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"The Power of Herbs": Herbal Antacids for Digestive Health

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Abstract*—Acidity or peptic ulcers are diseases of the gastrointestinal tract. More acid secretions due to activation of parietal cells or any other factors such as H. pylori infection can lead to degradation of the inner lining of the stomach known as mucous membrane, which further causes acidity or peptic ulcers in the stomach. Many drugs of allopathy are available for the treatment but are having serious side effects. Nowadays, the Ayurvedic medicines are becoming more popular due to their safety, efficacy and inexpensiveness. The main objective of herbal antacid is to cure the ulcer and relieve pain and burning sensation in the oesophagus. In this review the attempt is made to provide some information regarding the classification of herbs used in herbal antacid, the herbal plants used in the treatment of acidity as well as peptic ulcers and parts of the plant used with their pharmacological activities*.

***Keywords*—** *Herbal Antacids, Herbal Marketed Antacid Products, Herbal Plants*.

I. INTRODUCTION

Peptic ulcers or acidity are diseases most common these days. These are generally caused by having an active *Helicobacter pylori* bacterial infection in the stomach; taking more NSAIDs, likely aspirin, stress or consuming alcohol, tea or coffee can activate the parietal cell secretion and lead to acidity or a peptic ulcer due to the degradation of the mucous lining of the stomach [1, 2]. The symptoms which can be seen are abdominal pain, bloating in the stomach and a burning sensation in the GIT [3].

Antacids [4]

The constituents used to neutralise the formed acid in the stomach are known as an Antacids. They can be in solid, semi-solid as well as in liquid dosage form. It is administered through oral route. These are used to regenerate the eroded mucous membrane of the stomach. Mainly antacids are formulated by using either chemicals or herbal constituents.

Classification Of Antacids [4]

1. *Systemic antacids:* Systemic antacids are those that are absorbed into the bloodstream and produce systemic effects. Alkalosis and electrolyte imbalance are the most common side effects of systemic antacids. Systemic antacid examples include: Sodium bicarbonate and Calcium carbonate.
2. *Non-systemic antacids:* The antacids that are not absorbed into the bloodstream and show direct action without binding to the receptors are known as non-systemic antacids. These might cause gastrointestinal pain and obstruct the absorption of some medications.

   Non-systemic antacid examples include: Magnesium hydroxide and Aluminium hydroxide.

Side Effects of Antacids [5, 6]

1. A high amount of aluminium-containing antacids causes constipation.
2. A high amount of magnesium-containing antacids causes diarrhoea.
3. A high amount of calcium-containing antacids causes constipation and may lead to hypercalcaemia, which may cause kidney stones.
4. Excessive use of antacid can cause electrolyte imbalance.
5. Long-term use of aluminium- and magnesium-containing antacids may interfere with kidney function and cause kidney issues.

Marketed Share of Antacids Per Capita Income [7]

The marketed share of antacid is approximately USD 6.42 billion in 2024. It can reach up to USD 8.65 billion in 2033 at an increasing compound annual growth rate of 3.30% from 2025 to 2033. It can be in various dosage forms, such as capsules, chewable tablets and suspension form.

Herbal Antacids [8]

The naturally occurring constituents which are used in the formulation of antacids to neutralise the formed acid in the stomach are known as *Herbal antacids*. These are provided over the counter without the need of a licensed medical practitioner's prescription. These are having higher efficacy and safety with negligible side effects than chemically formulated antacids. Some commonly used herbal antacids on the market are named Digene, Dabur Pudin Hara, Himcocid, etc.

Merits of Herbal Antacids Over Chemically Formulated Antacids [9, 10]

1. These are more efficient and safer to use than chemically formulated antacids.
2. These are more cost-effective than chemically formulated antacids.
3. These have negligible side effects than chemically formulated antacids.
4. These have additional health benefits compared to chemically formulated antacids.
5. These create less mineral imbalance, like chemically formulated antacids.

