



## **Various Ethno-Medicinal Plants Of Malwa Region Used In Stomach Ailments**

**Mamta Bhoj Baroniya**

School of Studies in Botany, Vikram University Ujjain, MP, India

**Navneet Kumar Shrivastava**

Department of Botany, Govt. S. K. P. G. College, Dewas, MP, India

**Sanjay Singh Baroniya**

Department of Botany, Govt. S. K. P. G. College, Dewas, MP, India

***Abstract:***

*An attempt has been made to compile the plants and their preparations used for cure of stomach related diseases with Ethnomedicinal backgrounds with the list of plants from Madhya Pradesh (central Malwa region) with stomach care potentials. The study of ethno-medicinal system and plants as therapeutic agents is an important aspect to cure serious health problems. Now-a-days natural products and herbal medicines have been recommended for the treatment of stomach related diseases. Currently available remedial options for non-allopathy-dependent stomach diseases, such as dietary modification, oral fibres have lot potentials to cure such disorders. The article include the various preparations which can safely used to cure stomach related diseases in the form of daily diet as plant potentials for future generations. Attempts are being done for awareness towards changing our diet system with potential input of Ethnomedicinal traditional knowledge to cure the occurrence of stomach related diseases.*

***Key words:*** Ethnomedicinal Treasure, jaundice, constipation, Madhya Pradesh, Indian Medicinal Plants.

## **1.Introduction**

Ethnobotany studies the complex relationships between plants and cultures. It is multidisciplinary science defined as the interaction between plants and people. The relationship between plants and human cultures is not limited to the use of plants for food, clothing and shelter but also includes their use for religious ceremonies, ornamentation and health care. Medicinal plants have always been the principle sources of medicine in India. Since ancient past and presently they are becoming popular. There has been a rapid extension of allopathic system of medical treatment in our country during the past century (Dwivedi et. al. 2007). However, these drugs have adverse effect and people are going back to nature with hope of safety and security. On the other hand, herbs are safe, cheaper, easily available and with no fear of any side effects. It is evident that many valuable herbal drugs have been discovered by knowing that particular plant was used by the ancient folk healers for the treatment of some kind of ailment (Ekka & Dixit, 2007). In search of food and to cope successfully with human suffering, primitive man began to distinguish those plants suitable for nutritional purpose from others with definitive pharmacological action. This relationship has grown between plants and man, and many plants came to be used as drugs. The growth of knowledge to cure disease continues at an accelerating pace, and number of new plant-derived drugs increase likewise. Herbal medicine is currently experiencing a revival in Western society, along with other complementary therapies such as traditional Chinese Medicines, Osteopathy and Homeopathy (Shinwari and Gilani, 2003).

Dysfunction or reduction in the efficiency of liver and related organ can cause severe metabolic disorders. Liver disease is any condition that causes liver inflammation or tissue damage and affects liver function. The liver is a vital organ located in the upper right-hand side of the abdomen. It is as large as a football, weighs 2-3 pounds, and performs numerous functions for the body: converting nutrients derived from food into essential blood components, storing vitamins and minerals, regulating blood clotting, producing proteins and enzymes, maintaining hormone balances, and metabolizing and detoxifying substances that would otherwise be harmful to the body. The liver makes factors that help the human immune system fight infection, removes bacteria from the blood, and makes bile, which is essential for digestion. Bile, a greenish-yellow fluid consisting of bile acids or salts and waste products such as bile pigments, flows through small bile ducts inside the liver. The bile moves from these small ducts into larger ones,

like streams into a river, eventually converging into the common bile duct and exiting the liver. Some of the bile flows directly to the duodenum; the rest is stored and concentrated in the gallbladder. After a person eats, the gallbladder, a fist-sized organ that sits next to the liver, releases some of the stored bile into the small intestine, where it helps to digest fats.

Many stomach diseases are associated with infection. Historically, it was widely believed that the highly acidic environment of the stomach would keep the stomach immune from infection. However, a large number of studies have indicated that most cases of stomach ulcers, gastritis and stomach cancer are caused by *Helicobacter pylori* infection. One of the ways it is able to survive in the stomach involves its urease enzymes which metabolize urea (which is normally secreted into the stomach) to ammonia and carbon which neutralises gastric acid and thus prevents its digestion. In recent years, it has been discovered that other *Helicobacter* bacteria are also capable of colonising the stomach and have been associated with gastritis. Having too little or no gastric acid is known as hypochlorhydria or achlorhydria respectively and are conditions which can have negative health impacts. Having high levels of gastric acid is called hyperchlorhydria. Many people believe that hyperchlorhydria can cause stomach ulcers. However, recent research indicates that the gastric mucosa which secretes gastric acid is acid-resistant. Gastritis and stomach cancer are caused by *Helicobacter pylori* infection. Having too little or no gastric acid is known as hypochlorhydria which can have negative health impacts. There are many types of chronic disorders which affect the stomach. However since the symptoms are localized to this organ, the typical symptoms of stomach problems include nausea, vomiting, bloating, cramps, diarrhea and pain.

