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Formulation And Evaluation Of Herbal Powder Of Cynodon Dactylon…

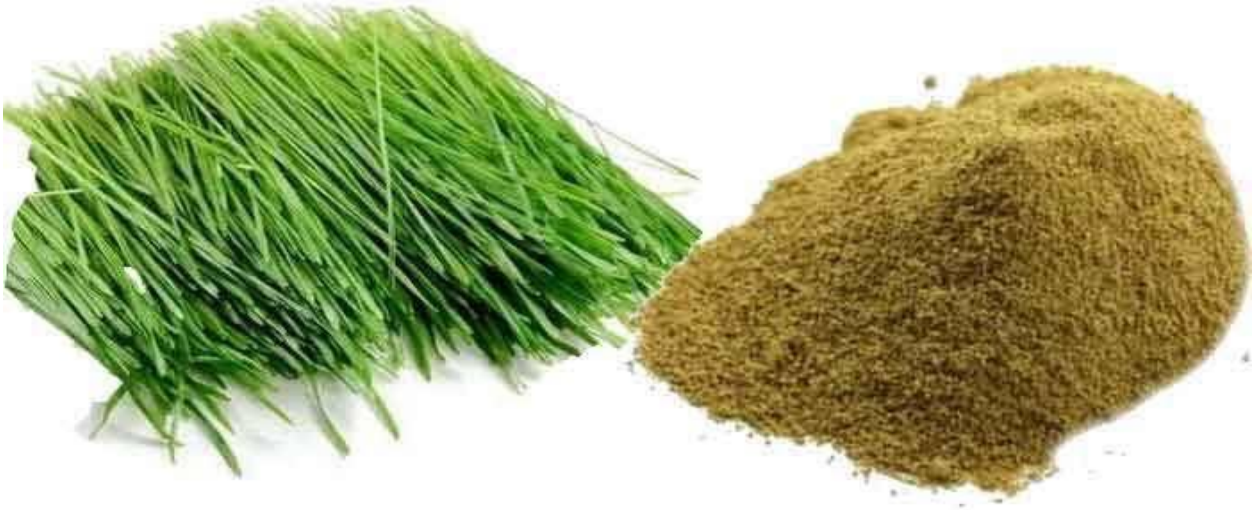
Kalsane Mahesh Bhimrao

Aditya Pharmacy College Beed

ABSTRACT

Cynodon dactylon (Bermuda grass) is a perennial grass distributed all over the world, and particularly it is native to the warm temperate and tropical regions. The plant has been rich in metabolites notably proteins, carbohydrates, minerals, flavonoids, carotenoids, alkaloids, glycosides and triterpenoides. Whole plant of C. dactylon keeps several biological activities such as antibacterial, antimicrobial, antiviral and wound healing properties. Furthermore, it has been extensively used in traditional medicines to treat varied ailments such as cough, headache, diarrhea, cramps, epilepsy, dropsy, dysentery, hemorrhage, hypertension, hysteria, measles, snakebite, sores, stones urogenital disorders, tumors, and warts. Therefore, based on the aforementioned consideration, this article reviews the most updated information of the phytochemical properties and pharmacological effects of C. dactylon extract, including its miscellaneous uses.

INTRODUCTION



Research on medicinal plants required to synthesisnew drugs in the treatment of various diseases. Cynodon dactylon is Poaceae family. It is one of thewidely-used plant in this family in ayurveda Thisplant contains various chemical constituents likesteroids, charbohydrates, oxides, salts, carotene,alkaloids, vitamins and acids According toprevious studies this plant can use internal as well asexternal in various diseases. It can be used for woundhealing, steptic, skin allergy, diarrhoea, epilepsy,hypertension, piles, diuretic, menstrual disorders, renalstones, antioxidant, stimulate spremato genisies,increase libido, anabolic and nueroprotective .Some of the studies proved this plant extract haveantimicrobial activity and can used in urinary tractinfection, syphilis, amibiosis Cynodon dactylon was used as a analgesic in toothache and other dentaldiseases Synthetic diuretic agents inhibit the iontransporters in nephrons and increase the urinarywater, electrolyte excretion. Based on the efficacy thediuretic is classified in to high, medium and low cellingagents. There are no studies on the diuretic activity ofthe plant on guinea pigs. Thus, this study was taken up.The present study was there for aimed and explorediuretic activity of Cynodon dactylon on guinea pigs.