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TABLE 1. Classification of Herbs and Herbal Plants Used in Herbal Antacids [11]

Classification	Examples
Demulcent herbs	Marshmallow root, liquorice root, aloe vera
Alkalising herbs	Tulsi, Fennel, Basil
Carminative herbs	Peppermint, Cardamom, Cinnamon
Antispasmodic herbs	Peppermint, Lemon Balm, Valerian Root
Healing herbs	Amla, Turmeric, Fenugreek

1. Demulcent herbs [12]: These herbs are rich in mucilage, a gel-like structure that coats and protects the stomach lining from acid irritation. It works by stimulating the formation of mucus by the tissues to form mucous membrane which protects from irritation due to excess acid in the stomach.
Examples include: Marshmallow root (*Althaea officinalis*) and Liquorice root (*Glycyrrhiza glabra*).
2. Alkalising herbs[13]: These herbs work by neutralising excess stomach acid and restoring the pH balance in the stomach. These can be taken as a tea, with salads, etc. These herbs contain magnesium and aluminium, which help to reduce acid in the stomach and remove acidic waste from the stomach.
Examples include:Tulsi (*Ocimum sanctum*) and Fennel (*Foeniculum vulgare*).
3. Carminative herbs [14]: These herbs alleviate gas, bloating and digestive discomfort which often accompany acid reflux or heartburn. These can reduce discomfort by reducing the fermentation in the gut. They can also be utilized to alleviate stomach pain brought on by flatulence.
Examples include:Peppermint (*Mentha piperita*) and Cinnamon (*Cinnamomum verum*).
4. Anti-spasmodic herbs [15]: These herbs reduce stomach spasms and soothe the digestive tract, which can relieve symptoms of acid reflux. These are used to reduce inflammation and relax smooth muscles.
Examples include: Lemon Balm (*Melissa officinalis*) and Valerian root (*Valeriana officinalis*).
5. Healing herbs [16]: These herbs promote healing of damaged tissues caused by excess acid produced in the stomach. This reproduces the mucous membrane which protects the lining of the stomach from acid and repairs the damaged cells.
Examples include: Amla (*Emblica officinalis*) and Turmeric (*Curcuma longa*).

TABLE 2. Marketed Formulations of Herbal Antacids

Serial number	Trade name	Company	Composition	Dosage form	References
1	Gasex	Himalaya	Ginger, black pepper, triphala, cowrie bhasma and aconitum palmatum	Tablet	17
2	Pudin hara	Dabur	Pudina satva, peppermint oil	Capsule and syrup	18
3	Pancharishta	Zandu	Draksha, Dashamoola, Triphala, Ashwagandha, Shatavari	Syrup	19
4	Pachmeena	Multani	Nagarmotha, Haritaki, Ajwain, Kali mirch, Methidana, Jeera safed, Saunf, Lavang, Chitrak	Syrup	20
5	Triphala	Dabur	Haritaki, Bibhitaki, Amla	Powder	21

TABLE 3. Some Herbal Plants Having Antacid Properties

Serial number	Plant name	Botanical name	Family	Chemical constituents	Present in marketed formulation	References
1	Liquorice	*Glycyrrhiza glabra*	Leguminosae	Glycyrrhizin, Glycyrrhetinic acid, Chalcones, Glycycoumarin, Tannins, Sterols, Steroids	Himalaya yashtimadhu (tablet), Dabur Mulethi powder and Zandu pancharishta (syrup)	22
2	Aloe vera	*Aloe vera*	Liliaceae	Aloin, Emodin, Glucomannan, Lupeol, Phytosterols, Flavonoids, Phenols	Dabur Aloe Vera (syrup), Patanjali Aloe Vera (cream), Himalaya Aloe Vera (face wash), Dabur Aloe Vera (gel)	23
3	Marshmallow Root	*Althaea officinalis*	Malvaceae	Ferulic acid, Syringic acid, Quercetin, Kaempferol, Mucilage, Coumarins, Sterols, Amino acids	Solaray marshmallow root (capsules), Herb Pharm marshmallow (syrup), Gaia Herbs marshmallow root (tablets, syrups) and Swanson marshmallow root (capsules)	24
4	Chamomile	*Chamaemelum nobile*	Asteraceae	Ferulic acid, Quercetin, Luteolin, Bisabolol, Terpenes, Coumarins, Polysaccharides	Himalaya Chamomile, Herb Pharm extract (liquid) and Gaia Herbs sleep and relax tea	25
5	Ginger	*Zingiber officinale*	Zingiberaceae	Gingerols, Shogaols, Zingiberene, Camphene, Oleoresins, Polysaccharides, Essential oils, Phenolic acid	Himalaya Koflet (syrup), Dabur Honitus (syrup) and Himalaya Sunthi (tablets)	26
6	Fennel	*Foeniculum vulgare*	Apiaceae	Anethole, Fenchone, Quercetin, Limonene, Saponins, Flavonoids, Coumarin	Baidyanath Isabgol (powder), Himalaya Gasex (tablet) and Patanjali Divya Gashar churna (powder)	27
7	Turmeric	*Curcuma longa*	Zingiberaceae	Curcumin, Turmerone, Desmethoxycurcumin, Zingiberene, Terpenes, Flavonoids, Steroids	Dabur Haldi drops (liquid), Himalaya Haridra (tablets), Gaia Herbs Turmeric (capsules)	28, 29

