

A Review on Traditional Plants and Herbs are used to Evaluation for their Hepatoprotective activity

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Abstract

India is known as a “Botanical garden of the world” because of largest producer of medicinal plants. These medicinal plants along with natural therapeutic value against various diseases, provide high quality food and raw materials. Considerably work has been done on medicinal plants to treatment of liver diseases, some of the plant products have been marketed as hepatoprotective drugs, based on their traditional uses and scientific reports. As liver is consider as vital organ, functions as a center of metabolism of nutrients such as carbohydrates, proteins and lipids and excretion of waste metabolites. Liver cell injury is due to various toxicants such as carbon tetrachloride, thioacetamide, chemotherapeutic agents etc, and chronic alcohol consumption and microbes is well studied and reported. The available synthetic drugs to treat liver disorders in this condition also cause further damage to the liver. Hence, Herbal drugs have become increasingly popular and their use is wide-spread. Herbal medicines have been used in the treatment of liver diseases for a long time. Herbal drugs gained popularity and importance in past years because of their efficacy , safety and cost effectiveness.

Keywords: Hepatoprotective drugs, Liver diseases, Herbal drugs, chemotherapeutic agents.

1. INTRODUCTION

Liver is thought of to be one of the most important organ that functions as a center of metabolism of nutrients such as carbohydrates, proteins and lipids and excretion of waste metabolites. Beside that it is conjointly handling the metabolism and excretion of medicine and different xenobiotics from the body thereby providing protection against foreign substances by detoxifying and eliminating them. The digestive fluid secreted by the liver has, among different things, plays an necessary role in digestion. Liver cell injury caused by numerous toxicants like sure chemotherapeutical agents, carbon tetrachloride, thioacetamide etc., chronic alcohol consumption and microbes is well-studied. Increased supermolecule peroxidation throughout metabolism of alcohol might end in development of liver disease leading to liver disease. Since human kind has created the use of plants within the treatment of numerous ailments. The Indian Traditional system of medicine like ayurveda, Siddha and Unani ar preponderantly primarily based on the use of plant materials. Herbal products have gained importance and recognition in recent years as a result of their safety, effectualness and price effectiveness. The association of medical plants

with different plants in their home ground conjointly influences their medicinal values in some cases. One of the necessary and well documented uses of plant products is their use as hepatoprotective agents. Hence, there is an ever increasing would like for safe hepatoprotective agent (Agarwal, 2001)

1.1.Hepatoprotective herbs

Natural plants and their active principles as sources for brand new drug discovery and treatment of diseases have attracted attention in recent years. Herbs and spices typically thought safe and tested to be effective against varied human ailments. Herbal medicine for liver disorders has been in use in Asian nation for an extended time and has been popularized in world over by leading prescription drugs (Saleem et al., 2010). The presently determined fast increase in consumption of these remedies worldwide has been excited by many factors, as they measure safe and effective (Said et al., 2002). The twenty first century has seen a paradigm shift towards therapeutic analysis of herbal medicines in disease models by fastidiously synergizing the strength of the standard systems of medication thereupon of the fashionable construct of proof based mostly medicative analysis, standardization and irregular placebo controlled clinical trials to support clinical effectiveness (Thyagarajan et al., 2002). A large number of plants and formulations have been claimed to have hepatoprotective activity. Nearly 160 phytoconstituents from 101 plants have been claimed to possess liver protecting activity. In India, more than 87 plants are used in 33 patented and proprietary multi ingredient plant formulations (Handa et al., 1986).

In the present study, review has been done for some medicinal plants, which have been evaluated for their hepatoprotective (Table 1) potency using different animal models. The plant name, part and solvent used for the extraction and different parameters done are given as follow:

Table.1. List of Plants evaluated for their hepatoprotective activity.

S. No	Plant (Family)	Part used	Solvent used	References
1.	<i>Aralia continentalis</i> Kitagawa. (Araliaceae)	Root	Ethanol	Hwang et al., 2009
2.	<i>Artemisia absinthium</i> L. (Asteraceae)	Aerial part	Water	Amat et al., 2010
3.	<i>Artemisia sacrorum</i> Ledeb. (Compositae)	Aerial part	Water	Yuan et al., 2010
4.	<i>Azadirachta indica</i> Juss. (Meliaceae)	Leaves	Fresh juice	Yanpallewar et al., 2002
5.	<i>Abutilon indicum</i> L. (Malvaceae)	Leaves	Water	Porchezhiyan and Ansari, 2005
6.	<i>Acanthopanax senticosus</i>	Stem bark	Water	Wang et al., 2010
7.	<i>Aloe barbadensis</i>	Aerial part	Water	Chandan et al.,

