



Review Article

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Medicinal importance of *Darbha*- A review

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ABSTRACT

Darbha is an important medicinal plant which has been used in Indian system of medicine since antiquity for the treatment of various ailments. There is enormous controversy between *Kusha* and *Darbha* in Ayurveda literature. Though the synonyms, actions and indications of *Kusha*, *Darbha* are mentioned together in different texts, the most of the *Nighantus* accepted both *Kusha* and *Darbha* as two different varieties and mentioned as synonyms for each other. Present study aimed to extensive review on the drug from Ayurveda as well as modern points of views. The review shows in spite of great controversy for botanical identity of this plant, most of the authors has considered *Darbha* as *Imperata cylindrica* Beauv., belongs to family Graminae. It contains various active principles like Cylindrine, Arundoin, Fermenol, Isoarborinol, Semiarenol, Cylindol A & B Gramenone A & B, Imperanene etc. On The basis of experimental and clinical studies conducted in various research centers, the drug possess various properties like diuretic, tonic, antipyretic, sedative, astringent, antiviral, vasodilator, vascular smooth muscle contraction inhibitory, plate late aggregation inhibitory properties and useful in hypertension, calculi, snake bite, thirst, gonorrhoea, jaundice, diseases of blood, bladder and skin. Study may provide the scope of further research in different pharmacological area of this important medicinal plant.

Keywords: *Darbha*, *Kusha*, *Imperata cylindrical*, Plant.

INTRODUCTION

Darbha is an important plant which has been used in Indian system of medicine since antiquity for the treatment of various ailments like *mutrakriccha* (urinary incontinence), *mutraghata* (urinary obstruction), *ashmari* (calculi) etc^[1]. Literally and botanically there is some controversy regarding the proper identity of this well known drug. In *Vedic* and *Samhita* period both *Darbha* and *Kusha* were recognized as two separate drugs, because in several places both have been mentioned together^[2]. This also indicates these two drugs have certain similar properties, actions and indications. On the basis of these similarities and morphological appearance, the later texts of Ayurveda have mentioned both *Darbha* and *Kusha* as synonyms for each other, which is the main origin of controversy among these two drugs. In some places of *Ashtanga Hridaya* we may find the words like *Kushdvaya* and *Dvidarbha*^[3,4] which indicates that two types of *Kusha* and two types *Darbha* were mentioned in *Astanga Hridaya* without differentiation between *Kusha* and *Darbha*. Lexicons like *Amarkosha* (2/2/166) and *Sivakosha* (44, 94, and 403) has accepted *Kusha* and *Darbha* are synonyms^[5,6]. Commentators like Arundutta (A.H.Su-25/24,25), Indu (A.S.K. 4/24;8/2), Adhmalla and Kashiram has considered both *Darbha* and *Kusha* as two varieties, while Hemadri (A.H.Su. 6/171) equates *Darbha* as *Kusha*^[7]. Dalhana, commentator of *Sushruta Samhita* and the field botanist of Ayurveda, clearly differentiates *Darbha* and *Kusha* as follows. *Kusha* is small, soft and has leaves like needle (young shoots) while *Darbha* is thicker with scabrid and longer leaves (S.S.Su.35/75). He also mentioned *Darbha* and *Kusha* as synonyms (S.S.Su 38/8)^[8]. Through the synonyms, actions and indications of *Kusha*, *darbha* are mentioned together the most of the *Nighantus* accepted both *Kusha* and *Darbha* as two different varieties and mentioned as synonyms for each other. Regarding the botanical source of these plants there is a great confusion. Many contemporary authors including Dymock (1893), Desai (1927), Kirtikar and Basu (1933), Nadakarni (1954) and Chopra (1958) have mentioned only one name i.e. *Desmostachia bipinnata* Stapf. for both of the drug, while others like Bappalal (1928), Yadavji (1950), Sharma (1956), Chunekar (1968) and Singh (1972) has opined that *Darbha* is a large and more scabrid variety of *Kusha*^[9-13]. On further literary survey many authors like Gupta (1914), Dutta(1922), Majumdar (1927), Biswas (1952), Monier Williams (1899), Watt (1890), Sharma P.V.& Chunekar K.C. (1975) and Dubey S.D. (1985) have mentioned *Imperata cylindrical* Beauv. as *Darbha*^[14-20].