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TABLE 4. Parts of Plant Used with Their Pharmacological Activity

Serial number	Plant name	Part of plant used	Pharmacological activities	References
1	Liquorice	Root and Rhizomes	anti-inflammatory activity, antiviral activity, immunoregulatory activity, antimicrobial activity, hepatoprotective effect	30
2	Aloe vera	Whole leaf and Gel	laxative effect, anti-ageing effect, anti-ulcer effect, skin protection and hydration activity, immunomodulatory effect, anti-inflammatory activity, anti-diabetic activity, antioxidant activity, anti-microbial activity and anti-tumour activity	31, 32
3	Marshmallow root	Flowers, Leaves and Roots	antimicrobial activity, anti-inflammatory activity, antiviral activity, anti-fungal activity, antitubercular activity, cytotoxic activity, immunostimulant activity, antitussive activity and anti-complement activity	33, 34
4	Chamomile	Flower heads	sedative activity, anxiolytic activity, antispasmodic activity, anti-inflammatory activity, anti-haemorrhagic activity and hepatoprotective activity	35, 36
5	Ginger	Rhizomes, Leaves and Flower	antioxidant activity, anti-inflammatory activity, anti-cancer, anti-bacterial, treating nausea and vomiting, and treating cardiovascular diseases	37, 38
6	Fennel	Seeds and Leaves	anti-bacterial activity, anti-fungal activity, antioxidant activity, anti-thrombotic activity, anti-inflammatory activity, oestrogenic activity, anti-diabetic activity, hepatoprotective activity	39, 40
7	Turmeric	Rhizomes	anti-protozoan activity, anti-diabetic activity, anti-spasmodic activity, anti-viral activity, anti-inflammatory activity, anti-coagulant activity, antioxidant activity, anti-fungal activity and anti-bacterial activity	41, 42

II. CONCLUSION

The acidity and peptic ulcers are diseases of the gastrointestinal tract generally caused by *Helicobacter pylori* bacteria, stress and consuming more frequently NSAIDs. The symptoms may include abdominal pain, burning sensation in the GIT and bloating of the stomach. The most common side effects of antacids are constipation, diarrhoea and electrolyte imbalance.

Antacids are used in the treatment of acidity and ulcers. Herbal antacids contain naturally occurring constituents used in the formulation of antacids. Herbs are classified as demulcent herbs, alkalising herbs, antispasmodic herbs, carminative herbs and healing herbs.

Some plants that exhibit antacid properties, such as liquorice, ginger, turmeric, marshmallow root, fennel, aloe vera and chamomile, are studied along with their parts to be used with more pharmacological activities.

