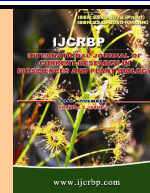




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Original Research Article

Ethno-Medicinal Uses of Some Plants in Treatment of Constipation, Diarrhea, Dysentery and Other Stomach or Digestive Disorders from District Hamirpur (Himachal Pradesh), India

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Abstract	Keywords
In this study, an ethnobotanical survey of the plant diversity was carried out in the different remote areas of Hamirpur district which fall in lower foot hills of Himachal Pradesh, India. The study was mainly emphasized on traditional uses of the herbal plants of Hamirpur district which are used for the treatment of constipation, diarrhea, dysentery and other stomach and digestive problems. The information was carried out about the uses of herbal plants for primary health care and the treatment of various health disorders through the personal contact and personal interview of rural old people of study area. This study was mainly focused on keeping the record of the herbal potential possessed by the plant growing in this area and their sustainability for the welfare of human race.	Constipation Digestive disorders Ethnomedicinal plants Traditional uses

Introduction

Constipation, Dysentery and stomach pain etc. are the common digestive and stomach problems which are found in the people of study region. Constipation occurs when the bowel movement becomes difficult or less frequent. The normal length of time between bowel movement ranges widely from person to person. Some people have bowel movement three times a day, others, only one or two times a week. Diarrhea is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss. Sign of dehydration often

begins with the loss of normal stretchiness of skin and changes in personality. Dysentery broadly refers to infections gastrointestinal disorders characterized by inflammation of intestine chiefly to colon. The bacteria *Shigella*, *Escherichia coli* and amoeba *Entamoeba histolytica* are the common causes of dysentery. These organisms are present in the stools of infected peoples and animals.

The flora of Hamirpur district is unique and diverse. The traditional healer or vaid has commendable knowledge of herbal plants around them. The climatic condition prevailing in this region provides an ideal

habitat for natural growth of variety of herbal plants and other plants by ethano-botanic importance. These plants provide raw material for the pharmaceutical, phyto-chemical, food flavoring and cosmetic industries.

Traditional medicine becomes the integral part of primary health care practices in the life cycle of rural people of study area because these peoples have great faith and great knowledge on the use of various herbal plants for treatment of various health problems. This paper records the use of Plants for the treatment of constipation, Diarrhea, Dysentery and other stomach problems. This knowledge provides good base for the development of new modern drug in the pharmaceutical industry and also beneficial for the identification and about traditional uses of local plants for fulfilling daily requirements. A perusal of literature shows total absence of ethnobotanical representation of this vast varied vegetation except for few reports on medicinal plants (Rawat et al., 2009; Prakash and Aggarwal, 2010; Kumar and Choyal, 2012; Kumar et al., 2015). Hence it was thought valuable to document, whatsoever ethnobotanical information could be collected.

Materials and methods

During the field survey, ethno-medicinal plants were collected from the remote areas and forest of district Hamirpur of Himachal Pradesh, India. The plants were collected in the fruiting and flowering stages. The collected plants thus pressed, mounted and preserved in the Department of Botany, Gautam Group of Colleges, Hamirpur (H.P), India and identified by consulting literature and floras (Collett, 1921; Aswal and Mehrotra, 1994; Kaur and Sharma, 2004; Singh and Sharma, 2006). The knowledge about the medicinal uses of herbal plants was gained by the personnel contact among the old peoples of remote areas and through interviews of the local voids, hakims and traditional healers.

Results

Ethno-botanical uses of different plants used by the local peoples of Hamirpur district for the treatment of constipation, diarrhea, dysentery or other stomach or digestive problems along with the details of medicinal plants such as botanical name, family, local name, part/s used and treatment methods are also given in Table 1.

Table 1. Ethnomedicinal plants used for treating various diseases associated with digestive tract.