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VEDIC PERIOD^[21]: Vedas are the primitive source of knowledge regarding the plants. The *Oshadhisukta* (10/47/1-23) of *Rigveda* is the oldest document of plants in which the morphology, habitat, classification and usage of medicinal plants were described including their mechanism of action. In the *Atharvaveda* (1500BC) we come across a more advanced picture of the status of medicinal plants. In *Vedic* literature both *Rigveda* (1/191/3) and *Atharvaveda* (Shaunakiya and Paippalada) we may find the extensive descriptions of *Darbha* regarding the origin, habitat, synonyms, properties and indications. In *Shaunakiya Atharvaveda*, *Darbha* is described as an aquatic, Devine grass and considered as the essence of *Oshadhies* (medicines). It was originated as a pure drop of fine gold at the time when the ocean resounded, when the clouds murmured and lightening flashed (S.A.S. 19/30/5). The plant grows mostly in coastal regions through its rich and extensive branched roots (S.A.S. 6/43/1-2). The morphology and properties of the plants described in the form of synonyms as

Bhurimula (bunch of root), *shatakanda* (hundreds rhizome), *Sahasraparna* (thousand leaves). *Darbhashthambha* (erect plant), *Vedatrina* (grass of *veda*), *Acchidraparna* (intact leaves), *Dushchyavana* (hard stem), *Sahamana*, *Sahasya* (beautiful flower), *Sahasraravshagru* (continue to exist), *Sahasravirya* (excellent potency), *Atishayaviryavan* (high-quality), *Ugrausadhi* (aromatic smell) (S.A.S.6/43/1-2; 19/32/1; 19/30/05 and *Satapathabrahmana* 3/2/3/1). *Darbha* is considered as best drug for non oozing disorders and beneficial for longevity, headache, *Jalodar*, Snake & Scorpion poison and prevention of wickedness, ageing and death (S.A.S. 8/7/20; 10/4/2, 13; 11/6/15)

DARBHA IN BRIHATRAYEE^[22-24]: *Brihatrayee* consist of *Charaka Samhita*, *Sushruta Samhita* and *Astanga hridaya*. In these texts classification, formulations, actions and indications of *Darbha* have been described in various places which have been reviewed here in a tabular form as below.

Table 1: Therapeutic uses of *Darbha* in *Brihatrayee*

S. No.	Group/Formulation	Action/ Uses	References
	<i>Charaka Samhita</i>		
1.	<i>Stanyajanan mahakashaya</i>	<i>Stayajana</i>	C.S.Su. 4/17
2.	<i>Mutravirechaniya mahakashaya</i>	<i>Mutravirechana</i>	C.S.Su.4/35
3.	<i>Madhur skandha</i>	<i>Vata,Pitta disorders</i>	C.S.V.8/139
4.	<i>Brahma rasayana</i>	<i>Dirghayu</i>	C.S.Ci.1-1/44
5.	<i>Candanaditaila</i>	<i>Jwara, Daha</i>	C.S.Ci.3/258
6.	<i>Shwadamshtadi ghrta</i>	<i>Mutrakricchra</i>	C.S.Ci.11/44
7.	<i>Punarnavadi yoga</i>	<i>Ashmari, prameha</i>	C.S.Ci.26/63
8.	<i>Mahapadma taila</i>	<i>Vatarakta, Jwara</i>	C.S.Ci.29/109
9.	<i>Basti (piccha, anuasana)</i>	<i>Jivadaniya</i>	C.S.Si.6/83
10.	<i>Basti</i>	<i>Marmaghata, Dahanashamaka</i>	C.S.Si.9/8 C.S.Si.10/33
	<i>Sushruta samhita</i>		
11.	<i>Upanayaniya dravaya</i>	<i>Upanayana</i>	S.S.Su. 2/4
12.	<i>Varunadigana</i>	<i>Vidhradi</i>	S.S.Su.38/10
13.	<i>Viratarvadigana</i>	<i>Mutrakricchra,mutraghata</i>	S.S.Su.38/12
14.	<i>Trinapanchamula</i>	<i>Mutradosha,rakta pitta</i>	S.S.Su. 38/75
15.	<i>Ritukalanyamopayoga</i>	<i>Ritukala</i>	S.S.Su. 2/27
16.	<i>Medicated milk</i>	<i>Mutra sanga</i>	S.S.Su. 10/61
17.	<i>Medicated ghee</i>	<i>Pittabhishyanda</i>	S.S.Su. 10/4
18.	<i>Baladi kwatha</i>	<i>Vatajwara</i>	S.S.U.39/170
19.	<i>Medicated watha</i>	<i>Kaphaja, Trishna</i>	S.S.U.48/22
20.	<i>Vatadi kshira</i>	<i>Mutradosha</i>	S.S.U.58/47
21.	<i>Phalgvadi-yoga</i>	<i>Sannipataja mutrakricchra</i>	S.S.U.59/25.