REFERENCES

1. Graham DY, Khalaf N. Peptic ulcer disease. Geriatric Gastroenterology. 2020:1-31.
2. Nahida, Acidity – Symptoms, Home Remedies, Causes and Treatment, February 2, 2023.
3. Dr. Sakshi Sharma**,** Dr. Varun Gupta**,** Acidity**,**10 Sep 2024**.**
4. Amengor CD, Akuffo OF, Kwaning J, Iddrisu AH, Ohemeng A, Acheampomaa DA, Gyapong P. Acid neutralizing capacity of selected antacid suspensions available in the Ghanaian market. Asian J. Res. Med. Pharm. Sci.. 2020;9:10-5.
5. Henry DA, Langman MJ. Adverse effects of anti-ulcer drugs. Drugs. 1981 Jun;21:444-59.
6. Chernenko V. What is an antacid agent. List of antacid drugs: classification, reception rules, side effects.
7. https://www.businessreseachinsights.com/market-reports/antacids-market-119536.
8. Yadav P, Pandiaraj T, Yadav V, Yadav V, Yadav A, Singh V. Traditional values of medicinal plants, herbs and their curable benefits. Journal of Pharmacognosy and Phytochemistry. 2020;9(1):2104-6.
9. Goswami Priyanka, Ghodke Omkar, Chawda Jay, Formulation Development and *In Vitro* Antacid Activity of Herbal Effervescent Granules.
10. Pawar SS, Pande VV, Girme A and Sanklecha VM, Biological Standardization of Some Herbal Formulations for Antacid Activity.
11. Roopa G, Bhat RS, Dakshina MS. Formulation and evaluation of an antacid and anti-ulcer suspension containing herbal drugs. Biomedical and Pharmacology Journal. 2015 Mar 25;3(1):01-6.
12. Yarnell E, Abascal K. Herbs for gastroesophageal reflux disease. Alternative and Complementary Therapies. 2010 Dec 1;16(6):344-6.
13. Chernenko V. List of antacid drugs. Antacids.
14. Kumar S, Kumari R, Mishra S. Pharmacological properties and their medicinal uses of *Cinnamomum*: A review. Journal of Pharmacy and Pharmacology. 2019 Dec;71(12):1735-61.
15. Nandhini S, Narayanan KB, Ilango K. Valeriana officinalis: A review of its traditional uses, phytochemistry and pharmacology. Asian J Pharm Clin Res. 2018 Jan;11(1):36-41.
16. Dasaroju S, Gottumukkala KM. Current trends in the research of *Emblica officinalis* (Amla): A pharmacological perspective. Int J Pharm Sci Rev Res. 2014;24(2):150-9.
17. Mukhram M, Anturlikar SD, Rafiq M, Patki PS, Rangesh P. Gastrokinetic and gastroprotective activity of Gasex. International Journal of Phytomedicine. 2011 Oct 1;3(4):557.
18. Balakrishnan A. Therapeutic uses of peppermint-a review. Journal of pharmaceutical sciences and research. 2015 Jul 1;7(7):474.
19. Pathak N, Shah HA, Vaidya A. 2 Clinical Perspective of Ayurceuticals. Clinical Aspects of Functional Foods and Nutraceuticals. 2014 Aug 29:33.
20. Tiwari HS, Rajendra B, Pooja M, Anzar A, Panda BP, Achala KR, Bharat PC, Gopesh M. TO EVALUATE THE EFFICACY OF PACHMEENA TONIC IN THE MANAGEMENT OF AJEERNA.
21. Wang M, Li Y, Hu X. Chebulinic acid derived from triphala is a promising antitumour agent in human colorectal carcinoma cell lines. BMC complementary and alternative medicine. 2018 Dec;18:1-9.
22. Kitagawa I. Licorice root. A natural sweetener and an important ingredient in Chinese medicine. Pure and applied chemistry. 2002 Jan 1;74(7):1189-98.
23. Kahramanoğlu İ, Chen C, Chen J, Wan C. Chemical constituents, antimicrobial activity, and food preservative characteristics of Aloe vera gel. Agronomy. 2019 Dec 2;9(12):831.
24. Ulbricht C, Basch E, Ulbricht C, Hammerness P, Vora M. Marshmallow (*Althaea officinalis L*.) monograph. Journal of Herbal Pharmacotherapy. 2003 Jan 1;3(3):71-81.
25. Dai YL, Li Y, Wang Q, Niu FJ, Li KW, Wang YY, Wang J, Zhou CZ, Gao LN. Chamomile: a review of its traditional uses, chemical constituents, pharmacological activities and quality control studies. Molecules. 2023 Jan;28(1):133.
26. Shalaby EA, Shanab SM, Hafez RM, El-Ansary AE. Chemical constituents and biological activities of different extracts from ginger plant (*Zingiber officinale*). Chemical and Biological Technologies in Agriculture. 2023 Feb 14;10(1):14.
27. Al-Snafi AE. The chemical constituents and pharmacological effects of *Foeniculum vulgare*-A review. IOSR Journal of Pharmacy. 2018;8(5):81-96.

