



**International Journal of Biology, Pharmacy
and Allied Sciences (IJBPAS)**

'A Bridge Between Laboratory and Reader'

www.ijbpas.com

TREATMENT OF JAUNDICE BY TRADITIONAL HEALTHCARE SYSTEM

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ABSTRACT

Numerous plants have been used to treat jaundice in traditional herbal medicine. This review is an attempt to compile available literature from scientific publications and online database on plants that are used to treat jaundice. About 51 plants species were found to be used to cure jaundice or hepatitis however; *Phyllanthus amarus*, *Mikania cordata* and *Litsea glutinosa* are commonly used to treat jaundice.

Keywords: Jaundice, Hepatitis, Ethnomedicinal Plants

INTRODUCTION

Jaundice is a condition in which a person's skin and the white of the eyes are discoloured yellow due to an increased level of bile pigments in the blood resulting from liver disease, it is also known as *icterus* in Greek. Jaundice is the most common of all liver disorders due to degradation of red blood cells in the blood. Jaundice may be caused by an obstruction of the bile ducts which normally discharge bile salts and pigment into the intestine. The bile gets mixed with blood and this gives a yellow pigmentation to the skin. The obstruction of the bile ducts could be due

to gallstones or inflammation of the liver, which is known as hepatitis, and is caused by a virus [1]. Jaundice may result from various diseases or conditions that affect the liver, like Hepatitis A, Hepatitis B, Hepatitis C, Hepatitis D, Hepatitis E, Auto immune hepatitis, Liver cirrhosis, Liver cancer, Haemolytic anaemia and Malaria. It is not a disease but rather a sign that can occur in many different diseases. 60% of the people are affected to jaundice in the world and it is in increasing trend [2]. This review is focused on the documentation of medicinal plants that

are used to treat jaundice.

Jaundice is the yellow discoloration of the skin that occurs when there is a build-up of a substance called bilirubin in the blood. In many cases, yellowness in the white part of the eyes is more obvious than in the skin. The red blood cells last for only about 120 days, after which they are broken down in spleen as bilirubin which is transported to the liver where a series of biochemical processes occur before it winds up being excreted as bile.

If red blood cells are being broken down too rapidly due to side-effect of certain drugs the system can become overloaded; too much bilirubin is produced to be handled by the liver. Unprocessed bilirubin accumulates in the bloodstream and eventually the skin and eyes will look yellow. This condition is called haemolytic anaemia. Sometimes, there would be problem in the liver cells thus the uptake, processing or excretion of bilirubin being hindered; it will accumulate in the bloodstream. In adults, alcoholism is a common cause of damage to liver cells. Other toxins and certain drugs can also cause acute damage to the liver. Likewise, a number of infections can interfere with liver function, and the various types of viral hepatitis are often associated with jaundice. Otherwise, a blockage in the bile duct will cause a build-up of fully processed bilirubin that spills into the

urine and cause it to become very dark. The blockage is most commonly caused by a gallstone. Occasionally it can be caused by a tumor.

Symptoms

The symptoms of jaundice are extreme weakness, headache, fever, loss of appetite, severe constipation, nausea, and yellow discoloration of the eyes, tongue, skin, and urine. The patient may also feel a dull pain in the liver region. Obstructive jaundice may be associated with intense itching. Pulse, tongue, nail, and eye examinations are important diagnosis methods used to reveal a person's body humour and its imbalance [2].

Treatment

There is no unique treatment for jaundice and hepatitis in modern allopathic and homeopathic medicine. However, a number of plants have been used in indigenous system of medicine to cure this disease [1]. For example *Curcuma zedoarea* [3, 4], *Phyllanthus amarus* [5], *Aloe barbadensis*, *Asparagus racemosus* [6], *Cissus adnata* [7], *Carissa opaca* [8] besides very many species of plants have been in use in treating this disease (Table 1).

These plants are commonly available in natural sources or obtained from local dealers. Herbal medicine is taken as infusion either with milk, honey or water. These medicinal

plants produce a variety of compounds that have therapeutic properties [1].

51 medicinal plant species used to treat jaundice and hepatitis were reported and documented. The majority of the reported species are wild and rare. These demand an urgent attention to conserve such vital resources so as to optimize their use in the primary health care system. Now a day, conservation of traditional knowledge is greatly menaced by a lot of factors related to modernization of the region and lack of interest in traditional healers in transferring it to next generation. It is, therefore, urgent to save the cultural heritage of the natives, by confirming the therapeutically used plants with scientific criteria. In this context, screening for active substances and testing their activities against jaundice and hepatitis causing organisms form an interesting subject for the feature studies.

CONCLUSION

In this review, medicinal plants used from various parts of the globe to treat jaundice and hepatitis were compiled. It is right time that effort is being made to authenticate the practice by isolating and screening the active substances and testing their activities against jaundice and hepatitis causing organisms in the future.

