemia, obesity, and chronic constipation (12).

3. Colon hydrotherapy: It can treat various organ diseases by removing the waste that may be absorbed. Some of these diseases include kidneys, skin, lungs, seizures, attention and concentration disorders, memory disorders, multiple sclerosis, peripheral neuropathy, rheumatic diseases, chest pain, allergic diseases, skin rash, allergic arthritis, muscle aches, arthritis, asthma, acne, chronic fatigue, hypertension, bad breath, nail syndrome and brittle hair, cold hands and feet, fibromyalgia, colon spasm, irritable bowel syndrome, oral ulcers, nausea, stomach ulcers, constipation, and environmental toxins (5,13).

Application of enema in the traditional Iranian medicine

In books on traditional medicine, enema is the first-line treatment in many cases. It is sometimes preferred over other treatments or recommended after other therapies. This procedure is used in the diseases of the head and neck, respiratory system, digestion, urinary tract, musculoskeletal system, and spleen, as well as systemic diseases. It can be also utilized for the treatment of some complications, such as colic and intestinal pain, ulcers and inflammation in the intestines, intestinal excretions, kidney and bladder pain and inflammation, libido enhancement, joint pain and sciatica, uterine diseases, headache, dizziness, stroke, and epilepsy (14,15).

In important cases, the systemic effect of this method can be also enlisted. Poisoning is a systemic disease in which enema has a special place. In the treatment of poisoning, the first step is to remove the toxic substances from the body. The next step is to induce vomiting, and then perform enema to prevent the absorption of toxic substances into the body.

This procedure is particularly helpful when the toxic substance has harmed the intestines and the lower parts of the digestive tract (e.g., in the treatment of the oral toxicity with mercury and Conium). Vomiting and enema constitute one of the first steps in the treatment of poisoning (16). In addition, in some types of fever, enema with certain medications can cause stool laxity, and therefore relieve heat and thirst and eliminate fever and inflammation (17).

Application of enema in the Chinese and Indian medicine

In Ayurveda, or traditional Indian medicine, enema called Vasti and Basti is one of the five treatment methods. This method has been successfully used in the treatment of microalbuminuria in di-

abetes (18), osteoporosis (19), sciatica (20), and oligoazospermia (21). In the Chinese medicine, the human and animal studies of enema have reported the significant effect of this procedure in the treatment of several diseases (22). Among these cases, an animal study showed that this method can be used to manage hypertension. In a study conducted on rats with hypertension, herbal enema was used to lower the blood pressure (23).

Contraindications for enema

In the traditional Iranian medicine, no absolute contraindication is indicated for enema. Relative contraindications have been mentioned only in patients with hemorrhoids and children (5). The recent studies have reported some side effects for enema. These side effects include chemical colitis (24,25), rectum and colon inflammation, rectum burn with hot liquid enema (13), intestinal poly-microbial septicemia, electrolyte disturbances, and allergic reactions to the administered drug. However, many of these complications are reported in limited cases of illness.

Some of these complications, such as colonic damage, depend on the patient's health status, operator's skill, or volume of administered fluid. Electrolyte disturbances are more common in the patients at both ends of the age range (i.e., children and the elderly), as well as among those with high blood pressure, heart disease, and renal failure. To reduce the complications of this method in the high-risk individuals, such as children, elderly, heart patients, and patients with colon disorders (e.g., ulcerative colitis, ischemic colitis, bleeding hemorrhoids, colon cancer, and rectal fistulas), enema should be carried out with caution and by trained personnel (26,27).

Discussion

Enema or hoqne is considered as an important part of treatment in the Iranian and Indian medicine. There are many valuable articles on this subject in the ancient resources and recent literature. Although this procedure is recognized as one of the therapeutic domains of the complementary medicine, it is one of the topics that have been less addressed in the comparative studies of the Iranian and other medical schools.

This method plays an important role in treating the diseases of most of the body organs and also in systemic diseases. For example, in common and dangerous diseases, such as poisoning and fever, enema can provide a rapid response. In many cases, the first step is gastric lavage, which is useful when the patient is referred timely and before drug absorption. However, enema facili-

tates the removal of the drug from the body over a longer period of time. The absorption of the drug can even be prevented during gastric lavage and enema.

Moreover, in conditions, such as fever, when the body does not respond well to treatment, fever can be controlled by performing enema. In addition, complications, such as seizure, hospitalization, and the uncontrolled administration of antibiotics, can be prevented using this procedure. Therefore, the implementation of enema will reduce the cost of hospitalization and treatment for patients. Regarding the trivial side effects and high success rate of this method in the examined cases, it is possible to replace this method with invasive and complicated therapies. However, this claim requires the implementation of more extensive clinical trials to be approved.

Conclusion

Despite the therapeutic use of enema, this procedure has been given low attention in modern medicine. Given the fact that enema is a simple, low-cost, accessible, and low-level method and is well described in the Iranian medical resources, the details related to the implementation of enema require a research project to update and designate its variants to get a method pattern available to therapists.

The method is a complete textbook that addresses the two aspects of the techniques and formulations of medicines used as treatment protocols, individually and categorized. In this regard, Chinese medicine, which has undergone a successful evolutionary path in scientific research and innovation since the middle of the last century, can be an acceptable model.

Acknowledgement

The present study was supported by the Mashhad University of Medical Sciences, Mashhad, Iran.

Conflict of Interest

The authors declare no conflict of interest.

