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Review Article

TRADITIONAL INDIAN HERBAL MEDICINE USED AS ANTIPYRETIC, ANTIULCER, ANTI-DIABETIC AND ANTICANCER: A REVIEW

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ABSTRACT

In the last few years there has been an exponential growth in the field of herbal medicine and these drugs are gaining popularity both in developing and developed countries because of their natural origin and less side effects. Many traditional medicines in use are derived from medicinal plants, minerals and organic matter .The World Health Organization (WHO) has listed 21,000 plants, which are used for medicinal purposes around the world. Among these 2500 species are in India, out of which 150 species are used commercially on a fairly large scale. India is the largest producer of medicinal herbs and is called as botanical garden of the world .The current review focuses on herbal drug preparations and plants used in the treatment of different chronic dieses in the world. The use of Ayurvedic medicines is common in both adults and children and is increasing in many areas of the world. This paper will discuss the benefits with use of herbal medicines as Antipyretic, Antiulcer, Anti-diabetic and Anti-cancerous activity.

Keywords: Antipyretic, Antiulcer, Anti-diabetic, Anti Cancer, Tulsi, Neem.

INTRODUCTION

There are many traditional systems of medicine in the world, each with different associated philosophies and cultural origins. Some of these, such as Tibetan traditional medicine, remain relatively localised in their country of origin; while others such as Ayurvedic and Chinese traditional medicines are increasingly used in many different areas of the world. This paper will concentrate on the issue treatment of chronic diseases and heavy metal poisoning related to herbal traditional medicines. Ayurveda is the most widely practised of the Indian traditional medicine systems, but there are others such as Siddha and Unani which are also used in the Indian subcontinent.

Herbal drugs as antipyretics

Herbal care or traditional system of medicine are used throughout the world and from centuries herbs have been the original source for most of the drugs. Medicinal plants contain so many chemical compounds which are the major source of therapeutic agents to cure human diseases. Recent discovery and advancement in medicinal and aromatic plants have lead to the enhancement of health care of mankind. Various medicinal plants like Neem, Arjuna, Aswagandha, Tulsi, etc. traditionally used for treating fever. The extract prepared from the heartwood of *Acacia catechu*, stem bark and leaves of *Bauhinia racemosus*, *Cleome viscosa* etc. reported to have antipyretic activity in rats.

