WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 6.805
Volume 5, Issue 8, 472-477. Review Article ISSN 2277– 7105

DIOSPYROS CORDIFOLIA ROXB.- AN UNDER EXPLOITED POTENT ETHNOMEDICINAL FEED- A REVIEW

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Article Received on
02 June 2016,
Revised on 23 June 2016,
Accepted on 14 July 2016
DOI: 10.20959/wjpr20168-6769

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ABSTRACT

Man is essentially a product of nature, and he can best maintain health by living in harmony with nature. Disease results when this harmony and balance is upset. While modern medicine places more importance on treatment. Herbalists respect the body and try to help it heal itself. Herbalists believe that the body holds inherent self-correcting tendencies to heal. Herbs are perceived as acting in synergy with the body to effect improvement and sometimes even cure. Due to the above facts we have taken this plant for it utility as a home remedy. The review of available literature reveals that *Diospyros cordifolia* Roxb. locally known as Tendu belongs to Ebenaceae is of great use for human beings. It has commercial value being used in Bidi industry as a raw material. Leaves are being used in stupefying fishes. It is being used in several ailments either as a cure or for the well being viz used for lever disorder, whooping cough. leprosy, skin eruption, dysentry, eye infection, abdomenal pain, wounds, ulcers, gonorrhea, fever, as emetic and anti helmintic. Alcoholic extract are anti inflammatory, anti pyretic and analgesic. It is depressant, spasmolytic producing brady cardia and hypotension. Aquous extract is being used in critical jaundicised condition. The fruits are consumed because of its juicy and sweet nature of local inhabitants.

KEYWORD: *Diospyros cordifolia,* Ethnomedicinal, Hepatoprotective, Bidi industry.

INTRODUCTION

We can not survive without plants. We depend on plants for food: directly in the form of grains, roots and tubers, fruits, vegetables, spices, oil and beverages. Much of our food also comes indirectly form plants. We get our meat and milk from animals that are dependent on plants for food. Plants provide fuel, either as firewood or in the form of fossil fuel, to cook

our food, keep us warm, run our machinery and light up our homes and cities. We also depend on trees for construction materials to build our houses and to craft our furniture. From cotton and flax we get fibres for our clothes. Plant dyes colour our clothes, at least before synthetic dyes were developed. In cities and towns, trees provide shade and shelter, and their flowers brighten the surroundings, Plants in parks and gardens contribute to the serene and peaceful environment, making such places favourite retreats (Chin, 2005).

Our interactions with plants and animals go back to prehistoric days when early man used his wits to survive in a hostile environment. first and foremost, he had to feed himself and his family. He had to distinguish which plants were safe to eat from those that were non-edible and poisonous. The behaviour of animals naturally provided many hints. However, what is edible to an animal is not necessarily safe for humans. Thus early man probably tried the non-edible and the poisonous in his quest for food and also encountered plants that caused strange and wonderful sensations, sometimes accompanied by colourful visions.

By trial and error he learned which plants were palatable and edible. These were eaten either raw or cooked. those that were poisonous or caused undesirable and strange reactions were avoided. As his familiarity with plants increased, he naturally identified those that could sooth or heal wounds and those that could cure illnesses.

This knowledge served him well in his search for food to satisfy his hunger, medicine to heal his wounds or ease his pains, hallucinogenic drugs for his religious rituals and poisons to assist him in his hunt for wild animals for food.

Such knowledge was painstakingly passed on from generation to generation database of valuable information of the plants around him. It is natural to assume that certain members of the tribe were gradually entrusted with such knowledge. These were variously known as shamans, bomohs, healers or witchdoctors. As communications between settlements was then poor, it is likely that such knowledge developed independently in different locations (Chin, 2005).

India has tremendous wealth of medicinal plants. But unfortunately, there is a lack of systematic efforts to explore and exploit this valuable potential except some sporadic attempts by a few institutions. One of the greatest difficulties confronting the research workers is the paucity of authentic informations on the identity, their distribution and

availability, and the use of medicinal plants. Medicinal plants mainly used in the preparations of Unani and Ayurvedic medicine, also prescribed by practitioners of traditional medicine in different parts of the country and others are used as household remedies by the common people.

In view of the growing interest in traditional medicine all over the world, this present review of *Diospyros cordifoia* has undertaken to collect widely disperesed data from different letratures.

Diospyros cordifolia Roxb also known as *Diospyros montana* Clarke in Hook. F.; *Diospyros montana* Roxb. var. *cordifolia* (Roxb.) Heirn locally named as Tendu, Bangab, Tomal, Mohesh Kanda, Kendu etc. belongs to family Ebenaceae.

It is a large shrub or small deciduous tree popularly known as Indian ebony ie., hard black wood of tropical trees. Leaves ovate- oblong, ovate lanceolate, acute, base cordate or rounded, hirsute on both surfaces. Male flowers 1 cm long pale-white in axillary cymes, female flowers 1.3 cm long, solitary, nodding. Fruits globose, yellow at maturity upto 2.5 cm. acrow. It is common on waste land and along road sides. Phenology-March-May & June-September (Saini, 2005) .It is also grown as natural wild in the forest and marginal lands of Waste Bengal, Madhya Pradesh, Orisa, Bihar, Chhattisgarh, Jharkhand, Uttar Pradesh & Andhra Pradesh (Roy *et al*., 2016). It is also planted in the Hindu tamples and shrines through out the country (Uddin, 2013).

