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Herbal Remedies for Bloating in Traditional Iranian Medicine: Natural Antioxidants for Managing Abdominal Bloating

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A B S T R A C T

Objective: Bloating, a biological process characterized by gas accumulation within the gastrointestinal tract, often results in abdominal pain and discomfort. Both children and adults frequently experience bloating and associated abdominal pain, causing significant distress. This review aims to identify and report on natural antioxidants that may be effective in alleviating bloating.

Methods: For this review, literature searches were conducted using keywords such as "herbal remedies," "bloating," and "traditional medicine." Databases such as Google Scholar, SID, MagIran, PubMed, and Scopus were utilized for the search. Ethnobotanical articles relevant to the topic were reviewed.

Results: Herbal remedies including ginger, peppermint, turmeric, cumin, caraway, wormwood, dandelion, burdock, hibiscus, lemon balm, chamomile, and fennel have been shown to effectively reduce abdominal bloating and improve digestive health.

Conclusion: The present study demonstrates that Iranian herbal remedies with potent antioxidant properties offer effective solutions for reducing abdominal bloating and enhancing digestive health. These herbs, through their bioactive compounds, not only alleviate gas accumulation within the stomach and intestines but also exert anti-inflammatory and soothing effects, which contribute to the alleviation of bloating-related abdominal pain. These findings emphasize the significance of utilizing natural and traditional treatments for managing digestive disorders and improving quality of life. A combination of these herbs, considering their unique properties, appears to be a comprehensive and effective therapeutic strategy for reducing bloating and promoting gastrointestinal health.

Keywords: Digestive health, Bloating, Herbal remedies, Traditional medicine, Iran

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Introduction

Bloating, a common gastrointestinal issue, can significantly impact an individual's quality of life [1]. It is characterized by abdominal distention, often accompanied by feelings of fullness and cramping. Bloating can arise from various factors, including overeating, excessive gas accumulation, and underlying digestive disorders [2, 3]. Common causes of chronic bloating encompass the consumption of gas-producing foods, aerophagia, irritable bowel syndrome, hormonal fluctuations, and certain medical conditions [3].

Addressing and preventing bloating often requires identifying the underlying cause [4]. In many cases, dietary modifications and lifestyle changes, such as increased fiber intake, adequate hydration, and regular physical activity, can effectively alleviate bloating [5]. Additionally, the use of probiotics, enzyme supplements, and over-the-counter medications like simethicone can provide relief. However, pharmaceutical interventions for bloating may have potential side effects, necessitating careful monitoring by a healthcare provider [6,7].

Traditional medicine persists as a widely recognized and effective approach for treating various ailments [8]. Natural remedies and herbal medicines for bloating often rely on plants and natural substances, which typically exhibit fewer side effects than synthetic drugs and can provide a gentler impact on the digestive system due to their natural compositions [9-11]. The current review aims to identify and report on the effective natural antioxidants for treating bloating, as documented in traditional Iranian medicine.

Methodology

In this review study, articles were searched using key terms such as "medicinal plants," "bloating," and "traditional medicine." Databases such as Google Scholar, SID, MegaIran, PubMed, and Scopus were used for the search. Ethnobotanical articles relevant to the topic were reviewed.

Results

The results of the literature review revealed that medicinal plants used for bloating in traditional Iranian medicine include ginger, peppermint, turmeric, cumin, zinnia, wormwood, dandelion, burdock, hibiscus, lemon balm, chamomile, and fennel. Additional details on these medicinal plants can be found in Table 1

Table 1: Major Medicinal Plants Used for Bloating in Traditional Iranian Medicine

Persian name	Common name	Scientific name	Herbal family	Mechanisms of Anti-bloating Effects [11-20]
Zangabil	Ginger	*Zingiber officinale*	*Zingiberaceae*	Increasing Gastrointestinal Motility and Reducing Gas Production
Naena felfeli	Peppermint	*Mentha piperita*	*Lamiaceae*	Relaxation of Stomach and Intestinal Muscles and Reducing Bloating
Zardchoubeh	Turmeric	*Curcuma longa*	*Zingiberaceae*	Anti-inflammatory and Antioxidant Properties
Zire sabz	Cumin	*Cuminum cyminum*	*Apiaceae*	Reduction of Gas Accumulation and Stimulation of Digestion