List of plants used as Antipyretics

S. No.	Common name	Botanical Name	Part Used	Family	Uses
1	Tulsi	*Ocimum sanctum*	Leaves	Labiatae	Antipyretic; Antitussive
2	Neem	*Azadirachta indica*	Leaves	Meliaceae	Antipyretic
3	Brahmi	*Centella asiatica*	Whole Plant	Umbellifera	Antipyretic; Blood purifier
4	Amla	*Emblica officinalis*	Fruits	Euphorbiaceae	Antipyretic
5	Dhaniya	*Coriandrum sativum*	Leaves;Seeds	Umbelliferae	Antipyretic; Carminative
6	Satavari	*Asparagus adscendens*	Tuberous Roots	Liliaceae	Antipyretic; Demulscent; Nutrit ive Tonic
7	Bahera	*Terminalia belerica*	Fruit	Combretaceae	Antipyretic; Expectorant
8	Cinchona	*Cinchona officinalis*	Bark	Rubiaceae	Antipyretic;
9	Bhindi	*Abelmoschus esculentus*	Seed	Malvaceae	Antipyretic, Diuret ic
10	Imli	*Tamarindus indica*	Fruits	Caesalpiniaceae	Antipyretic; Carminative
11	Swet Chandan	*Santalum album*	Wood; Volatile oil	Santalaceae	Antipyretics; Sedative;
12	Palwal	*Trichosanthes dioica*	Fruits	Cucurbitaceae	Antipyretic; Laxative
13	Nirgandi	*Vitex negundo*	Roots; Flower; Fruits; Bark	Verbenaceae	Antipyretic; Astringent
14	Bish	*Aconitum ferox*	Dried Roots	Ranunculaceae	Antipyretic;
15	Datyuni	*Alstonia scholaris*	Leaves; Bark; Milky Juice	Apocynaceae	Antipyretic; Stimulant;
16	Gulancha	*Cocculus cordifolia*	Stem; Leaves; Root	Menispermaceae	Antipyretic; Aphrodisiac
17	Jhar Haldi	*Coscinum fenestratum*	Stem	Menispermaceae	Antipyretic; Stomachic
18	Phala-Kantak	*Daemia extensa*	Leaves; Roots	Ascepidaceae	Antipyretic; Expectorant
19	Kali-Mirch	*Piper nigrum*	Dried Fruits	Piperaceae	Antipyretic; Carminative
20	Chitravalli	*Rubia cordifolia*	Roots	Rubiaceae	Antipyretic; Astringent
21	Jwaran-Thakah	*Swertia chirata*	Whole Herb	Gentianaceae	Antipyretic; Antidot
22	Gurach	*Tinospora cardifolia*	Stem; Root	Menispermaceae	Antipyretic; Antidot
23	Jangali Lahusan	*Allium sativum*	Bulb; oil	Liliaceae	Antipyretic; Antiseptic
24	Kasondi	*Cassia occidentalis*	Leaves;Seeds; Root	Caesalpiniaceae	Antipyretic; Purgative
25	Bhringaraj	*Eclipta erecta*	Roots; Leaves	Compositae	Antipyretic; Emet ic
26	Akasbel	*Cuscuta reflexa*	Seeds; Stem; Fruits	Convolvulaceae	Antipyretic; Carminative
27	Aghata	*Achyranthes aspera*	Leaves; Seeds;Root	Amarantaceae	Antipyretic; Astringent;
28	Cashew	*Anacardium occidentale*	Fruit; Seed; Bark; Oil	Anacardiaceae	Antipyretic;Irritant;
29	Ganja	*Cannibis sativa*	Leaves; Dried Flourerscence	Cannabaceae	Antipyretic; Analgesic
30	Wild mint	*Lantana involucrate*	Whole Herb	Verbenaceae	Antipyretic
31	Biiter gourd	*Momordica charantia*	Fruit; Leaves; Seeds	Cucurbitaceae	Antipyretic; Stimulant
32	Bambo	*Bambusa vulgaris*	Shoot; Seeds; Roots; Leaves	Graminae	Antipytretic; Diuret ic
33	Australian fever tree	*Eucalyptus globules*	Dried leaves; Gum; Oil	Myrtaceae	Antipyretic; Carminative
34	Pan	*Piper betel*	Leaves	Piperaceae	Antipyretic; Carminative
35	Yellow Cedar	*Tecoma stans*	Wood; Oil	Bognoniaceae	Antipyretic; Sedative

Anti Ulcer Activity

Peptic ulcer dieses encompassing gastric and duodenal ulcer is the most prevalent gastrointestinal disorder. The pathophysiology of peptic ulcer dieses involves an imbalance between offensive (acid, pepsin, and *H. pylori)* and defensive factors (Mucin, Prostaglandin, Bicarbonate, Nitric oxide and growth factors). Indian Medicinal plants and their derivatives have been a valuable source of therapeutic agents to treat various disorders including Antiulcer diseases.

List of plants have Anti-ulcer activity

S. No.	Common name	Botanical Name	Part Used	Family	Uses
1	Tulsi	*Ocimum sanctum*	All parts	*Labiatae*	Antiulcer ,Antibacterial,
2	Tippani	*Allophylus serratus*	Leaves	*Sapindaceae*	Antiulcer, elephantiasis
3	Shaparni	*Desmodium gangeticum*	Root Extract	Leguminosae	Typhoid, piles, inflammation, asthma,Antiulcer
4	Neem	*Azadirachta indica*	dried bark extract	Meliaceae	Gastrointestinal dieses , leprosy, respiratory disorders
5	Indian Sarsaparilla	*Hemidesmus indicus*	Extract	Asclepiadaceae	Antidiarrhoeal, mucoprotective,Antiulcer
6	Satavari	*Asparagus racemosus*	Extract of fresh root	*Liliaceae*	Anti-diarrhoeal, Antibacterial, Antiulcer
7	Triphala	Terminalia pallida	Plant Extract	Combretaceae	Antiulcer
8	Aamla	*Emblica officinalis*	Fruit Extract	Euphorbiacae	Antiulcer
9	Gotu Kola	*Centella asiatica*	Fresh Juice	Apiaceae	Antiulcer
10	Brahmi	*Bacopa monniera*	Fresh Juice	Scrophulariaceae	Antiulcer
11	Apple bananas	*Musa sapientum*	fruit	Scitaminaceae	Antiulcer
12	Papeeta	*Carica papaya*	Seeds	Caricaceae	Anti-helmintic, antiamebic, Antiulcer
13	Pausanto	*Kielmeyera coriacea*	stem	guttiferae	Anxiolytic, Antiulcer
14	Brindleberry	*Garcinia cambogia*	Fruit extract	clusiaceae	Antiulcer
15	Winter melon	*Benincasa hispida*	fruit	cucurbitaceae	Antiulcer, epilepsy
16	Wild pipal	*Ficus arnottiana*	fruit	Moraceae	Antiulcer, demulcent
17	Indian devil tree	*Alstonia Scholaris*	Whole plant	Apocynaceae	Antiulcer,
18	Indian mulberry	*Morinda citrifolia*	Fruit	rubiaceae	Antiulcer, Anti-diabetic
19	Indian borage	*Plectranthus amboinicus*	Whole plant	Lamiaceae	Diuretic, Antiulcer