	Astanga Hridaya:		
22.	<i>Trinapanchamula</i>	<i>Pitta nashaka</i>	A.H.Su.6/171
23.	<i>Varunadi gana</i>	<i>Gulma, vidardi</i>	A.H.Su.15/21
24.	<i>Viratarvadi gana</i>	<i>Mutrakrcchra, mutraghata</i>	A.H.Su.15/24
25.		<i>Ritucharya</i>	A.H.Su.22/20
26.		<i>Trishna</i>	A.H.Chi.6/62,73
27.	<i>Shvadamshtadi ghita</i>	<i>Mutrakricchra,prameha</i>	A.H.Ci.3/102
28.	<i>Prameha pathyadravya</i>	<i>Prameha</i>	A.H.Ci.12/24
29.	<i>Sukumara taila</i>	<i>Vardhma etc.</i>	A.H.Ci.13/42
30.	<i>Baladi kwath</i>	<i>Shula</i>	A.H.Ci.14/50
31.		<i>Gulma</i>	A.H.K.2/53
32.	<i>Pranarakshaniya drugs</i>	<i>Trishna</i>	A.H.K.2/37
33.	<i>Amalakirassayana</i>	<i>Dirghayu, medha etc.</i>	A.H.U.39/29

Abbreviation: C.S- Charak Samhita, S.S-Sushruta Samhita, A.H-Astanga Hridaya, Su-Sutrasthan, Si-Siddhisthan, K-Kalpasthan, Ci-Chikitsasthan, V-Vimana Sthan, U- Uttartantra

DARBHA IN OTHERS CLASSICAL TEXT^[25-27]: *Chakradutta, Sharangadhara Samhita* and *Bhavaprakasha* are the most popular *samhitas* in Ayurveda in the treatment points of view. In several places of these texts various herbal and herbomineral preparations of *Darbha*

has been depicted including their vehicle, regimen and mode of administration for the treatment of various kinds of diseases on the basis of etiopathogenesis.

Table 2: *Darbha* in others classical text

S. No.	Group/Formulation	Actions /Uses	References
	Chakra data		
1.	<i>Bilwadi Kvatha</i>	<i>Kaphaja trishna</i>	C. D. 16/9
2.	<i>Shvadamshtadi ghrita</i>	<i>hridroga,mutrakricchra</i>	C. D. 31/21
3.	<i>Trinodbhavapanchamula</i>	<i>Pittaja mutrakricchra,haematuria</i>	C.D. 32/4,5
4.	<i>Trikantakadi Kwatha</i>	<i>terrible mutrakricchra</i>	C. D. 32/22
5.	<i>Sukumara ghrta</i>	<i>rasayana ,mutrakricchra</i>	C. D. 32/29
6.	<i>Viratarvadi gana</i>	<i>vatavikar, ashmari,</i>	C. D. 34/2
7.	<i>Kushadi ghrita</i>	<i>Pittaja ashmari</i>	C. D. 34/14
8.	<i>Varunadi ghna</i>	<i>Kapha& medovikara, headach Gulma,internal abscess.</i>	C. D. 34/23
9.	<i>Sharapancamuladi ghrita</i>	<i>ashmari, mutuiakrcchra</i>	C. D. 34/40
	Sharangadhara Samhita:		
10.	<i>Vuratarvadujyatta</i>	<i>Asgnari Mutraghata</i>	S. D.2/104
	Bhavaprakasha.		
11.	<i>Trinodbhava panchamula</i>	<i>Pittaja mutriakricchra, basti shodhana</i>	B.P.35/17
12.	<i>Trikantakadi yoga</i>	<i>ashmari, mutrakricchra</i>	B.P.35/18
13.	<i>Trinapanchamula</i>	<i>mutrakricchra in pregnancy etc.</i>	B.P.3/4236,37;37/55
14.	<i>Vidarighrita</i>	<i>Mutraghata hridroga,Gulma</i>	B.P.36/49
15.	<i>Kushadighrita</i>	<i>Pittashmari</i>	B.P.37/22
16.	<i>Varunadigana</i>	<i>Kaphameda hara, gulma & Internal abscess</i>	B.P.37/32