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Table 1: List of Medicinal Plants Used From Various Parts of the World to Treat Jaundice

S. No	Plant Name/ Family	Parts Used	References
Asia			
1.	<i>Adiantum capillus</i> / Polypodiaceae	Leaves	[8, 9]
2.	<i>Alocasia indica</i> / Araceae	Tuber	[6]
3.	<i>Argyrolobium roseum</i> / Fabaceae	Whole plant	[8]
4.	<i>Cajanus cajan</i> / Fabaceae	Tender leaves	[6, 10]
5.	<i>Ecbolium viride</i> / Acanthaceae	Root	[6]
6.	<i>Averrhoa carambola</i> / Oxalidaceae	fruit	[6]
7.	<i>Boerhaavia procumbens</i> / Nyctaginaceae	Whole plant	[8]
8.	<i>Carissa opaca</i> / Apocynaceae	Leaves	[8]
9.	<i>Cucumis sativus</i> / Cucurbitaceae	Fruit	[8]
10.	<i>Cuscuta reflexa</i> / Cuscutaceae	Whole plant	[8]
11.	<i>Calycopteris floribunda</i> / Combretaceae	Fruits	[6]
13.	<i>Euphorbia tirucalli</i> / Euphorbiaceae	Juice of plant	[6]
14.	<i>Hemidesmus indicus</i> / Apocynaceae	Root, aerial parts	[6]
15.	<i>Justicia adhatoda</i> / Acanthaceae	Roots	[8]
16.	<i>Cissus elongate</i> / Vitaceae	Leaves and stems	[11]
17.	<i>Equisetum debile</i> / Equisetaceae	Whole, plant	[8]
18.	<i>Mikania cordata</i> / Compositae	Leaves	[6, 12- 16]
19.	<i>Vitis pallid</i> / Vitaceae	Whole plant	[7, 15]
20.	<i>Vitex peduncularis</i> / Verbenaceae	Juice of barks	[16, 17]
21..	<i>Berberis lyceum</i> / Berberdiaceae	Leaves	[8]
22..	<i>Cichorium intybus</i> / Astraceae	Whole plant	[8]
23.	<i>Cissus repens</i> / Vitaceae	Stems, leaves	[7]
24.	<i>Daucus carota</i> / Umbelliferae	Taproot	[6]
25.	<i>Embelia ribes</i> / Euphorbiaceae	Fruits	[6, 18]
26.	<i>Blumea malabarica</i> / Rubiaceae	Leaves	[6]
27.	<i>Asparagus racemosus</i> / Liliaceae	Whole plant	[6]
28.	<i>Baccaurea ramiflora</i> / Euphorbiaceae	Bark	[19]
29.	<i>Cissus adnata</i> / Vitaceae	Bark, leaves, roots	[7]
30.	<i>Drynaria quercifolia</i> / Polypodiaceae	Rhizomes	[20, 21]
31.	<i>Carthamus tinctorious</i> / Compositae	Flower	[6]
32.	<i>Cassia fistula</i> /Caesalpiniaceae	Seeds	[6]
33.	<i>Citrullus colocynthis</i> / Cucurbitaceae	Root	[6]
34.	<i>Aloe barbadensis</i> / Liliaceae	Whole plant	[6]
35.	<i>Amaranthus spinosus</i> / Amaranthaceae	Leaves, roots	[6]
36.	<i>Begonia roxburghii</i> / Begoniaceae	Stem	[22]
37.	<i>Morinda persicifolia</i> / Rubiaceae	Roots	[23]
38.	<i>Bixa orellana</i> / Bixaceae	root	[6]
39.	<i>Hordeum vulgare</i> / Poaceae	Seeds	[8]
40.	<i>Phyllanthus amarus</i> / Euphorbiaceae	fruits and leaves	[5]
Australia			
41.	<i>Ficus scandens</i> / Moraceae	Roots and leaves	[6]
42.	<i>Cissus assamica</i> / Vitaceae	Young parts of plants	[24, 25]
43.	<i>Scurrula graciliflora</i> / Loranthaceae	Tuberous root leaves	[26, 27]
44.	<i>Vitex pinnata</i> / Verbenaceae	Bark, stem and whole plant	[28]
China			
45.	<i>Glycosmis pentaphylla</i> / Rutaceae	Infusion ofleaves	[6]
46.	<i>Litsea glutinosa</i> / Lauraceae	Leaves infusion	[6, 7, 8, 29, 30]
47.	<i>Baliospermum montanum</i> / Euphorbiaceae	Roots	[6]
Africa			
48.	<i>Boerhaavia diffusa</i> / Nyctaginaceae	Leaves and roots	[6]
49.	<i>Curcuma zedoarea</i> / Zingiberaceae	Rhizomes, leaves	[3,4]
50.	<i>Hedyotis corymbosa</i> / Rubiaceae	Entire plant	[6]
51.	<i>Curculigo orchiodes</i> / Amaryllidaceae	Rhizomes and roots	[6]