There is no unique treatment for stomach ailments by prescribing modern allopathic and homeopathic medicine. Although different workers have documented medicinal plants from various regions of world, but to our knowledge no systematic investigation on application of medicinal plants against different stomach ailments has been made which was based on socio-economic conditions of respondent communities. In this context, the present study is an important milestone with particular emphasis on application of medicinal plants for stomach related diseases. In developing countries 80% of population is using traditional medicine in primary medical problems (Grover and Yadav, 2004). Therefore, Government is endowed with the wealth of medicinally important plants and has focused on ancient herbal treatment methods where traditional alternative medicines are popularly practiced among the large segment of its population.

## **2. Study area**

Madhya Pradesh is often called the Heart of India, is a state in central India. Its capital is Bhopal. Madhya Pradesh was originally the largest state in India until November 1, 2000 when the state of Chhattisgarh was carved out. It borders the states Uttar Pradesh, Chhattisgarh, Maharashtra, Gujarat and Rajasthan. Madhya Pradesh is endowed with rich and diverse forest resources. Lying between lat. 21°04'N and long. 74°02' and 82°49' E, it is a reservoir of biodiversity. The geographical area of the state is 308,144 km<sup>2</sup> which constitutes 9.38% of the land area of the country. The forest area of the state is 95,221 km<sup>2</sup> constituting 31% of the geographical area of the state and 12.44% of the forest area of the country. Legally this area has been classified into "Reserved Forest, Protected Forest and Unclassified Forest", which constitute 61.7%, 37.4% and 0.9% of the forest area respectively. Per capita forest area is 2,400 m<sup>2</sup> as against the national average of 700 m<sup>2</sup>. As per the latest estimates of Forest Survey of India, published in the State of Forest Report (SFR) 2003, suggest that the total forest cover of M.P. is 76,429 km<sup>2</sup>., which is 24.79% of the land area - dense forest constituting 13.57% and open forest 11.22%. One third of the state is forested and offers a unique and exciting panorama of wildlife.

## **3. Methodology**

Our total survey was focused on the talks with people of tribal areas of tribal pockets of Malwa region totally providing the information of ethnomedicinal potentials during March 2009 to February 2010. Data regarding herbal remedies were collected as per plan suggested by Shrivastava et. al., (2007). Data were collected through general conversation with traditional healers and questionnaires were used to obtain the plants used by them. Details of medicinal plants used, mode of treatment, method of preparation, types of dosage and administration were documented. Sometimes we also observed various patients coming and having relief. We also talk to their patients and conclude regarding their ethno-medicinal use. The information gathered from the tribal people was documented and the plants were identified through flora of Madhya Pradesh. Therefore, in present paper an attempt has been made to generate an overview of all the plants from ethnomedicinal and scientific background with potentials to rescue the stomach ailments.

#### **4.Results And Discussion**

As plants play important role in almost every realm of human activity, Ethnobotany encompasses many fields (Black et al., 2001; Cook et al., 1995; Cotton, C.M. et al., 1996). Studies on Ethno-food and ethno-medicinal plants have been carried out all over the world in tribal areas. (Akarele, O. 1990; Balick, M.J.1990; Bye, R.A. 1986; Croom, E.M.1983; Domingunz, X.A. et al 1985). The present study was confined to Tribal people of Malwa region, who shared a lot of knowledge with us. As our present report is confined to plants with potentials to rescue the stomach ailments, so here we have presented ethnomedicinal information on plants with potential to salvage the stomach related problems (Table. 1). The list includes various types of preparations used to cure stomach (liver) diseases. Herbal medicines prescribed by tribal healers are either preparation based on single plant part or a combination of several plant parts. It was believed that compound formulations will cure more rapidly as compare to single formulations.

In every ethnic group there exists a traditional health care system, which is culturally patterned. In rural communities health care seems to be the first and foremost line of defense. The WHO has already recognized the contribution of traditional health care in tribal communities. We are lucky enough to have this opportunity to documenting these treasures of indigenous knowledge systems. It appears that we are approaching a 'new era' in the drug development from natural sources in general. Now days it is an urgent need to target the drugs with potentials to rescue the stomach ailments as diet to cure the causes and restrict the stomach disorders at the edge of new millennium where we can move ahead with a health and healthy living. Higher plants are an untapped reservoir, only waiting to be collectively investigated. Current study is an attempt to explore the Ethno-medicinal treasure hidden in the tribal belts of Malwa region (Madhya Pradesh). For many classes of drugs widely employed in humans, synthesis of novel structures have neither yielded entities with novel mechanisms of action nor with fewer side effects and/or activities improved over those of drugs currently available. In essence, it appears that the chemist has run into a dead-end street. It is very essential to have a proper documentation of medicinal plants and to know their potential for the improvement of health and hygiene through an eco friendly system. Thus importance should be given to the potentiality of ethno medicinal studies as these can provide a very effective strategy for the discovery of useful medicinally active identity.

