HAEMOSTATIC ACTION OF DURVA CYNODON DACTYLON (LINN) PERS

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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 Tridoshahara, kaphavatashamaka, 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 It cures itching, sore throat, bronchitis, indigestion, ulcers, boils, psoriasis, inflammations, leprosy, anaemia, leucoderma, elephantiasis, filariasis, 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 tomoderating 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, sugar cane, durva, yavasa root, onion, dadima flowers and milk should be used as snuff. Durvaghrita is used in bleeding piles and promotes wound-healing in erysipelas. Durva oil is used for wound-healing. In Sushruta Samhita, it is described in intrinsic haemorrhage. Durva is mentioned in Nigbhantu also. In Kaideva Nighantu, the synonyms, properties of shvetadurva are well described and used in visarpa, daha. The synonyms and properties of gandadurva also described and used in trishna, kushtha, daha, jvara. in Bhavaprakash Nighantu, niladurva is described for the treatment of visarpa, trishna, daha. Shvetadurva is used in vrana, visarpa, daha. In Raj Nighantu, it is described as niladurva used in raktapitta, atisara, jvara. Golomi is used in amatisara, kasa, trisha. Maladurva is used in trisha. Durva is used in daha, murchha, tripti. 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, madhyamakhan-da mentions durvadyaghrita in raktapitta. 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 Classification**

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

**Vernacular names**

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

**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 sublateral mucronulate, 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, Kaphapitta-shamaka.

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, anti-
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-filarisis, 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 denture, 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 Nighantu. 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 Tridoshahara, kaphavatashamaka, rakta stambhana. 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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