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Zenian	Ajwain	*Trachyspermum ammi*	*Apiaceae*	Anti-bloating and Antispasmodic Effects
Afsantin	Wormwood	*Artemisia absinthium*	*Asteraceae*	Assisting Digestion and Reducing Gas Production in the Stomach
Ghasedak	Dandelion	*Taraxacum officinale*	*Asteraceae*	Stimulation of Digestion and Reduction of Gas Accumulation
Babaadam	Burdock	*Arctium lappa*	*Asteraceae*	Anti-inflammatory Properties and Improved Digestive Function
Chaye torsh	Hibiscus	*Hibiscus sabdariffa*	*Malvaceae*	Antioxidant Properties and Digestive Support
Badranjbouyeh	Lemon balm	*Melissa officinalis*	*Lamiaceae*	Relaxing and Reducing Gastrointestinal Spasms
Babouneh	Chamomile	*Matricaria chamomilla*	*Asteraceae*	Anti-spasm and Anti-inflammatory Effects in the Digestive Tract
Razianeh	Fennel	*Foeniculum vulgare*	*Apiaceae*	Reduction of Gas Production and Intestinal Spasms

Table 1 can be analyzed from various statistical and analytical perspectives regarding the plant families. The Apiaceae family, encompassing medicinal plants such as cumin, zinnia, fennel, and lemon balm, emerges as a significant contributor to anti-bloating herbal remedies. This family is particularly recognized for its active compounds, including essential oils and flavonoids, which contribute to reducing gas production and improving digestive function. The Asteraceae family, comprising plants such as wormwood, dandelion, burdock, and chamomile, is also notable for its anti-inflammatory properties and digestive benefits. The Lamiaceae family, featuring three medicinal plants—peppermint, lemon balm, and chamomile—is crucial for its antispasmodic effects, which relax digestive muscles and alleviate bloating. The Zingiberaceae family, including ginger and turmeric, is well-known for its anti-inflammatory properties and ability to enhance digestive motility. Additionally, the Malvaceae family, represented by hibiscus tea, is renowned for its antioxidant effects. The predominance of plants from the Apiaceae and Asteraceae families underscores the emphasis on these plant families in Iranian traditional medicine for reducing bloating. This distribution may be attributed to the widespread availability of these plants within the Iranian ecosystem. Table 1 identifies 12 medicinal plants with diverse mechanisms of action, demonstrating the multifaceted approach of Iranian traditional medicine to manage bloating and digestive disorders.

Discussion

Bloating, a common digestive disorder characterized by abdominal distension, pain, and flatulence, has been historically addressed using medicinal plants in traditional cultures. A key property of these plants is their ability to reduce inflammation and improve digestive function. Specifically, herbs such as ginger and peppermint, with their anti-inflammatory and antispasmodic properties, are effective in alleviating abdominal pain associated with bloating [21,22]. Ginger stimulates the secretion of digestive enzymes, facilitating food digestion and reducing gas accumulation. Peppermint, with its calming effect on

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intestinal smooth muscles, helps reduce spasms and pain [21,22]. Turmeric and cumin, potent antioxidants, prevent oxidative stress in the digestive tract and improve digestion [23,24]. Zinnia, wormwood, and dandelion, with their antimicrobial and anti-inflammatory properties, can be beneficial in treating various digestive disorders, including bloating [25-27].

Herbs like burdock and hibiscus are particularly useful for reducing flatulence and alleviating abdominal discomfort [26,27]. Lemon balm and chamomile offer soothing and anxiolytic effects that can be beneficial for reducing stress, a common contributor to bloating [28,29]. Fennel is another well-known anti-bloating herb that works by increasing intestinal motility and reducing bloating, making it highly effective for digestive issues [30,31].

All these plants contain natural antioxidants that specifically help mitigate oxidative damage in the digestive system and maintain gut health. Since many of these plants are readily available in the natural environment, their use as complementary remedies for digestive issues can be a cost-effective and efficient alternative to synthetic drugs.

Conclusion

In conclusion, the combination of these plants and their use in the form of teas or extracts can play a significant role in managing bloating and other digestive disorders. However, it is recommended that individuals with chronic digestive issues consult with a healthcare professional or traditional medicine specialist before using these herbs to avoid potential adverse effects.

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