

HAEMOSTATIC ACTION OF *DURVA CYNODON DACTYLON* (LINN) PERS**Prakash Sanjay**Lecturer, Department of Dravyaguna, Govt. Ayurvedic College & Hospital, Varanasi,
Uttar Pradesh, India**ABSTRACT**

Durva (*Cynodon dactylon* (Linn.) Pers., Family: Poaceae (Gramineae) is a perennial glabrous grass. It is commonly known as Doob grass or Bermuda grass or Couch grass. It is a cosmopolitan plant. Very commonly found grass, everywhere in country. It is well described in *Charaka Samhita*, *Sushruta Samhita*, *Chikitsa granthas* and *Nighantus*. **Hemostasis** or **haemostasis** is a process which causes bleeding to stop, meaning to keep blood within a damaged blood vessel. *Durva* is having *Laghu*, *Snigdha Guna*, *Madhura*, *Kashaya*, *Tikta*, *Rasa*, *Shita Virya* and *Madhura Vipaka*. By the virtue of above properties it is *Tridosahara*, *kaphavata shamaka*, *raktastambhana*, *krimighna*, *ashmarinashana* and *vedanasthapana*. Due to the presence of bioactive compounds it is anthelmintic, antidysenteric, antidote to poisons, litholytic, diuretic, anti-inflammatory and uterine tonic. It cures itching, sore throat, bronchitis, indigestion, ulcers, boils, psoriasis, inflammations, leprosy, anaemia, leucoderma, elephantiasis, urinary discharges, dyspepsia, burning sensation, colic, piles, bloody discharges from the uterus, internally in cases of menorrhagia, allied menstrual troubles, leucorrhoea, tumours, fractures of the bone is used in general anasarca, cancerous growth, glandular diseases, intermittent fever, obesity, paralysis of different organs, rheumatism, splenic disorders and wounds. This review focuses on the detail botanical description, phytochemical constituents, pharmacodynamics and medicinal uses.

Keywords Ayurveda, *Durva*, *Cynodon dactylon*, *Prajasthapana*, Haemostatic, *Golomi*.

INTRODUCTION

Hemostasis or **haemostasis** is a process which causes bleeding to stop, meaning to keep blood within a damaged blood vessel (the opposite of hemostasis is hemorrhage). It is the first stage of wound healing. This involves blood changing from a liquid to a gel. Intact blood vessels are central to moderating blood's tendency to clot. The endothelial cells of intact vessels prevent blood clotting with a heparin-like molecule and thrombomodulin and prevent platelet aggregation with nitric

oxide and prostacyclin. When endothelial injury occurs, the endothelial cells stop secretion of coagulation and aggregation inhibitors and instead secrete von Willebrand factor, which initiate the maintenance of hemostasis after injury. Hemostasis has three major steps: 1) vasoconstriction, 2) temporary blockage of a break by a platelet plug, and 3) blood coagulation, or formation of a fibrin clot. These processes seal the hole until tissues are repaired. *Durva* (*Cynodon dactylon* (Linn) Pers. is commonly known as

Doob grass or Bermuda grass or Couch grass belonging to the family Poaceae (Gramineae). It is a cosmopolitan plant. Very commonly found grass, everywhere in country. Properties and action of *Durva* are *raktastambhana, krimighna, ashmarinashana and vedanasthapana*. The drug is used for urinary discharges, dyspepsia, burning sensation, colic, piles, bloody discharges from the uterus, internally in cases of menorrhagia, allied menstrual troubles, leucorrhoea, tumours, fractures of the bones, is used in general anasarca, cancerous growth, glandular diseases.

Literature Review

The literary review of the *Durva* was started right from the *Vedas* up to recent research works to obtain thorough knowledge of drug. On comprehensive review of Ayurvedic classics it was found that *Durva* is described in *Vedas, Charaka Samhita, Sushruta Samhita*.

In *Charaka Samhita*, *Durva* is described in *prajasthapana* and *varnya mahakashaya*. To check haemorrhage, juice of grape, sugarcane, *durva*, *yavasa* root, onion, *dadima* flowers and milk should be used as snuff¹. *Durvaghrita* is used in bleeding piles² and promotes wound-healing in *erysipelas*³. *Durva* oil is used for wound-healing⁴. In *Sushruta Samhita*, it is described in intrinsic haemorrhage⁵. *Durva* is mentioned in *Nighantus* also. In *Kaideva Nighantu*, the synonyms, properties of *shvetadurva* are well described and used in *visarpa, daha*⁶. The synonyms and properties of *gandadurva* also described and used in *trishna, kushtha, daha, jvara*⁷. In *Bhavaprakash Nighantu*, *niladurva* is described for the treatment of *visarpa, trishna, daha*⁸. *Shvetadurva* is used in *vrana, visarpa, daha*⁹. In *Raj Nighantu*, it is described as *niladurva* used in *raktapitta,*

*atisara, jvara*¹⁰. *Golomi* is used in *amatisara, kasa, trisha*¹¹. *Maladurva* is used in *trisha*¹². *Durva* is used in *daha, murchha, tripiti*¹³. *Durva* is also mentioned in *Chikitsa Granthas* like *Chakradatta, durvadyalepa* mentioned in *kushtha* (CD.50.20). On taking paste of *durva*, woman gets menstruation (amenorrhoea) (CD.62.25). *Bhavamishra*, in his section *Bhavaprakash, madhyamakhand* mentions *durvadyaghrita* in *raktapitta*¹⁴. In *Gadanigraha*, mentioned as it checks vomiting (GN.2.14.30). In *Vrinda Madhava*, its oil is used in wound-healing (VM.45.28), scabies, eczema (VM.51.135) and paste of *durva* is used in scabies, eczema, worms, ring worm, urticaria (VM.52.6).