S.No.	Botanical name	Family	Local name	Part(s) used	Treatment
1.	<i>Aegle marmelos</i>	Rutaceae	Bilpatri	Fruit Root bark	10g of fruit in combination with 10g gar (jaggy) is taken twice in a day to cure dysentery and diarrhea. Used against stomach pain.
2.	<i>Acorus calamus</i>	Acoraceae	Baryan	Whole plant	Whole plant material extract is used to cure stomach pain.
3.	<i>Allium sativa</i>	Amaryllidaceae	Lahsun	Bulbils	The raw bulbils of this plant are used in case of stomach pain.
4.	<i>Artocarpus integrifolia</i>	Moraceae	Kathal	Fruit	Ripe fruit is edible and used to cure dysentery.
5.	<i>Bauhinia variegata</i>	Fabaceae	Kachnar	buds	One tea spoon of powdered dried buds is taken in a day to check diarrhea and dysentery.
6.	<i>Bauhinia vahlii</i>	Fabaceae	Torrya	Leaves	2-3gms of dried powdered leaves are taken with water to check dysentery.
7.	<i>Berberis aristata</i>	Berberidaceae	Kashmalya	Bark	Berberine is the alkaloid extracted from bark and salts is used in case of diarrhea.
8.	<i>Calotropis gignatea</i>	Asclepiadaceae	Safed aak	Flower and roots	Powdered flowers are used in case of digestive problems.
9.	<i>Citrus media</i>	Rutaceae	Nimbu	Fruit	Fruit is pickled and its juice taken thrice daily to check vomiting in digestion and diarrhea.
10.	<i>Cordia dichotoma</i>	Boraginaceae/ Cordiaceae	Lausoda, Lasura	Inflorescence, Fruits	Inflorescence cooked as vegetables and considered good for dysentery.

S.No.	Botanical name	Family	Local name	Part(s) used	Treatment
11.	<i>Curcuma longa</i>	Zingiberaceae	Haldi	Rhizome	Dried powder of rhizome is taken with water orally in case of stomach pain.
12.	<i>Cuscuta reflexa</i>	Convolvulaceae	Akashbel, Amarvela	Whole plant material	5-10ml decoction of the aerial plant parts (two times a day) to check dysentery.
13.	<i>Desmodium gangeticum</i>	Fabaceae	Shalpashi	Roots	Root decoction is useful in case of digestive problems, diarrhea and vomiting.
14.	<i>Dioscorea bulbifera</i>	Dioscoreaceae	Talad	Tuber	Powdered tuber is used in case of dysentery.
15.	<i>Emblica officinalis</i>	Phyllanthaceae	Amla	Fruit	Fruit is also one of the major constituents of "Trifla churn" which helps in the digestion and constipation.
16.	<i>Euphorbia heterophylla</i>	Euphorbiaceae	Khabad doodhli	Whole plant parts or aerial plant parts	Decoction of the aerial plant parts is used to relieve the constipation.
17.	<i>Ficus religiosa</i>	Moraceae	Reepal	Roots	Dried powder of roots is used in the treatment of diarrhea and dysentery.
18.	<i>Foeniculum vulgare</i>	Apiaceae	Meethi sonf	Seeds	Seeds which are fried in pure ghee mixed with sugar to treat stomach pain.
19.	<i>Holarrhena antidysentrica</i>	Apocynaceae	Inderjau	Bark	Bark powder is useful in case of amoebic dysentery.
20.	<i>Jatropha curcas</i>	Euphorbiaceae	Jabhprota, Jablotha, Jamnota	Seed	Powdered seeds prescribed with cold water for relieving constipation.
21.	<i>Lantana camara</i>	Verbenaceae	Phulu	Leaves	Decoction of leaves is given to relieve stomach pain.
22.	<i>Lathyrus aphaca</i>	Fabaceae	Matarphali, sudu	Seeds	Half tea spoon of powdered seed cure is taken one in a day for 5 days to cure diarrhea.
23.	<i>Lepidium sativum</i>	Brassicaceae	Halon	Whole plant material	Aqueous extract of plant material is used in case of stomach problem.
24.	<i>Moringa oleifera</i>	Moringaceae	Suhmjana, sunana	Fruit(pod), Bark	Pod is useful in case of diarrhea. Bark is used in case of digestive problems.
25.	<i>Murraya koenigii</i>	Rutaceae	Galndhela, Kadi patri	Leaves	Fusion of leaves with "gur" and onion is taken with hot water twice a day for stomach pain.
26.	<i>Musa paradisiaca</i>	Musaceae	Kela	Fruit	Leaves powder is used daily to check dysentery.
27.	<i>Ocimum basilicum</i>	Lamiaceae	Bhabli	Leaves	20ml of decoction of leaves is taken twice in a day to cure gastric problems and other stomach problems.
28.	<i>Oroxylum indicum</i>	Bignoniaceae	Seonak Tat palanga	Whole plant material and fruit	50ml decoction of plant along with its fruits is taken two times a day to cure constipation. Fruit is useful in case of stomach problems.
29.	<i>Phyllanthus niruri</i>	Phyllanthaceae	Bhumi amla, Kaval a khrat	Seeds	Half tea spoon of powdered seed is given once daily for a week to cure stomach disorder.