### 5. Conclusion

Now a days, conservation of traditional knowledge is greatly menaced by a lot of factors related to modernization of the region and lack of interest in traditional healers, in transferring it to next generation. It is, therefore, urgent to save the cultural heritage of the natives, by confirming the therapeutically used plants with scientific criteria. In this context, screening for active substances and testing their activities against stomach ailments causing organisms form an interesting subject for the feature studies. The present study reveals that the Madhya Pradesh is rich in herbal medicine with diversified ethnobotanical values. From the table presented, it can be seen that there is a wide variety of plants for common ailments and diseases. However, different types of strategies are require to adopted such as in-situ conservation, ex-situ conservation and traditional conservation to conserve the plants which are vulnerable and endangered.

S.N .	Botanical Names	Local Name	Family	Parts Used	Ethanomedicinal Uses
1	Abrus precatorius L.	Ghughuchi	Fabaceae	Root, Seed, Leaves	Unripened seeds are crushed and taken with water for digestion.
2	Achyranthes aspera L.	Chirchiri	Amaranthaceae	Root, Seed, Leaves	Seeds powder is used for acidity and constipation Diuretic, time of bleeding in delivery and leaf extract for strong digestion.
3	Aegle marmelos L.	Bel	Rutaceae	Fruits	Pulp is directly taken with sugar and spices for stomach infections.
4	Annona squamosa	Sitaphal	Annonaceae	Fruits, seeds, Roots, Leaves	Pulp of fruits is taken for constipation, Root decoction is a powerful purgative.
5	Boerhaavia diffusa L.	Punarnava	Nyctaginaceae	Herb, roots	Fresh plant material is boiled in water along with sugar. Half cup of the decoction is given to the patient Diaphoretic, diuretic, jaundice.
6	Canabis sativa	Bhang	Euphorbiaceae	Leaves	Laves directly chewed for strong stomach digestion.
7	Carica papaya L.	Papita	Caricaceae	Fruit, Seed powder	Ripened fruits are suggested for jaundice patients, Seed powder is digestant.
8	Carisa carand	Karaunda	Apocyanaceae	Roots, fruits and leaves	Ripened/dried fruits are crushed and directly taken with meals for constipation.

S.N .	Botanical Names	Local Name	Family	Parts Used	Ethanomedicinal Uses
10	Cucumis sativus L.	Kheera	Cucurbitaceae	Fruits/seeds	Fresh fruit is cut into small pieces and is given to the patient . Seeds powdered and given to the patient with water.
11	Cuscuta reflexa Roxb	Amarbel	Cuscutaceae	Whole plant	Fresh plant material is cooked and the paste is taken orally for constipation.
12	Eclipta alba Hassk.	Ghamira	Asteraceae	Whole plant	Leaf extract is taken with honey as Liver tonic.
13	Emblica officinalis Gaert	Amla	Euphorbiaceae	Fruits	Fresh fruits are taken directly and dried fruits are powdered and used for Stomach disorders.
14	Ficus glomerata	Gular	Urticaceae	Root, leaves, fruits	Used in dysentery. Latex is used with mishri/batasha for the cure of gastric trouble.
15	Hordeum vulgare L.	Jai	Poaceae	Seeds	Dried seeds are Powdered, mixed with water and sugar, taken orally digestion.
16	Jatropha curcas L.	Ban rendi	Euphorbiaceae	Seed oil	Latex of plant is taken with batasha for constipation.
17	Manilcara hexandra	Khirni	Sapotaceae	Bark, Fruits	Unripened fruit latex is used with mishri for constipation Ripened fruits are used directly for acidity (Stomachic and anthelmintic).
18	Mentha longifolia L.	Pudina	Lamiaceae	Leaves	Leaves are taken with spices as chatni for Abdominal disorders .
19	Morus alba L.	Shehtut	Moraceae	Bark	Fresh fruits are crushed. One cup of the juice is given to the patient twice a day for two weeks for the treatment of jaundice.
20	Ocimum sanctum	Tulsi	Labiataeae	Leaves	Leaves are eaten directly with sugar/mishri for the cure of indigestion and stomach infections.
21	Opuntia	Nagphani	Cactaceae	Fruits/juice	Ripened Fruits are roasted and used for treatment of stomach ulcers and constipation.
22	Oxalis corniculata L.	Gandora	Oxalidaceae	Leaves	Fresh leaves are crushed and mixed in water. juice is given to the patients of jaundice.
23	Phonix dactyleferus	Khajur	Arecaceae	seed powder	Seeds dipped in water overnight for exclusion of seed coat, remaining cotyledons are used with gur/honey for constipation. Stem apex and leaves are chewed for cure for acidity.
24	Piper longum Linn	Pepper	Piperaceae	Fruits	Seeds crushed taken with honey for gastric trouble.