Scientific Classification¹⁵

Kingdom	: Plantae
(Unranked)	: Angiosperms
(Unranked)	: Commelinids
Order	: Poales
Family	: Poaceae (Gramineae)
Genus	: <i>Cynodon</i>
Species	: <i>dactylon</i>

Vernacular names

Classical Name:	<i>Durva</i>
Sanskrit name :	<i>Durva, Shataparva, Golomi, Shatavirya.</i>
Hindi	: <i>Dub, Dubarha</i>
English	: Doob Grass
Bengali	: <i>Durva</i>
Punjabi	: <i>Dobda</i>
Arabian	: <i>Usva</i>
Persian	: <i>Marg.</i>
Telugu :	<i>Harvali</i>
Tamil :	<i>Arugampulla</i>

Botanical Description of *Durva*

Durva is a perennial glabrous grass.

Distribution & Habitat

It is a cosmopolitan plant. Very commonly found grass, everywhere in country.

Habit- It is a grass.

Stem- is slender, prostrate, widely creeping, forming matted tufts, with slender erect or ascending flowering branches 7.5-30 cm. high.

Leaves- are 2-10 cm. by 1.25-3 mm. narrowly linear or lanceolate, finely acute to pungent, more or less glaucous, soft, smooth, and usually conspicuously distichous in the barren shoots and at the base of stems, sheaths tight, glabrous or hairy, sometimes bearded at the mouth, ligule a very fine ciliate rim spikes 2-6, radiating from the top of a slender peduncle, 2.5-5 cm. long, green or purplish, rhachis slender, compressed or angled, scaberulous. Spikelets 1.8-2.5 mm. long, rhachilla produced, very slender, equaling half the length of the spikelets.

Invoulcral glumes lanceolate, acute to subla-temucronulate, the lower 1-1.6 mm. long, the upper slightly longer, floral glume obliquely oblong to semiovate, about 2 mm. long. Anthers oblong, 1 mm. long. Grains 1.05 mm. long.

Flowering and fruiting time- is throughout the year.

Phytochemical Constituents of Durva

Plant contains glucose.

Pharmacodynamics

Rasa : Madhura, Kashaya, Tikta

Guna : Laghu, Snigdha

Virya : Shita

Vipaka : Madhura

Doshakarma: Tridoshahara, Kaphapittashamaka.

Medicinal Uses of Durva

The plant is useful as an astringent drug which is generally recommended as a uterine tonic and frequently used in menorrhagia and uterine affections.

The bark is useful as bitter and acrid; it is cooling to the bowels, anthelmintic, antidy-

senteric, antidote to poisons, litholytic, diuretic, anti-inflammatory and uterine tonic. It cures itching, sore throat, bronchitis, indigestion, heaviness, ulcers, boils, psoriasis, inflammations, leprosy, anaemia, leucoderma, elephantiasis-filariasis, urinary discharges, dyspepsia, thirst, burning sensation, diseases of the blood and effect of fatigue, enlargement of abdomen, colic, piles, bloody discharges from the uterus, internally in cases of menorrhagia, allied menstrual troubles, leucorrhoea, tumours, fractures of the bones, strengthens the teeth and dentature, astringent to the bowels, alexiteric, demulcent, emollient, it beautifies the complexion, decoction of the bark-preparation in milk-is orally given as a specific recommendation (asokatvak ksirapaka), besides use of bark in other forms in this kind of menstrual disorders in female patients.

The seeds are useful in urinary discharges, calculus and diuretic.

The flowers are pounded and mixed with water are used for the treatment of haemorrhagic dysentery. The powder of dried flowers given in diabetes.

The bark, flowers and fruits are prescribed in combination with other drugs for the treatment of snake-bite and scorpion-sting.

CONCLUSION

On comprehensive review of Ayurvedic classics it was found that *Durva* is described in *Vedas*, *Charaka Samhita*, *Sushruta Samhita*, various *Nighantus*. *Durva* (*Cynodon dactylon* (Linn) Pers., Family: Poaceae (Gramineae) is a perennial glabrous grass. It is commonly known as Doob grass or Bermuda grass or Couch grass. It is a cosmopolitan plant. Very commonly found grass, everywhere in country., is a traditional Ayurvedic medicine, has been used for centuries as a urinary discharges, dyspepsia,

burning sensation, colic, piles, bloody discharges from the uterus, internally in cases of menorrhagia, allied menstrual troubles, leucorrhoea, tumours, fractures of the bone is used in general anasarca, cancerous growth, glandular diseases. *Durva* is having *Laghu, Snigdha Guna, Madhura, Kashaya, Tikta, Rasa, Shita Virya* and *Madhura Vipaka*. By the virtue of above properties it is *Tridosahara, kaphavatashamaka, raktasambhana*. Doses of *durva* juice is 12-24 gms, 10-20 ml. powder is 1-3gms., decoction is 50-100 gms. Part used is whole plant, leaves and roots. Specific formulations are *Durvadi kvatha, Durvadya ghrita, Durvadya tail and Durvadi lepa*.

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Source of support: Nil
Conflict of interest: None Declared