

REVIEW ARTICLE

An Updated Review on Diuretic Plants-2012

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ABSTRACT

India is one of the richest floristic regions of the world and has been a source of plants and their products since antiquity and man uses them in different ways according to his needs, particularly as food or as medicine. There is rising interest of herbal drugs in the health and their benefits. The beneficial reason is that they might offer a natural safeguard against the development of certain conditions and be a reputed treatment for some diseases or ailments. One major class of clinical medicines that are used to lower the blood pressure are known as diuretics and they work by increasing the volume of urinary excretion as well as the amount of sodium in urine from our body. There are a large number of studies which supports the diuretic effects of traditional herbal medicines. The aim of this review is to highlight the work on diuretics of plant origin. The present paper also involves various plant drugs and their bioactive extracts involved in diuretic mechanism. This article may help investigators to identify medicinal plants responsible for diuretic activity.

Key words: Diuretics, traditional herbal medicines, plant drugs.

INTRODUCTION

Diuretics are drugs that increase the rate of urine flow, sodium excretion and are used to adjust the volume and composition of body fluids in a variety of clinical situations. Drug-induced diuresis is beneficial in many life-threatening disease conditions such as congestive heart failure, nephritic syndrome, cirrhosis, renal failure, hypertension, and pregnancy toxemia. Most diuretic drugs have the adverse effect on quality of life including impotence, fatigue, and weakness. Naturally occurring diuretics include caffeine in coffee, tea, and cola, which inhibit Na⁺ reabsorption and alcohol in beer, wine inhibit secretion of ADH although most of the diuretics proved to be very effective in promoting sodium excretion, all cause potassium loss and prompted the search for potassium sparing diuretic. Hence search for a new diuretic agent that retains therapeutic efficacy and yet devoid of potassium loss is justified. Many indigenous drugs have been claimed to have diuretic effect in Ayurvedic system.

DISCUSSION

From this study, it is clear that the medicinal plants play a vital role against on various diseases. Various herbal plants and plants extracts have

significant diuretic activity in animal models. The diuretic activity is probably due to the presence of flavonoids and alkaloids in all few herbal plants. Our review (**Table 1**) results showed that above-mentioned medicinal plants could prevent diuretic with the principle on dose-dependent. The results of this study indicate that extracts of leaves and plants extracts of some medicinal plant have good potentials for use in diuretic. The present review study give evidential explore mechanism of action of medicinal plants against experimentally induced diuretics. Hence the review study is concluded that the herbal drug possesses diuretic activity and it has been proved by different animal models give many links to develop the future trials.

CONCLUSION

Traditional systems of medicine are popular in developing countries and upto 80% of population relies on traditional medicines or folk remedies for their primary health care needs Drug induced diuresis is beneficial in many life threatening disease conditions such as congestive heart failure, nephritic syndrome, cirrhosis, renal failure, hypertension and pregnancy toxemia. Most diuretic drugs have the adverse effects on

quality of life including impotence, fatigue and weakness. Herbal medicines are in great demand in the developed as well as developing countries

for primary health care because of their wide biological and medicinal activities, higher safety margins and lesser costs.

Table 1: List of diuretic plants

S.No	Botanical Name	Family	Parts used	Solvent used	Chemical Constituents	Screening Method	References
1	<i>Achyranthes aspera</i> Linn	Amaranthaceae	Whole plant	Methanol	Triterpenoids, saponins	Lipschitz	Saurabh Srivastav <i>et al</i> ¹
2	<i>Anogiessus lactifolia</i> Roxb	Combretaceae	Leaves	Methanol, aqueous	Steroids, flavonoids, alkaloids	Lipschitz	Prasad Naik <i>et al</i> ²
3	<i>Barleria prionitis</i> Linn	Acanthaceae	Aerial parts	Aqueous	Barlerin	Lipschitz	Murale <i>et al</i> ³
4	<i>Cassia fistula</i> Linn	Fabaceae	Dried fruits	Aqueous & Methanol	Proantho – cyanidine, flavonoids	Lipschitz	More.V.B <i>et al</i> ⁴
5	<i>Centella asiatica</i> Linn	Apocyanaceae	Roots	Methanol	Cardenolide glycosides	Lipschitz	Ashikur Rahaman <i>et al</i> ⁵
6	<i>Cerebera odollum</i> Gaertn	Apocyanaceae	Roots	Methanol	Cardenolide glycosides	Lipschitz	Ashikur Rahaman <i>et al</i> ⁶
7	<i>Cissampelos pareira</i> Linn	Menispermaceae	Roots	Methanol	Bis benzyl iso quinoline	Lipschitz	K.K.Hullatti <i>et al</i> ⁷
8	<i>Cyclea peltata</i> Lam	Menispermaceae	Leaves	Ethanol	Alkaloids, flavonoids, saponins, diterpenoids	Lipschitz	K.K.Hullatti <i>et al</i> ⁸
9	<i>Derris trifoliata</i> Lour	Fabaceae	Aerial parts	Ethanol	Tannins, steroids, flavonoids	Lipschitz	Manmoon, Azam ⁹
10	<i>Echinops echinatus</i> Roxb	Asteraceae	Roots, Aerial parts	Methanol	Phenols, tannins, flavonoids, alkaloids	Lipschitz	Amish J.Patel <i>et al</i> ¹⁰
11	<i>Erythrina indica</i> Lam	Leguminosae	Roots, Bark	Methanol, ethanol	Flavonoids, steroids	Lipschitz	Wadhava <i>et al</i> ¹¹
12	<i>Lawsonia inermis</i> Linn	Lythraceae	Leaves	Ethanol, aqueous	Triterpenoids, flavonoids, tannins, alkaloids	Lipschitz	Chandra kalyan Reddy <i>et al</i> ¹²
13	<i>Michelia champaca</i> Linn	Magnoliaceae	Leaves & Stem Bark	Aqueous	Tannins	Lahlou method	Ahmad <i>et al</i> ¹³
14	<i>Morinda citrifolia</i> Linn	Rubiaceae	Ripend Fruits	Saline Water	Steroids	Lipschitz	Rammohan <i>et al</i> ¹⁴
15	<i>Pergularia daemi</i> Forsk	Asclepediaceae	Whole plant	Ethanol, Petroleum Ether & ethyl acetate	Triterpenoids, steroids	Lipschitz	Bhavin V <i>et al</i> ¹⁵
16	<i>Ruta graveolens</i> Linn	Rutaceae	Leaves	Hot water	Flavonoids, alkaloids	Lipschitz	Jaya kody <i>et al</i> ¹⁶
17	<i>Salvia officinalis</i> Linn	Labiatae	Leaves	Methanol	Alkaloids, steroids	Kau Method	Upendra Bhadoriya <i>et al</i> ¹⁷
18	<i>Solanum torvum</i> S.W	Solanaceae	Seeds, fruit walls	Methanol	Spirostanol glycosides, isoflavonoids, alkaloids	Lipschitz	Rammohan <i>et al</i> ¹⁸
19	<i>Spilanthes acmella</i> Murr	Compositae	Leaves	Ethanol	Tannins, steroids, carotenoids	Rao method	Rajesh <i>et al</i> ¹⁹
20	<i>Stephania japonica</i> Thumb	Menispermaceae	Roots	Methanol	Bis benzyl iso quinoline	Lipschitz	K.K.Hullatti <i>et al</i> ²⁰

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