References

1. Tansaz M, Bahman M, Nabi Meybodi R. Hoqne, Its History, Method and Indications and its application in Iranian Traditional Medicine Compared with Classical Medicine. *History of Medicine Journal*. 2014;6:45-71.
2. Yu W, Li Z, Long F, et al. A Systems Pharmacology Approach to Determine Active Compounds and Action Mechanisms of Xipayi Kuijie'an enema for Treatment of Ulcerative colitis. *Sci Rep*. 2017;7:1189.
3. Thatte U, Chiplunkar S, Bhalerao S, et al. Immunological & metabolic responses to a therapeutic course of Basti in obesity. *Indian J Med Res*. 2015;142:53-62.
4. Richards DG, McMillin DL, Mein EA, et al. Colonic irrigations: a review of the historical controversy and the potential for adverse effects. *J Altern Complement Med*. 2006;12:389-393.
5. Christensen P, Laurberg S. The Malone Procedure and Its Variants. In: Zbar AP, Madoff RD, Wexner SD, editors. *Reconstructive Surgery of the Rectum, Anus and Perineum*. London: Springer; 2013 p. 273-282.
6. Kessler RC, Davis RB, Foster DF, et al. Long-term trends in the use of complementary and alternative medical therapies in the United States. *Ann Intern Med*. 2001;135:262-268.
7. Shi L, Shao GL. Demonstration of a sigmoid colon fistula using CT with gastrografin enema. *Quant Imaging Med Surg*. 2012;2:63-64.
8. Paparo F, Revelli M, Puppo C, et al. Crohn's disease recurrence in patients with ileocolic anastomosis: value of computed tomography enterography with water enema. *Eur J Radiol*. 2013;82:e434-40.
9. Tan KY, Seow-Choen F, Ng C, et al. Which colorectal cancers are missed by double contrast barium enema? *Tech Coloproctol*. 2004;8:169-172.
10. Mensah Y, Glover-Addy H, Etwire V, et al. Ultrasound Guided Hydrostatic Reduction of Intussusception in Children at Korle Bu Teaching Hospital: An Initial Experience. *Ghana Med J*. 2011;45:128-131.
11. Daghighi M, Aslanabadi S, Purisa M. Evaluation of ultrasound in the diagnosis of intestinal intussusception and reduction with normal saline enema. *Medical Journal of Tabriz University of Medical Sciences*:2003;36:46-50.
12. Kenig J, Richter P, Zanowska K. Barium enema in the treatment algorithm of lower gastrointestinal tract bleeding. *Pol Przegl Chir*. 2013;85:467-470.
13. Walker D. Value of Colon Hydrotherapy Verified by Medical Professionals, *Medical Journalist Report*, 2000.
14. Cheshti A. Exsir Azam. Tehran; Research Institute for Islamic and Complementary Medicine; 2009;4:660-673.
15. Aghily Khorasani MH. Kholase Al-Hekmat. Qom: Ismailian publisher; 2007.
16. Shams al-Din Ibrahim. Avicenna's (Ibn Sina) the Canon of Medicine (al-Qanun fi al-tib). Beirut; Scientific Institute for Publications, 314-315.
17. Aghily Khorasani MH. Makhzan Al-Advie. Tehran University of Medical Sciences, 1380.
18. Ramteke RS, Thakar AB, Trivedi AH, et al. Clinical efficacy of Gokshura-Punarnava Basti in the management of microalbuminuria in diabetes mellitus. *Ayu*. 2012;33:537-541.
19. Gupta AK, Shah N, Thakar AB. Effect of Majja Basti (therapeutic enema) and Asthi Shrinkhala (*Cissus quadrangularis*) in the management of Osteoporosis (Asthi-Majjakshaya). *Ayu*. 2012;33:110-113.
20. Ali M, Shukla VD, Dave AR, Bhatt NN. A clinical study of Nirgundi Ghana Vati and Matra Basti in the management of Gridhrasi with special reference to sciatica. *Ayu*. 2010;31:456-460.
21. Juneja YM, Thakar AB. Clinical evaluation of Basti administered by Basti Putak (Pressure method), Enema pot method (Gravity fed method), and syringe method in Kshinashukra (Oligozoospermia). *Ayu*. 2011;32:234-240.
22. Zou C, Wu YC, Lin QZ. Effects of Chinese herbal enema therapy combined basic treatment on BUN, SCr, UA, and IS in chronic renal failure patients. *Zhongguo Zhong Xi Yi Jie He Za Zhi*. 2012;32:1192-1195.
23. Song E, Lee E, Bu Y, et al. Efficacy and safety of gwakhyang-jeonggi-san retention enema in normal rats and spontaneously hypertensive rats. *Evid Based Complement Alternat Med*. 2013;2013:765914.
24. Lim CH, Lee HY, Kim WC, et al. A case of chemical colitis caused by hydrogen peroxide enema. *Korean J Gastroenterol*. 2011;58:100-102.
25. Sheibani S, Gerson LB. Chemical colitis. *J Clin Gastroenterol*. 2008;42:115-121.
26. Richards DG, McMillin DL, Mein EA, et al. Colonic irrigations: a review of the historical controversy and the potential for adverse effects. *J Altern Complement Med*. 2006;12:389-393.
27. Seo HI, Choi KH, Han KH, et al. Predisposing Factors of Ischemic Colitis: Data from 14 Years of Experience in a Single Center. *Gastroenterol Res Pract*. 2017;2017:1049810.