Anti-diabetic

Diabetes mellitus is a clinical syndrome characterized by inappropriate hyperglycemia caused by a relative or absolute deficiency of insulin or by a resistance to the action of insulin at the cellular level. Plant materials which are being used as traditional medicine for the treatment of diabetes are considered one of the good sources for a new drug or a lead to make a new drug. Plant extract or different folk plant preparations are being prescribed by the traditional practioners and also accepted by the users for diabetes like for any other diseases in many countries.

List of plants have Anti-diabetic activity

S. No.	Common name	Botanical Name	Part Used	Family	Uses
1	Methi	*Trigonella foenum-gracecum*	Seeds	Fabaceae	Antidiabetic
2	fern	*Nephoelepsis tuberosa*	bulb	Oleandraceae	Antidiabetic
3	keukand	*Costus specious*	rhizome	Costaceae	Antidiabetic
4	Indian wheat	*Plantago ovata*	husk	Plantaginaceae	Antidiabetic
5	garlic	*Allium sativum*	bulb	Alliaceae	Antidiabetic
6	Indian Sarsaparilla	*Hemidesmus indicus*	root	Asclepiadaceae	Antidiabetic
7	onion	*Allium cepa*	bulb	Liliaceae	Antidiabetic
8	Pinyn	*Acontium carmichaeii*	Root	Ranunculaceae	Antidiabetic
9	Chilli pepper	*Capsicum annum*	Fruit	Solanaceae	Antidiabetic
10	goat's rue	*Galega officinalis*	Seed	Fabaceae	Antidiabetic
11	lingzhi mushroom	*Gandoderma lucidium*	Fruit	Ganodermataceae	Antidiabetic
12	Sea pea	*Lathyrus japonica*	Seed	Fabaceae	Antidiabetic
13	Rice	*Oriza sativum*	Root	Poaceae	Antidiabetic
14	Guduchi	*Tinospora cardifolia*	Plant	Menispermaceae	Antidiabetic
15	bitter gourd	*Momordica charantia*	fruit	Cucurbitaceae	Antidiabetic
16	Indian Kino Tree	*Pterocarpus marsupium*	bark	Fabaceae	Antidiabetic
17	ginger	*Zingiber officinale*	rhizome	Zingiberaceae	Antidiabetic
18	Gowar plant	*Cyamospsis tetragonolobus*	Fruit	Fabaceae	Antidiabetic
19	phalsa	*Grewia asiatica*	Fruit	Malvaceae	Antidiabetic
20	Indian Gum Arabic	*Acacia arabica*	seeds	Leguminosae	Antidiabetic
21	Holy Fruit Tree	*Aegle marmelos*	Root bark	Rutaceae	Antidiabetic
22	Aloe	*Aloe vera*	Leaf pulp extract	Aloaceae	Antidiabetic
23	Davana	*Artemisia pallens*	aerial parts	Compositae	Antidiabetic
24	Sugar apple	*Annona squamosa*	leaf extract	Annonaceae	Antidiabetic
25	King of Bitter	*Andrographis paniculata*	plant extract	Acanthaceae	Antidiabetic
26	Neem	*Azadirachta indica*	plant extract	Meliaceae	Antidiabetic
27	Life Plant	*Biophytum sensitivum*	plant leaf extract	Oxalidaceae	Antidiabetic
28	Tar vine	*Boerhavia diffusa*	aqueous leaf extract	Nyctaginaceae	Antidiabetic
29	Tanner's Cassia	*Cassia auriculata*	flower extract	Leguminosae	Antidiabetic
30	Ivy gourd	*Coccinia indica*	Leaf extract	Cucurbitaceae	Antidiabetic
31	Carilla Fruit	*Casearia esculenta*	Root extract	Flacourtiaceae	Antidiabetic
32	Madagascarperi winkle	*Catharanthus roseus*	leaf extract	Apocynaceae	Antidiabetic
33	Green tea	*Camellia sinensis*	leaf extract	Theaceae	Antidiabetic
34	Indian black berry	*Eugenia jambolana*	pulp extract of the fruits,	Myrtaceae	Antidiabetic
35	Mango	*Mangifera indica*	leaf extract	Anacardiacea	Antidiabetic
36	Holy Basil	*Ocimum sanctum*	leaf extract	Lamiaceae	Antidiabetic
37	Pomegranate	*Punica granatum*	Flower extract	Punicaceae	Antidiabetic
38	Indian Gentian	*Swertia chirayita*	Plant extract	Gentianaceae	Antidiabetic

