Ethnomedicinal Plants

Subjects: Plant Sciences
Contributor: Disha raghuvanshi

Ethnomedicinal plants have a significant role in the lives of people of rural and tribal areas. Thousands of medicinal plant species are used to treat various diseases, including jaundice, and are considered an important therapeutic resource to minimize these diseases. Jaundice (icterus) is a chronic disease that occurs when the amount of bilirubin in the blood increases.

Keywords: : jaundice ; bilirubin ; ethnomedicinal plants ; phytoconstituents ; hepatoprotective

1. Introduction

Himachal Pradesh in the lap of western Himalaya is well-known for its floral diversity, including medicinal plants, which are used since ancient times for the treatment of jaundice. The dependency of human beings on plants is an age-old relationship, which is described as ‘ethnobotany’. Ethnobotany comes from the term ethnology, which means the study of culture, so ethnobotany or ethnobiology is a scientific study of plants and human relationship, which shows plants as a primary source of need. Ethnobotany deals with various aspects in which one of the most popular and common aspect is the study and use of ethnomedicines. Ethnomedicine involves the study of indigenous beliefs, concepts, knowledge, and practices among the ethnic groups of tribal and rural people for preventing, curing, and treating jaundice. For human existence, since ancient times, especially, the ethnic or tribal community has a great dependence on local flora for medicinal and other purposes [1][2]. The traditional medicine system represents the indigenous beliefs, skills, and practices of rural and tribal communities based on their experiences to maintain their health [3]. Traditional medicines play an efficient role in the preparation of herbal drugs for the betterment of people [4]. This system of medicines is used for curing diseases through the employment of agencies and forces of nature. Tribal people have their own system of medicines, which are age-old, and some of which are not documented in the literature. This tradition has been passed on from one generation to the other for treating jaundice. The information on medicinal and various other plants comes from the ancient people when they started learning and making use of these traditional plants for various purposes [5][6].

Medicinal plants are regarded as the gift of nature to humans. Various parts of medicinal plants, including herbs, shrubs, and trees, are used for curing jaundice and diseases like neurodegenerative, inflammatory, anthelmintic, diaphoretic, diuretic, etc. According to WHO (World Health Organization), “medicinal plant is a plant, within which one or more of its part contains the substances, which can be further used for various therapeutic purposes, and serves as a precursor for chemo-pharmaceutical semi-synthesis” [7]. Various bioactive compounds of plants called the secondary metabolites are the reason for their medicinal value and include glycosides, tannins, steroids, alkaloids, terpenoids, essential oils, etc. [8]. Himachal Pradesh is endowed with a rich diversity of plants, which includes 3500 higher plants, and of these, 1500 plants are identified with medicinal and aromatic properties[9]. Because of the geographical position and difficult means of transport and communication, people of some major tribes of Himachal Pradesh (Gaddi, Gujjar, Kinnaura, Lahula, and Pangwals) mostly live in villages and rural areas and belongs to diverse cultures. These people, with their specific traditional knowledge, make use of different medicinal plants for curing jaundice [1]. Medicinal and ethnobotanical uses of different plant species are documented by various researchers or scientists from different areas of Himachal Pradesh based upon the information provided by the local ethnic people [10]. Ethnomedicines have made good contributions in the health care system in traditional medicines for the treatment of jaundice since ancient times. There are two broad categories for the use of medicinal plants; firstly, plants are used traditionally only by local physicians for getting relief from illness, and secondly, the plants are used by pharmaceutical companies for their active ingredients [11]. According to WHO, due to poverty and lack of modern medicines among different rural and tribal areas, it is estimated that about 70–80% of the world’s total population is totally dependent on the local medicinal plants for their primary healthcare system [6].

Ethnomedicinal plants are generally used for curing various ailments like diabetes, dysentery, typhoid, and jaundice. Different parts of the plant, including roots, leaves, fruits, and flowers, are used for the treatment of jaundice. Furthermore, jaundice is not just a disease rather a sign of a disease that occurs in the liver, which indicates impairment of the liver

functioning [12][13]. The foremost ancient literature says that “iecur” is a Latin word that was previously used to describe the term liver [14]. Basically, the term jaundice is taken from the french word “jaune”, which means “yellowness” and is characterized by yellow pigmentation [15]. Pigmentation is generally shown by the skin and eyes. It occurs due to the exceeding level of bilirubin. Bilirubin is synthesized in the body and is a natural product that is produced because of hemolysis through the action of liver cells, which further in the presence of biliverdin reductase leads to the production of bilirubin or unconjugated bilirubin.

2. Conclusion

Ethnomedicinal knowledge is respected by rural people and has been shown to be useful in the treatment of various diseases and the production of medicines in the Western Himalaya from time to time. Traditional or folk-based plant medicines have shown great potential to form the basis of jaundice-curing drugs. The purpose of the present study was to record the ethnomedicinal knowledge of plants used for the treatment of jaundice by the rural and tribal communities of Himachal Pradesh in western Himalaya. The other aims of this research were to discuss the different important phytochemicals and active compounds present in these plants and to discuss the different in vivo studies performed in support of their medicinal uses, with specific reference to the treatment of jaundice. The outcome of this research showed that the rural people of Himachal Pradesh used 87 different plant species with 51 different families to treat jaundice and contribute to healthcare. These plants demonstrated the presence of several phytochemicals in them and displayed phenolic and flavonoid compounds with hepatoprotective properties in most of the experimental studies (in vivo) performed with these plants. With antioxidant potential, the phenolic and flavonoid compounds are recognized, and due to this property, these plants have been shown to be important in curing jaundice. *Aloe vera*, *Bauhinia variegata*, *Berberis aristata*, *Emblica officinalis,* and *Terminalia chebula* are some of these herbs, which suggest the ethnopharmacological approach to treating jaundice with the hepatoprotective operation.

There is a lot of knowledge in the latest literature on the use of various plants for treating jaundice. Nevertheless, very few studies are carried out on the scientific validation of medicinal plants by means of biochemical, clinical, and pharmacological screening to validate the jaundice healing folklore medicine. In the future, it is, therefore, very important to pursue steps that do not deviate from shifting the view of tribal people toward their indigenous belief in the treatment of jaundice to develop successful drugs or to discover new potential sources of drugs. In addition, nano-formulation of plant extracts also improves their therapeutic significance [16][17], and it is also possible to use nano-formulation of herbal plants as an alternative and refining conventional knowledge for the potential cure of jaundice.

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