S.No.	Botanical name	Family	Local name	Part(s) used	Treatment
30.	<i>Physalis minima</i>	Solanaceae	Patakai or rashbari	Fruit and flowers	Cooked fruit and flowers are used in case of stomach and constipation.
31.	<i>Plantago lanceolata</i>	Plantaginaceae	Safed isbagal	Seeds	Powdered seeds (2-3g) with a pinch of sugar is taken once every morning with hot milk 2-3 days to get relieve from constipation and in case of dysentery.
32.	<i>Plumbago zeylanica</i>	Plumbaginaceae	Chitra	Roots	Root powder and root paste is used in case of diarrhea.
33.	<i>Pogostemon benghalensis</i>	Lamiaceae	Dusyan, Kali basuti	Leaves	Powdered leaves with onion, ajwain are used twice a daily to cure stomach pain.
34.	<i>Pongamia pinnata</i>	Fabaceae	Karanja, puti - karanja	Whole plant	The whole plant material extract is useful in case of abdominal enlargement, diarrhea.
35.	<i>Prunus amygdalus</i>	Rosaceae	Badam	Fruit and seed	Dried fruit decoction is useful to stop dysentery in small babies and oil extracted from seed is use to check constipation.
36.	<i>Prunus serasoides</i>	Rosaceae	Pajja	Leaves and Bark	Infusion of leaves and bark is mixed with black pepper to relieve from stomach pain.
37.	<i>Terminalia chebula</i>	Combretaceae	Harad	Fruit	Hot one tea spoon of powdered fruit with saunf (<i>Foeniculum vulgare</i>) is fried in dish ghee which is taken once orally to check dysentery.
38.	<i>Trichodesma indicum</i>	Boraginaceae	Rukhali	Whole plant material	One tea spoon of whole plant material decoction used twice in a day to cure stomach pain.
39.	<i>Trigonella foenum-graceum</i>	Fabaceae	Methi	Seeds	Powdered seeds are taken with hot water which is used to cure the gastro problems.
40.	<i>Vigna vexillata</i>	Fabaceae	Bakrbel, Gunji root	Roots	Decoction of roots along with raw turmeric and roots of bankakadi is taken twice in a day for 3-5 days in case of stomach pain and to cure ulcer cholera.
41.	<i>Raphanus sativum</i>	Brassicaceae	Mooli	Leaves	Juice of fresh leaves is used to check constipation.
42.	<i>Ricinus communis</i>	Euphorbiaceae	Arind	Seeds	One tea spoon of oil which is extracted from the seed with hot milk is used to cure constipation.
43.	<i>Solanum nigrum</i>	Solanaceae	Makoi	Fruit	Ripe berries (Fruit) are also food for diarrhea.
44.	<i>Taraxacum officianale</i>	Asteraceae	Dalal /dudali	Leaves	Half tea spoon of powdered leaves is taken twice in a day for two days to cure stomach ache.
45.	<i>Terminalia bellerica</i>	Combretaceae	Bahera	Fruit	Fruit is an important component of triphala churn which is used for indigestion.
46.	<i>Zanthoxylum armatum</i>	Rutaceae	Tirmir	Fruit seed bark	Seed and bark powder is used in case of dyspepsia and cholera. Dried fruit powder is used in case of stomach pain.

Conclusion

The information generated from the study regarding the medicinal plants used by the villages need a thorough phytochemical investigation including alkaloid extraction and is elation along with few clinical trials. This could help in creating mass awareness regarding their conservation, promotion of ethno-medico-botany knowledge with in the region besides contributing tom the preservation and enrichment of the gene bank of such economically important species before they are lost irrevocably.

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