Anticancer

Cancer is a abnormal malignant growth of body tissue or cell. A cancerous growth is called a malignant tumor or malignancy. A non cancerous growth is called benign tumor .The process of cancer metastasis is consisting of series of sequential interrelated steps, each of which is rate limiting. Plants with loaded with chemical with chemo protective activities of some of them are undergoing clinical trial. Inhibition of angiogenesis is a novel process of cancer therapy. The selected and careful use of this plant may definitely in anti-angiogenic therapy and thus in cancer management.

List of plants have Anti-Cancer activity

S. No.	Common name	Botanical Name	Part Used	Family	Uses
1	Arjuna Bark	Terminalia arjuna	Bark	Combertacae	Anticancer
2	Kalmegh	Androgarphis paniculata	Dried leaves	Acanthacae	Anticancer
3	Vinca	Catharanthus roseus	Whole plant	Apocynacae	Anticancer
4	Ochrosia	Ochrosia elliptica	Trunk Bark	Apocynacae	Anticancer
5	May Apple	Podophyllum peltatum	Dried Rhizome	Berberidacae	Anticancer
6	Ginger	Zingiber officinalis	Rhizome	Zingibaracae	Anticancer
7	Turmeric	Curcuma longa	Rhizome	Zingibaracae	Anticancer
8	deerberry	*Vaccinium stamineum*	fruit	Ericaceae	Anticancer
9	Indian mulberry	*Morinda citrifolia*	fruit	Rubiaceae	Anticancer
10	Bhilwa	*Semecarpus anacardium*	fruit	Anacardiaceae	Anticancer
11	Madar	*Calotrophis gigantea*	Whole plant	Asclepiadaceae	Anticancer
12	Arhar Dal	*Cajanus cajan*	Leaves	Fabaceae	Anticancer
13	Palash	*Butea monosperma*	Bark	Fabaceae	Anticancer
14	Orchid Tree	*Bauhinia variegata*	Root	Caesalpinaceae	Anticancer
15	Onion	*Alium cepa*	Bulb	Liliaceae	Anticancer
16	Indian Aloe	*Aloe barbadensis*	Leaves	Liliaceae	Anticancer
17	Tarwar	*Cassia auriculata*	Root	Caesalpinaceae	Anticancer
18	Senna	*Cassia senna*	Leaves	Caesalpinaceae	Anticancer
19	Lemon	*Citrus medica*	Root	Rutaceae	Anticancer
20	Carrot	*Daucus carota*	Root	Apiaceae	Anticancer
21	Danti	*Jatropha curcas*	Leaves,seed,oils	Euphorbiaceae	Anticancer
22	Mint	*Mimosa pudica*	Whole plant	Mimosaceae	Anticancer
23	Tobacco	*Nicotiana tabacum*	Leaves	Solanaceae	Anticancer
24	Indian Ipecac	*Tylopora indica*	Root, Leaf	Asclepiadaceae	Anticancer
25	Nichinda	*Vitex trifolia*	Leaf	Verbanaceae	Anticancer

CONCLUSION

From this study, it is clear that the medicinal plants play a vital role against various diseases. Various herbal plants and plants extracts have significant antiulcer, Antipyretic, Anti-diabetic and Anti-cancerous activity in different animal models. Our review result shows that above-mentioned medicinal plants could prevent from Fever, Ulcer, Diabetes, and Cancer with the principle on dose-dependent. A variety of botanical products have been reported to possess that activity. Hence the review study is concluded that the herbal drug possesses antiulcer, antipyretic, anti-diabetic, anti-cancerous activity and it has been proved by different animal models which give many links to develop the future trials.

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