17.	<i>Kushaditaila</i>	<i>Pradara, Yonishula, shukradosha, Vandhya nashana</i>	<i>B.P.37/59</i>
18.	<i>Gokshuradichurna gutika</i>	<i>All types of prameha shotha & arsas</i>	<i>B.P.38/82</i>
19	<i>Kushadiyoga</i>	<i>Complication of garbhapata</i>	<i>B.P.70/79</i>

Abbreviation: C.D.-Chakradutta, S.D.-Sharangadhar Samhita, B.P.-Bhavprakash

DARBHA IN NIGHANTUS ^[28-40]: A Physician without the knowledge of *Nighantus*, A scholar without the knowledge of grammar and a soldier without the knowledge of weapon all are being laughed at in the world (Narahari 17th Century A.D). The Etymological meaning of the word *Nighantu* is which shines of looks beautiful (*Shabda Kalpadruma*). *Nighantu* is a special kind of work in which synonyms of similar

meanings are collectively described (*Vachaspathyam* vol.V). In *nighantus* the morphological, pharmacological and therapeutically aspects of the medicinal plants have been described through the synonyms. In this connection some important, relevant synonyms, properties and indications of *darbha* mentioned in various *nighantus* has been reviewed here.

Table 3: *Darbha* mentioned in various *nighantus*

Synonym	<i>Nighantus</i>
<i>Barhi</i>	<i>B.N., D.N., K.N., M.P., N.S., P.R., S.G., S.N.</i>
<i>Brahma Pavitra</i>	<i>R.N.</i>
<i>Dirghapatra</i>	<i>B.P., R.N., S.G.</i>
<i>Hrasva darbha</i>	<i>K.D.</i>
<i>Kharacchada</i>	<i>P.R</i>
<i>Khara darbha</i>	<i>D.N., K.D.</i>
<i>Ksudra Kusha</i>	<i>H.D.</i>
<i>Kshura Patra</i>	<i>B.N</i>
<i>Kusha</i>	<i>A.K., A.N., D.N., N.S., S.N. H.D., M.P., K.D., B.P., S.G., S.K.</i>
<i>Kutha</i>	<i>A.K., N.S.</i>
<i>Lava</i>	<i>A.N., K.D.</i>
<i>Munishashtra</i>	<i>K.D.</i>
<i>Mrdu darbha</i>	<i>A.R., S.N., D.N., K.D.</i>
<i>Paviraka</i>	<i>A.K., N.S, K.D., R.N., S.K.</i>
<i>Prthula</i>	<i>D.N., S.N.</i>
<i>Punyatma</i>	<i>R.N.</i>
<i>Putatma</i>	<i>R.N.</i>

Abbreviation: A.K-Amarkosha, A.N-Astanga *Nighantu*, D.N- Dhnavantari *Nighantu*, N.S-Nighantu sesh, S.N- Sodhala *Nighantu*, H.D-Hridayadipaka *Nighantu* M.P-Madanapala *Nighantu*. K.D-Kaidev *Nighantu*, B.P- Bhavprakash *Nighantu*. S.G- Shaligram *Nighantu*, R.N-Raj *Nighantu*. P.R-Paryayaratnamala.S.K-Shivkosha.