	Mill. (Liliaceae)			2007
8.	<i>Andrographis lineate</i> Fam. (Acanthaceae)	Leaves	Methanol, Water	Sangames waran et al., 2008
9.	<i>Anoectochilus formosanus</i> Hayata. (Orchidaceae)	Whole plant	Water	Fang et al., 2008
10.	<i>Apium graveolens</i> Linn. (Apiaceae)	Seeds	Petroleum ether, Acetone, Methanol	Ahmed et al., 2002
11.	<i>Bauhinia variegata</i> L. (Leguminosae)	Stem bark	Alcohol	Bodakhe and Ram, 2007
12.	<i>Berberis tinctoria</i> Lisch. (Berberidaceae)	Leaves	Methanol	Muruges et al., 2005
13.	<i>Boerhaavia diffusa</i> Linn. (Nynctaginaceae)	Leaves	Ethanol	Olaleye et al., 2010
14.	<i>Camellia sinensis</i> Kuntze. (Theaceae)	-	Water	Oyejide and Olushola, 2005
15.	<i>Cassia tora</i> L. (Caesalpiniceae)	Ononitol monohyd	-	Dhanasekaran et al., 2009
16.	<i>Bauhinia variegata</i> L. (Leguminosae)	Stem bark	Alcohol	Bodakhe and Ram, 2007
17.	<i>Berberis tinctoria</i> Lisch. (Berberidaceae)	Leaves	Methanol	Muruges et al., 2005
18.	<i>Boerhaavia diffusa</i> Linn. (Nynctaginaceae)	Leaves	Ethanol	Olaleye et al., 2010
19.	<i>Camellia sinensis</i> Kuntze. (Theaceae)	-	Water	Oyejide and Olushola, 2005
20.	<i>Cassia tora</i> L. (Caesalpiniceae)	Ononitol monohyd	-	Dhanasekar An et al., 2009
21.	<i>Halenia elliptica</i> (Gentianaceae)	Whole plant	70% Methanol	Huang et al., 2010a
22.	<i>Hedyotis corymbosa</i> Lam. (Rubiaceae)	Whole plant	Methanol	Sadasivan et al., 2006
23.	<i>Hibiscus sabdariffa</i> L. (Malvaceae)	Flowers	Water	Amin and Hamza, 2005

24.	<i>Hybrophila auriculata</i> Heine. (Acanthaceae)	Root	Water	Shanmugasund aram and Venkatara man, 2006
25.	<i>Justicia simplex</i> D. Don. (Acanthaceae)	Whole plant (Isolated lignans)	Petroleum ether	Jasemine et al., 2007
26.	<i>Kyllinga nemoralis</i> L. (Cyperaceae)	Rhizome	Petroleum ether, Ethanol	Somasunda ram et al., 2010
27.	<i>Laggera alata</i>	Whole plant	-	Wu et al., 2009
28.	<i>Ligustrum robustum</i> Roxb.(Oleaceae)	Leaves	Water	Lau et al., 2002
29.	<i>Lygodium flexuosum</i> (L.) Sw. (Lygodiaceae)	Whole plant	Hexane	Wills and Asha, 2006
30.	<i>Sida acuta</i> Burm. f. (Malvaceae)	Root	Methanol	Sreedevi et al., 2009
31.	<i>Thunbergia laurifolia</i> Linn. (Acanthaceae)	Leaves	Water	Pramyothin et al., 2005
32.	<i>Trichosanthes cucumerina</i> L. (Cucurbitaceae)	Whole plant	Methanol	Sathesh Kumar et al., 2009
33.	<i>Vernonia amygdalina</i> Delile. (Astereaceae)	Leaves	90% Methanol	Adesanoye and Farombi, 2010
34.	<i>Zinigiber officinale</i> Rosae (Zingiberaceae)	Rhizomes	50% Ethanol	Ajith et al., 2007
35.	<i>Ziziphus mauritiana</i> Lam (Ramnaceae)	Leaves	80% Ethanol	Dahiru et al., 2005

2. DISCUSSION AND CONCLUSION

There are various traditional systems of medicine in the world, each with different connected philosophies and cultural origins. Some of these, such as Tibetan traditional medicine, remain relatively localised in their country of origin; whereas others such as Ayurvedic and Chinese traditional medicines are increasingly used in many different area of the world. This article will give attention to on the issue treatment of Liver disease by using 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. Now a days liver disease is a major public health problem for both developed and developing countries. Thus, use of herbal remedies is gaining popularity all over the world which is easy to procure and further easy to make

for the treatment of any type of hepatotoxicity. These therapies are fortunately very efficacious and cost-effective therefore, attracting the research world for constant search of new drug, more potent principles of the plant, and more palatable formulations. In this review article every plant has been taken to collect and compile the details regarding a few hepatoprotective plants, which will be useful to the society to venture in to a field of alternate systems of medicine.

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