TAXONOMICAL CLASSIFICATION

Kingdom: Plantae, Subkingdom: Tracheobionta, Super division: Spermatophyta, Division: Magneliophyta, Class: Liliopsida, Subclass: Commelinidae, Order: Cyperales, Family: Poaceae, Genus: Cynodon, Species: Cynodon dactylon IV. COMMON NAMES Afrikaans: Gewonekweek, Kweekgras; Arabic: Thaiel, Najeel, Echrish, Tohma; Chinese: Gou ya gen; English: Bahama grass, Bermuda grass, Common couch, Devil's grass, Giant Bermuda grass, Green couch, Hariali grass, Indian couch, Plain couch, Quick grass; French: Chiendent pied-de-poule, Cynodon dactyle, Chemical constituents and pharmacological effects of Cynodon dactylon 18 Grand chiendent; German: Bermudagras, Hundezahngras; India: Dhub, Doob; Italian: Gramina; Portuguese: Capim-Bermuda; Spanish: Grama rastrera, Zacate de Bermuda; Swedish: Hundtandsgräs DISTRIBUTION: Probably native to East Africa where it is widely distributed from sea level to 2,160 m altitude. It was now distributed throughout the world in temperate and subtropical regions. In temperate zones, it grew along sea coasts; in tropics, most commonly in areas with 670-1750 mm rainfall; in arid zones. along rivers and on irrigated land.

Taxonomical classification of Cynodon dactylon

Kingdom-Plantae

Division-Magneliophyta

Class-Liliopsida

Order-Cyperales

Family-Poaceae

Genus-Cynodon

Species-Cynodon dactylon

DISTRIBUTION

Probably native to East Africa where it is widely distributed from sea level to 2,160 m altitude. It was now distributed throughout the world in temperate and subtropical regions. In temperate zones, it grew along sea coasts; in tropics, most commonly in areas with 670-1750 mm rainfall; in arid zones. along rivers and on irrigated land. Perennial grass, very variable, with long rapid-growing, creeping runner or stolons, rooting at nodes, forming a dense tuft on the surface of the soil, runners sometimes 20 m long; leaves 2.5-20 cm long, 2-6 mm broad, flat or sometimes folded or convolute; inflorescence on culms 15 cm to 1 m tall consisting of 2-12 spikes arranged star-like at apex of stem; spikes 2.5-10 cm long with numerous spikelets, arranged in 2 rows on one side of spike; spikelets flat, 2-2.5 mm long, awnless, with 1 floret; glumes unequal, the upper longer and one-third to three-fourths length of floret.

TRADITIONAL USES : Traditionally, the plant was used for the treatment of diarrhea, dysentery, wounds, hemorrhages and hyperdypsia. Fresh juice of plant was used as demulcent, astringent and in the treatment of dropsy, anasarca, catarrhal opthalmia, secondary syphilis, chronic diarrhea and dysentery. The fresh expressed juice of the grass was used in hemuturesis, vomiting and as application in catarrhal opthalmia, and also can be applied to cuts and wounds, and in chronic diarrhea and dysentery. Decoctions of root were used in vesical calculus and secondary syphilis, stoppage of bleeding from piles, and irritation of urinary organs.

PROCESSING OF PLANT

1. The leaves were washed in running water and cut into small bits to facilitate drying.
2. The pieces of plant material were dried for 12hrs in a hot air oven (Model: HIPL-024A) at 60°C.
3. The dried plant material (leaves) was taken separately and grounded using an electric blender to obtain a fine powder.
4. The powder was further passed through a 2mm sieve to obtain finer particles. The powdered samples were stored in a clean glassware container until needed for analysis.

EXTRACTION OF PLANT

1. 500mg of powdered plant material was separately dispensed in 1000ml of each water and solvents used.
2. The powdered plant material was defatted with petroleum ether for 24 hoursat 20° C and extracted with chloroform, ethanol and methanol in a Soxhlet apparatus for 72hrs at 40°C respectively.
3. The thick mass obtained by evaporating the solvent under reduced pressure at room temperature.
4. It rendered a gummy concentrates of chocolate black color. The gummy concentrate was designated as crude extract.
5. The extract obtained was used for the phytochemical screening.

RESULT

Paste: It is used in application on any inflammation, wounds, skin ailments and pain. It is very effective in skin disorders, wounds and scar.

Powder: It is very helpful in nausea, diarrhoea, and Piles.

Juice: It is useful in urine related disorders and urinary tract infections. It is also useful to stop bleeding occurring in body.

Dose: Juice: 10-20 ml

The phytochemical constituents of the Cynoden dactylon plant were analyzed and the results were given here.

CONCLUSION

From the very beginning of civilization, medicinal plants have provided enormous leads to combat diseases. C. dactylon is a weed and has been found to possess various potential medicinal with diverse pharmacological activity spectrum. This review article provided adequate information about medicinal, pharmacognostic and pharmacological properties of this plant. In the near future it may be used as a novel drug to treat many diseases such as anticancer, antiulcer, anti-diabetics, antibacterial, antimicrobial, antiviral, cardiovascular and wound healing. Since this versatile medicinal plant is the unique source of various types of chemical compound, extensive investigation is necessary to utilize their therapeutic aptness to cure diseases.

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