Table 4: Properties, actions and indications of *Darbha* described in *Nighantus*

<i>Nighantu</i>	<i>Rasa</i>	<i>Guna</i>	<i>Vipaka</i>	<i>Virya</i>	<i>Prabhava/</i>	<i>Effect on dosha</i>	<i>Indications</i>	<i>Ref./Group</i>
A.N.	-	-	-	-	<i>Agni dipana</i>	K	<i>Shirahshula</i>	<i>Varunadigana, 9-96</i>
A.R.	<i>Madhura</i>	-	<i>Madhura</i>	-	-	-	-	<i>Madhura skandha, 1/28</i>
B.N.	<i>Madhura Kashaya</i>	-	<i>Madhura</i>	<i>Shita</i>	-	VPK	<i>Mutrakriccha Ashmari</i>	<i>Guducyadi varga, 165-166</i>
D.N.	-	-	-	<i>Shita</i>	-	RP	<i>Mutrakriccha</i>	<i>Mishrakadivarga, 7/18</i>
K.N.	<i>Madhura Kashaya</i>	<i>Snigdha</i>	<i>Madhura</i>	<i>Shita</i>	-	KP	<i>Daha Rakta Pitta</i>	<i>Aushadhi Varga, 77, 123-1241</i>
M.P.	-	-	-	-	-	PK	<i>Vasti roga</i>	<i>Abhayadivarga, 1/338</i>
R.N.	<i>Madhura</i>	-	<i>Madhura</i>	<i>Shita</i>	<i>Ruchivardhak</i>	P	<i>Shosha</i>	<i>Shatyadi varga, 91-94</i>
S.G.	<i>Madhura Kashaya</i>	<i>Sbugdga</i>	<i>Madhura</i>	<i>Shita</i>	<i>Garbhasthapak, Shukra&Rakta Shodhan</i>	K P	<i>Kamala Murcha Rakta Petta Pradara</i>	<i>Guducyadi varga, P.368-370</i>
S.P.	-	-	-	-	-	KP	-	<i>Kapha pittaghna varga, 101-106</i>

Abbreviation: K-Kapha, P-Pitta, V-Vata.

TAXONOMICAL POSITION OF *Imperat cylindrica* Beauv (DARBHA)^[441]:

Kingdom	-	Plant Kingdom
Group	-	Phanerogames
Sub group	-	Monocotyledons
Order	-	Glumiflorae
Family	-	Poaceae (Gramineae)
Genus	-	Imperata
Species	-	Eylindrica
Latin name	-	<i>Imperat cylindrica</i> Beauv.
Synonyms	-	<i>Imperata arundonacea</i> Cyr. <i>Saccarum cylindricum</i> Lamk.

BOTANICAL DESCRIPTION OF *Imperat cylindrica* Beauv (DARBHA)^[42-43]:

Distribution and Habitat: It is distributed throughout the tropical and temperate regions of the world. It is common in tropical Africa, Southern Europe and eastwards to Turkistan, Afghanistan India, Ceylon, Malaya, Jawa, Japan and Australia. In India, it is found throughout the hotter parts, both in plains and hills, ascending up to 2,300 mm. in the Himalayas. It grows gregariously in lower swampy grounds, water-logged area, bunds of rice fields and sides of irrigation of channels. It is essentially a light loving plant, growing in open spaces. The grass is often found in association with *Saccarum munja* Roxb. (Shara) and *Erianthus revennae* Beauv. The grass spreads rapidly by root stocks. The seeds which are very light are car ride by wind to new situations. Once established, the grass multiplies rapidly by root-stocks. The savannah form flowers are found in the hot season, the swamp form at the close of the rains or in cold season and the depauperate form irregularly almost throughout the year.

