

A Review Study on Vastuk

¹Dr. Hemant Kumar, ²Dr. Nidhi Sharma, ³Dr. Brijesh Sharma

Faculty of Ayurvedic Science

Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India

E-Mail Id: h.331985@gmail.com

Abstract

Chenopodium album Linn. (Vastuk) is a well known ayurvedic medicinal plant which is used in various ailments like digestion problem, liver disorder, anaemia, splenomegaly etc. The Leaves of Vastuk are very rich in K (potassium) & vita.C. Pharmacognostical evaluation was carried out including examinations of morphological and microscopic characters. Ash value, powder analysis and extractive values were also assessed. Phytochemical evaluations including qualitative chemical examinations were also conducted. The plant is rich in various pharmacotherapeutics with effective action. In this paper an attempt has been made to do a summarized review on Vastuk.

Keywords: Vastuk, Disease, Phytochemical, Ayurveda, Phytochemical

Introduction

Vastuk is a commonly used leafy vegetable in India. Chouli, Paalak, Methi and Vastuk commonly form the part of leafy vegetables in Indian dietary practices. Vastuk is commonly used during in winter season. It is used in form of Cooked Vegetable, Raita and Paratha with perceived benefit of easy defecation due to high fibre content but Vastuk leaves are rich in Fe content. The daily requirement of iron is expected to be mitigated through diet. Any possible deficiency should also be managed through dietary modification as a first line of therapeutic management further; dietary modification should also be in tune with traditional dietary practice in order to achieve better compliance. Therefore vegetables like Vastuk should systematically be explored in the management of Hemoglobin deficiency in Indian population.

Table 1: Classification of Vastuk

Kingdom	Plantae
Superdivision	Spermatophyta
Division	Magnoliophyta
Class	Magnoliopsida
Subclass	Caryophyllidae
Order	Caryophyllales
Family	Chenopodiaceae
Genus	Chenopodium
Species	album

Vernacular Names The various vernacular names of Vastuk are as below:

Table 2: Vernacular names of Vastuk

English	Lamb's-quarters
Hindi	Vastuk
Bengali	Chandanbethu
Tamil	Paruppukkirai
Sanskrit	Vastuk
Kannada	Kaduoma
Oriya	Bathua
Telugu	Pappukura
Malayalam	Vastuccira

Table 3: Synonyms of Vastuk

Ksharpatra	Leaves having kshar property.
Shak-rat	Superior in Shak-varga.
Yav-shak	It grows naturally in the Yava-fields.

Morphological Description

It is erect and much branched herb, upto 60-150 cm, but typically becomes recumbent after flowering unless supported by other plants.

Stem is hairy, often tinted red, green, white.

Leaves variable, often rhombic-ovate to lanceolate .8 -9 cm long, grey-green, paler below in colour; margin mostly dentate, sometimes entire leaf, the lowermost sometimes larger and lobe-like., apex acute to obtuse, base narrowly to broadly cuneate, petioles 0.6-5 cm in length.

Flowers small in the terminal ends in the form of dense glomerules cluster, paniculate spikes; calyx ca. 1-1.5 mm in length, the ovate lobes, weak, mealy pubescent, scarious margins, grey-green colour.

Seeds small, kidney shaped, less than 1mm in diameter, margins obtuse, pericarp lightly roughened, brown-shiny.

Fruits round, somewhat pressed, covered.

Habitat/ Ecology Chenopodium album is cosmopolitan weed. It grows in all types of soil wildly all over the world. So it can be cultivated throughout world in wide range of pH value soil. Worldwide it is distributed equally. It is better adapted to temperate zones and is a secondary weed in tropical areas. It easily grows and spreads in wastelands, meadows, farm. It is generally not found in high altitudes.

Rasa Panchaka of Vastuk

The action of a drug is completely based on the Rasapanchaka of that drug. The Rasapanchaka of Vastuk is shown below in tabloid form:

Table 4: Rasa Panchaka of Vastuk

Rasa/Taste	Madhura Sweet
Guna/Pharmacological property	Snighdha /Unctous, Guru /Heaviness
Veerya/ Potency	Sheeta /Cold
Vipaka/Final transformation of the drug	Madhura /Sweet

Karma of Vastuk

Karma is the action related to something to be achieved. It doesn't require any other factor for its action. The actions of Vastuk are well described by the texts.

