Some hepatoprotective garden plants

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Received 28 September 2004; Revised 4 October 2004

Abstract

Number of plants grown as ornamentals have medicinal value also. A good many garden plants are hepatoprotective. The present paper deals with six ornamental plants which are used in traditional medicines for liver disorders and their hepatoprotective properties have been confirmed pharmacologically.

Keywords: Hepatoprotective plants, Ornamental plants.

IPC Code: Int. cl.7— A61K 35/78, A61P 1/16

Introduction

Botanical gardens are playing a major role in conserving the diversity of medicinal plant species and they can also be useful in the future in resolving many of the immediate threats upon the wild medicinal flora of the country. Some botanic gardens are already playing an active role in medicinal plant study and research. The cultivation of ornamental medicinal plants in gardens has encouraged conservation and popularization of medicinal properties of some plants used in traditional medicines. The information given in this paper can be used to develop a herbal botanical garden with an expertise on both the propagation and cultivation.

*Ixora coccinea* Linn., Family: Rubiaceae; Local Name: *Thetchi*

A small shrub with attractive flowers, widely distributed throughout India and grown in gardens. The flowers are extensively used in Ayurvedic medicine and have been reported to exhibit significant hepatoprotective effect against paracetamol overdose-induced hepatotoxicity in rats as judged by reduction of elevated levels of serum marker enzymes and liver lipid peroxide levels¹.

*Lawsonia inermis* Linn. syn. *L. alba* Lam., Family: Lythraceae; Local Name: *Mehndi*

Commonly known as Henna, is a shrub, which grows without much care and is mostly grown as a hedge. The white sweet scented flowers are borne in profusion. The crushed leaves are used for colouring nails and palms and also for dyeing hair. The bark is said to be useful for jaundice and enlargement of spleen, calculous affections, as alterative, in skin diseases and leprosy.

Hepatoprotective activity has been reported in the aqueous suspension of the Henna bark against CCl₄ – induced liver toxicity. It significantly reduced the elevated serum marker enzyme levels, serum bilirubin, liver lipid peroxides and increasing the total serum protein, liver glutathione, glutathione peroxidase, glutathione-S-transferase, glycogen, superoxide dismutase and catalase activity².

*Nyctanthes arbor-tristis* Linn., Family: Oleaceae; Local Name: *Pavizhamalli*

It is also referred to as ‘Night Jasmine’ or ‘Tree of Sadness’ as it blossoms at night. It is a very attractive
garden ornamental with exceedingly fragrant flowers, having a white corolla and an orange red tube and centre. A tall bushy shrub, with rough hairy leaves, it grows without much care in any garden soil.

It is widely used in traditional medicine of India to treat fever, rheumatism and as an antidote for reptile venoms. The bark is considered to be useful in treating internal injuries and healing of wounds, including fractured bones. The bark is also reported to possess hepatoprotective effects3, 4.

**Phyllanthus myrtifolius Moon.**, Family: *Euphorbiaceae*

A slender undershrub with woody rootstock, bearing minute pink flowers. It is a common hedge plant, yielding to any kind of training as topiary forms. The village medical practitioners or *vaidyas* of Palghat and Trichur districts of Kerala use the leaves of this plant to treat jaundice and other liver diseases. Experimentally, the plant showed significant reduction of CCl₄-induced prolongation of hexobarbitone-induced narcosis in mice, suggesting hepatoprotection against carbon tetrachloride5.

**Spilanthes ciliata H.B.K.**, Family: *Asteraceae; Local Name: Akravu*

A creeping plant, bearing golden yellow flowers, is used as an attractive ground cover. It has an array of medicinal properties and traditionally used in the treatment of gum troubles, scurvy, scabies and rheumatism. It is widely used in folk medicine to treat liver ailments. The ethanolic extract of the whole plant showed significant hepatoprotective effect against paracetamol overdose-induced liver damage in rats6.

**Wedelia calendulacea Lees.**

syn. *W. chinensis* Merrill, Family: *Asteraceae; Local Name: Manjakayyunni*

An attractive, procumbent, perennial herb with golden yellow flowers. It is commonly used as a ground cover in Kerala, like *W. trilobata*, in the United States. Traditional physicians of Tamil Nadu use it in various liver tonic preparations. During experimental studies it exhibited significant protective activity against carbon tetrachloride-induced liver damage *in vivo* in rats by counteracting the increase of liver weight, hepatic lipid peroxidation and serum alkaline phosphatase, induced by carbon tetrachloride (CCl₄)7.

**Acknowledgements**

The authors are thankful to Dr. G M Nair, the Director of the Institute, for facilities, Dr. N Mohanan, Mr. KP Pradeep Kumar and Mr. S Suresh Kumar, for photographic assistance.

**References**