Morphology: A very variable, tufted perennial grass with rhizomatic underground parts; Rhizomes white, somewhat succulent, branched, extensively creeping, scaly; Culms erect, ranging from, filiform, dwarf forms 7.5-10 cm. high to stout, robust forms about 2.8m. tall and 8mm. in diameter; leaves variable, very short to 1.5m. long, erect, linear to liner-lanceolate, Flat, narrowed towards the base, tapering to an acuminate tip, scabrid on the margin (cutting margins), covered with white villae at the base; sheaths rather loose, glabrous or slightly pubescent, longer than the internodes; Inflorescence a silvery white, silky, dense, cylindrical, cylindrical. Narrow plume –like panicle with many branches and spikelet, with white ring of minute hairs on the node, easily recognized when the purple stigmas are emerging from the sides of the spikelet which are of most concealed by the hairs from the callus. The size of the panicle is variable (2.5 to 22.5 cm. or rarely up to 75 cm. in length) but the spikelets are similar in structure. Spikelets are lanceolate in shape, 2-flowered, lower floret barren and upper hermaphrodite; callus hairs soft, white 2-3 times as long as the spikelets. Lowerglume lanceolate, membranous, slightly thickened at the base, apex hyaline, 3-9 nerved, margins incurved, dorsally villous with soft white hairs, 1 ½-3 times the length of the glume. Upper glumes are similar to the lower one. Lower florets are empty; Lemma oblong, hyaline, nerveless, apex acute of toothed, ciliate. Upper floret hermaphrodite; lemma ovate –lanceolate, hyaline, nerveless; Palea rectangular or oblong, 1.5-3 mm. long Anthers 2, 2.5-3mm. long, orange; stigma 2,3-4mm. long, purple Grains (Caryopsis) small, elliptic to oblong, brown, light and loose.

PROPERTIES, ACTIONS AND USES ^[44-45]: *Darbha* is a holy grass and used in religious and sacrificial ceremonies, Roots are sweet, cooling, oleaginous, diuretic and aphrodisiac and indicated in the disease of blood and bladder, dysentery, gonorrhoea, biliousness, asthma, thirst, strangury, jaundice, vaginal discharges, menorrhagia, vesicle calculi, skin eruptions, vomiting, sedative to pregnant uterus. Culms are considered as diuretic and used in dysentery and menorrhagia. The grass has been tried as a raw material for paper manufacture and used

for thatching and rope making. It is mentioned that cattle don't like the grass, buffalos eat tender leaves in the absence of other grasses, It can be used as fodder in mixture with grass and wheat.

Parts used – root, rhizome and leaves.

PHYTOCHEMICAL REVIEW ^[46-48]: Phytochemical analysis of dry tender grass of *I. Cylindrica* provides the following values: crude protein 6.56 %; ash value 7.92%; calcium 0.39%; nitrogen 1.05%; and phosphorus 0.22%; starch equivalent 10.7; and digestible protein. 0.8 lb./100lb. Nitrogen balance is negative it is reported to be a good source of vitamins A&C. Analysis of dry rhizomes furnished the following values : Total sugar 22.5%; reducing sugar 9.20%; and invert sugar 12.45% (wealth of India. V.1959). Ram P .Rastogi et al. (1993) isolated five triterpenoids from *I. Cylindrica* and designated as cylindrine Arundoin. Fermentol. Isoarborinol and Semiarenol. Matsunaga K. et al. (1994) studied the chemical constituents of *I. cylindrica* also investigated and isolated novel Phenolic compound.