S.N .	Botanical Names	Local Name	Family	Parts Used	Ethanomedicinal Uses
26	Saccarum officinarum	Ganna	Poaceae	Stem/juice	Stem chewing and sucking is advised to the patients of jaundice and indigestion.
27	Tamarindus indica L.	Imli	Caesalpinaceae	Fruit, Roots	Roots and fruit of T. indica are soaked in water for a night. One cup of this extract is given to the patient for indigestion.
28	Terminalia belerica Roxb.	Bahera	Combretaceae	Fruits	Seeds crushed taken with honey for gastric trouble/constipation.
29	Terminalia chebula Retz.	Harra	Combretaceae	Fruits	Seeds crushed taken with honey for gastric trouble/constipation.
30	Trigonella phenugricum	Methi	Fabaceae	Leaf, seeds	Leaves used directly and seeds are used after soaking overnight.
31	Zinziber officinalis	Adrak	Zinziberaceae	Rhizome	Rhizome is crusher and used as chatni with meals for cure of constipation.
32	Zizyphus nummularia Lamk.	Jhar bal	Rhamnaceae	Fruits	Ripend dried fruits are crushed and powdered, taken with salt and sugar for the cure of indigestion and constipation and Bilious infections
33	Zizyphus zuzuba	Ber	Rhamnaceae	Fruit, seeds	Ripend dried fruits are crushed and powdered, taken with salt and sugar for the cure of indigestion and constipation.

*Table 1: List of ethanomedicinal plants from Madhya Pradesh (central Malwa region) with potentials to cure stomach ailments.*



---

**6.Reference**

1. Akarele, O. (1990) Medicinal plants in traditional medicine. In: Economic and medicinal plants research. Vol 4 (ed., H. Wagner and N. R. Farnsworth), pp 5-16.
2. Balick, M.J. (1990) Ethnobotany and the identification of therapeutic agents from the rainforest. In: Bioactive Compounds from Plants. (Eds. D.J. Chadwick and J. Marsh), Ciba Foundation Symposium, No. 154. John Wiley and Sons, Chichester and New York, pp. 22-39.
3. Black, L.W. and Hugh, C.C. (2001). Plants from the past .University of Alabama press. Tuscaloosa
4. Bye, R.A. (1986). Medicinal plants of the Sierra Madre: Comparative study of Tarahumara and Mexican market plants. *Economic Botany* **40** : 102–124.
5. Cook, F.E.M. (1995). *Economic Botany Data Collection Standard*. (Ed. H.D.V. Prendergast). Royal Botanical Garden, Kew, United Kingdom.
6. Cotton, C.M., 1996. *Ethnobotany: Principles and Applications*. John Wiley and Sons Ltd., Chichester, England, pp: 347
7. Croom, E.M. (1983). Documenting and evaluating herbal remedies. *Economic Botany* **37**(1):31-27.
8. Dominguez, X.A. and Alcorn, J. (1985). Screening of medicinal plants used by Huastec Mayans of northeastern Mexico. *Journal of Ethnopharmacology* **13** : 139–156.
9. Dwivedi, S.N.; Shrivastava, S. Dwivedi, S. Dwivedi, A. Dwivedi, S. and Kaul, S. (2007). ‘Relevance of medicinal herbs used in traditional system of medicine’, Farmavita. Net.
10. Ekka, R. N. and Dixit, V.K. (2007). “Ethno-pharmacognostical studies of medicinal plants of Jashpur district, Chattisgarh”, *Int. Jour. Of Green Phar.* **1**(1): 2-4.
11. Grover, J. K. and Yadav, S. P. (2004). Pharmacological actions and potential uses of *Momordica charantia*: A review. *J. Ethnopharmacology* **93** : 123-132.
12. Shinwari Z.K. Gilani, S.S. (2003). Sustainable harvest of medicinal plants at Bulashbar Nullah, Astore (Northern Pakistan). *J. Ethnopharmacol.* **84**: 289-298.

13. Shrivastava, S. Dwivedi, S. Dubey, D. and Kapoor, S. (2007). “Traditional herbal remedies from Madhya Pradesh used as oral contraceptives- A field survey”, Int. Jour. of Green Phar. **1**(1): 18-22.