All the plant parts like leaves, fruits, seeds and bark can be used for different commercial purposes. The leaves are used as raw material of the "Bidi" industry. The West Bengal Tribal Development Co-operative Corporation Limited (WBTDCC) has given top priority in this regard (Roy *et al*., 2016).

The leaves contain betulin, diospyrin, epiuvaol and a new triterpene characterized as urs-12en-3a, 28-diol, along with lupeol, sitosterol, bita-sitosterol, stigmasterol and betulic acid. The crushed leaves are used as fish poison to stupefying fishes.

The plant is of great medicinal importance used for liver dis orders, whooping cough, leprosy, skin eruption, dysentery, eye infection, abdomenal pains, wounds, ulcers, gonorrhea, fever, as emetic and ant helmintie Nadakarni,1954; Chopra *et al.*,1956, The alcohlic extract of the plant possesses anti inflammatory, antipyretic and analgesic activity (Kohli *et a.*,1972).

C N S depressant, spasmolytic, produces braby cardia and hypotenstion (Singh *et al*.,1971). The aquous extract of the stem bark is traditionally used by the tribal people 'Soligas of Biligiri Ranga Hill Range to cure critical jaundicised condition (Krishna,1996).

The lilterature survey indicate that no systemic studies have been carried out on the clinical evaluation of different ethnomedicinal uses (Mankani *et al.,2006).*

The fruits consumed by the local inhabitants are good source of corbohydrate, calcium, phosphorus and carotenes and as a result it can prevent malnutrition and it can not only provide nutritional security but can uplift the socio economic condition of the poor in habitations. (Roy *et al*.,2016). The fruit pulp contains fatty esters of a-amyrin, ursolic and oleanolic acids; also contains bita-sitosterol, lupeol and betulinic acid. Seeds contain betulinic acid and 1.5% oil;5 saponifiable fraction of the oil contains palmitic, stearic, oleic and linoleic acid and unsaponified fraction contains lupeol, bita-sitosterol and stigmasterol (Rastogi and Mahrotra, 1993).

The fruits are applied to boils appear on hands with much pain. Various parts of the plant is used in fever, dysuria, gravel, neuralgia, pleurisy, pneumonia, menorrhagia and flooding puerperal fever, diarrhoea and poisions spides bite (Yusuf *et al*., 2009).

Bark and wood contains 7-methyljuglone, mamegakinone, bitramentacenone, isodiospyrin, diosptyrin 8'-hyroxydiospyrin, 3,5'-O-cyclodiospyrin, 3'-chlora-2'-hydroxydiospyrin (artifact), chromenone ester and chromenone acid, allobetulin and oxyallobetulin. Tetrahydrodiospyrin also have been isolate from bark. The bark extract is significant anti-inflammatory, antipyretic and analgesic; the alcohlic extract in hibits *Ehrlich ascites* careinoma in mise (Asolkar *et al*.,1992).

The hepato protective effects of the triterpenes isolated from the stem bark and flowering twig of *Diospyros cordifolia* was screened on male Wister strain rats against carbon tetrachloride induced toxie hepatitis (Mankani *et al*.,2006). The stem bark and the flowering twigs were coltected and drived in shade and powered mechanically. The dried powder was extracted with hot petroleum ether for 48 hrs. The extract so obtained was concentrated in vacuum using rotary flask evaporator. The constituent ursolic acid was Isolated from the petroleum ether extract following (Chandra and Sashrtry,1989) where as the other two constituent lupeol and betulnie were islated and characterisied from petroleum ether extract

following (Kapil and Dhar,1989). The identity of the compounds were confirmed by the IR, HNMR and Mass spectral studies. Oral suspension contaning 10 mg per ml. of each active contituents viz ursolic acid, lupeol and betulin were prepared in 1% gum tragacanth among the isloted constituents of *Diospiros cordifolia* stem bark and flowering twig, ursolic acid was found to be highly in preventing the toxic effect of carbon tetra chloride where as the therapeutic efficacy was less animals treated with lupeol and betulin.

CONCLUSION

The plant is a nutirimental, of commercial, industrial use and potent ethnomedicinal uses not only for a cure but also being used towards a state of wellness and improved health and as a result person is likely to have a fewer chances of being ill. In several literature the fruits are being shown as poisonous but we have consulted more then a dozen persons who are inhabitants in and around the forest of Bahraich, Shravasti and Katarniyaghat Wild Life sanctuary and have been informed that that consume the fruit of Tendu upto full stomach when it is available in season ie, June to September. The fruit is much juicy and sweet.

ACKNOWLEDGEMENTS

Author is thankful to all the local knowledge holders who helped in one way or the other.The thanks are also to the Principal Kisan PG College, Bahraich for facilities.

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