PHARMACOLOGICAL REVIEW: In feeding experiments on young and adult animals, the drug showed the result of acidic urine and acidosis (wealth of India, 1959). The experimental results of *Trinapancamula* showed both preventive and curative action on urolithiasis in rats. In clinical trial conducted on 34 patients, 4 patients passed stone within one month of treatment, 23 patients had symptomatic relief, 4 remained unchanged and 2 patients did not come for follow up ^[49]. Yubang X et al. (1979) have reported the drug *Imperata cylindrica* along with other 10 herbal drugs showed potency against the Yunnan snake bite to mice prior to lethal injection of *Naja naja* or Agki –strodon holys ^[50]. Dubey, S.D. et al. (1985) have been studied the pharmacology of *I. cylindrica* in experimental albino rats and reported to have significant diuretic, natriuretic and Kaluretic actions. Lim–Sylvianco, C.y et al. (1988) have reported that, the expressions from twenty plants like *Imperata cylindrica*, *Ricinus communis* etc. obtained from quinapo market, were found to reduce the genotoxicity of mutacarcinogen, methylmethane ^[51]. Certain extracts of flowers of Manzanilla (*Chrysanthemum indicum*) and Kogon (*Imperata cylindrica*) were prepared and tested on 48 mice for sedative effects by using the modified Hippocratic behavioral observation method. The 20 percent and 10 percent normal salt solutions of alcohol free extract concentrates of fresh and dried Kogon flowers were more effective than corresponding preparations of Manzanilla. The potency of kogon (*I. cylindrica*) Preparations were comparable to that of phenobarbitone sodium except they were short –acting when given through intra-peritoneal. However the orally administered decoctions of fresh and dried flowers and normal salt solutions of alcohol free extracts of both plants exhibited similar results with that of phenobarbitone sodium ^[52]. Asolkar, et al. (1992) have been reported that, In China, rhizome, root and flower of *I. cylindrica* is used as diuretic, tonic, astringent, antipyretic and antiviral. Dona, D. Det al. (1992) have been assessed the diuretic effect of four traditional Vietnamese herbal remedies like *I. cylindrica*, *Plantago major* etc. which are claimed to produce diuresis. No influence was recorded for the 12hr and 24hr. urine output or sodium excretion for any of the drugs when tested under standardized conditions in a placebo controlled double blind crossover model ^[53]. Matsunaga, K et al. (1994) have been reported the inhibitory activity on contractions of vascular smooth muscle of *I. cylindrica*; 5-lypoxynose inhibitory activity of cylindol A (1); inhibitory activity on the contraction of the rabbit aorta and vasodilatation activity of Grainone B (2) of *Imperata cylindrica*. The platelet aggregation inhibitory activity of inperenone of *I. cylindrica* has also reported by Matsunaga K. (1995). Mohsen et al. (1995) have been reported the anti-oviposition and insecticidal activity of *Imperata cylindrica*. The anti hypertensive property of *I. cylindrica* has been reported by Murthy A.R., Dubey S.D, &Tripathi K (1997).

CONCLUSION

After the deep analysis of the literature of *Darbha* (*Daab*) from Vedic to current period in Ayurveda and other allied subjects it can be concluded that, *Darbha* is an aquatic, Devine grass. It's having the properties of *madhura*, *kashaya rasa* (sweet and astringent taste), *snigdha*, *laghu guna* (~unctuous and light asset), *madhura vipaka* (~sweet metabolism), *sheeta veerya* (~arctic active potency), *tridosha* (mainly *pitta*) *shamaka* property. The drug possess actions like *Jeevaneeya* (protract longevity), *rasayan* (~antioxidant), *mutral* (diuretic), *agnideepan* (~digestive stimulant), *ruchivardhak* (~appetizer). *garbhasthapak* (~protect pregnancy), *shukra & rakta shodhan* and useful in *mutrakriccha*, *mutrraghata* (~urinary disorder), *ashmari* (calculi), *prameha* (~metabolic syndrome), *daha* (burning sensation), *jawara* (~rise of temperature), *trishna* (thirsting), *arshas* (hemorrhoids), *gulma*(~abdominal tumor), *hridroga* (cardiac disorder), *vata rakta* (~arthritic condition), *rakta pitta* (~bleeding disorder) etc. Botanically *Darbha* is considered as *Imperata cylindrica* Beauv., belongs to family Graminae and contain various active principles like Cylindrine, Arundoin, Fermentol, Isoarborinol, Semiarenol, Cylindol A & B Gramenone A & B, Imperanene etc. On The basis of experimental and clinical studies conducted in various research centers the drug possess diuretic, natriuretic, kaluretic, tonic, antipyretic, sedative, astringent, antiviral, vasodilator, vascular smooth muscle contraction inhibitory, plate late aggregation inhibitory properties and useful in hypertension, calculi, snake bite, thirst, gonorrhoea, jaundice, diseases of blood, bladder and skin etc.

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