28. Sun W, Wang S, Zhao W, Wu C, Guo S, Gao H, Tao H, Lu J, Wang Y, Chen X. Chemical constituents and biological research on plants in the genus Curcuma. Critical reviews in food science and nutrition. 2017 May 3;57(7):1451-523.
29. Shang ZP, Xu LL, Lu YY, Guan M, Li DY, Le ZY, Bai ZL, Qiao X, Ye M. Advances in chemical constituents and quality control of turmeric. World Journal of Traditional Chinese Medicine. 2019 Apr 1;5(2):116-21.
30. Yang R, Wang LQ, Yuan BC, Liu Y. The pharmacological activities of licorice. *Planta medica*. 2015 Dec;81(18):1654-69.
31. Minwuyelet T, Sewalem M, Gashe M. Review on therapeutic uses of Aloe vera. Global J Pharmacol. 2017;11(2):14-20.
32. Rahmani AH, Aldebasi YH, Srikar S, Khan AA, Aly SM. Aloe vera: Potential candidate in health management via modulation of biological activities. Pharmacognosy reviews. 2015 Jul;9(18):120.
33. Rančić D, Dražić S, Dajić-Stevanović Z, Radošević R. Anatomical features of the marshmallow (*Althaea officinalis L.*) root. Journal of Scientific Agricultural Research. 2009;70(4):51-60.
34. Shah SA, Akhtar N, Akram M, Shah PA, Saeed T, Ahmed K, Asif HM. Pharmacological activity of *Althaea officinalis L*. J Med Plants Res. 2011 Oct 30;5(24):5662-6.
35. Brabandt H, Ehlert D. Chamomile harvesters: A review. Industrial Crops and Products. 2011 Jul 1;34(1):818-24.
36. Sharafzadeh S, Alizadeh O. German and Roman chamomile. Journal of applied pharmaceutical science. 2011 Dec 30(Issue):01-5.
37. Tanweer S, Mehmood T, Zainab S, Ahmad Z, Shehzad A. Comparison and HPLC quantification of antioxidant profiling of ginger rhizome, leaves and flower extracts. Clinical Phytoscience. 2020 Dec;6:1-2.
38. Zagórska J, Czernicka-Boś L, Kukula-Koch W, Iłowiecka K, Koch W. Impact of thermal processing on the selected biological activities of ginger rhizome—A review. Molecules. 2023 Jan 3;28(1):412.
39. Šunić L, Ilić ZS, Stanojević L, Milenković L, Stanojević J, Kovač R, Milenković A, Cvetković D. Comparison of the essential oil content, constituents and antioxidant activity from different plant parts during development stages of wild fennel (*Foeniculum vulgare Mill.*). Horticulturae. 2023 Mar 10;9(3):364.
40. Anka ZM, Gimba S, Nanda A, Salisu L. Phytochemistry and pharmacological activities of *Foeniculum vulgare*. IOSR J. Pharm. 2020;10:1-0.
41. Singh G, Kapoor IP, Singh P, de Heluani CS, de Lampasona MP, Catalan CA. Comparative study of chemical composition and antioxidant activity of fresh and dry rhizomes of turmeric (*Curcuma longa Linn.*). Food and chemical toxicology. 2010 Apr 1;48(4):1026-31.
42. Bhat SV, Amin T, Nazir S. Biological activities of turmeric (*Curcuma longa Linn.*)-an overview. BMR Microbiol. 2015;1(1):1-5.