Table 5: Karma of Vastuk in various Nighantu

S. No.	Nighantu	Karma
1.	Kaideva	Ruchikar, Agnideepak Hridhya
2.	Soshala	Pachak, Snehan
3.	Madanpal	Rochana Pachak, Shukral
4.	Bhav Prakash	Saraka, Krimighana
5.	Raj	Mala-mutrashudhhikar, Rochak

Roghgnata of Vastuk:

Vastuk is being indicated for several maladies. Vastuk is recommended as Arshanoghana. The various therapeutic indications of Vastuk are exhibited by means of the Table.

- Doshagnata – Tridosha-shamak

Chemical Constituents

- The leaves of Vastuk contain ascaridole, that is used to treat roundworms and hookworms.
- Vastuk has reported to contain iron 31.8 mg/100 gm.
- It contains nearly 8% saponins.
- Cryptomeridiol (obtained from the seeds) showed growth enhancing action.

Current Medicinal Uses

- Leaves have been used to treat for stomach ache, and to prevent scurvy or vitamin C deficiencies given the high levels of vitamin C in the plant.
- Cold tea has been used to treat diarrhea, while topical preparations of the leaves have been applied to bug bites and inflammatory joints.

Pharmacological Actions

- Anthelmintic
- Antiphlogistic

- Antireumatic
- Contraceptive
- Laxative
- Odontalgic

The leaves are anthelmintic, antiphlogistic, antirheumatic, mildly laxative, odontalgic. An infusion is taken in the treatment of rheumatism. The seeds are chewed in the treatment of urinary problems and are considered useful for relieving the discharge of semen through the urine. The juice of the stems is applied to freckles and sunburn. The juice of the root is used in the treatment of bloody dysentery. Food that comprises 25.5% of the powdered herb may suppress the oestrus cycle.

Table 6 : Qualitative tests of Vastuk

S.No	Metabolites	Tests	Chenopodium album	Vastuk- Amalaki mishran
1	Carbohydrate	Molish	+ve	+ve
		Iodine	+ve	+ve
		Seliwanoff	+ve	+ve
		Fehling	+ve	+ve
		Bendict	+ve	+ve
2	Proteins	Ninhydrin	+ve	+ve
s		Millons	-ve	-ve
		Lead Sulphide	-ve	+ve
		Xanthoprotic	+ve	+ve
3	Alkaloids	Dragendorff's	+ve	+ve
		Mayer's	+ve	-ve
		Wagner's	-ve	-ve
4	Tannins	Iron Salt	+ve	+ve
		Lead acetate	+ve	-ve
5	Resins	FeCl ₃	+ve	-ve

Table 7 : Phytochemical Investigations and Organoleptics

Name of investigation	Vastuk*
Foreign matte	1.54%
Moisture Content	6.55%
Total Ash	3.95%
Acid insoluble ash	0.28%

Water soluble ash	1.62%
Aqueous Extractive Value	24.46%
Alcoholic Extractive Value	19.48%
Petroleum Ether Extractive Value	7.1%
Colour	Green
Odour	Sharp Characteristic
Taste	Sweet
Touch	Fine
Iron	31.8mg/100 gm

References

- [1]. Anonymous; Ayurvedic Formulary of India, Part-I and Part-II, Prepared and Published by Ayurvedic Pharmacopoeia committee duly constituted by Dept. of AYUSH, Ministry of Health and Family Welfare, Govt. of India, New Delhi
- [2]. Anonymous; The Ayurvedic Pharmacopoeia of India; Govt. of India, Ministry of Health and Family welfare, Dept. of Ayush, New Delhi.
- [3]. Ambikadatta Sastri: Bhaisajya Ratnavali Chaukhambha publication, Varanasi, 18th Ed. (1991).
- [4]. Sharma P.V., Priya Nighantu Chowkhambha Surbharti Prakashana, Varanasi, 2004.
- [5]. Sushruta Samhita, Ayurveda tatva sandipika commentary by Ambikadatta Shastry, Chowkhamba Sanskrit Samsthana, Varanasi.
- [6]. Bhavamishra, Bhava Prakasha, 10th Edn. Chowkhambha Orientalia Varanasi, 2002. Chunekar Shri Krishna C. (1970): Comm. on Bhava Prakasha Nighantu, Chowkhambha Bharati Academy, Varanasi.
- [7]. Agnivesha, Charaka Samhita, Ayurveda Deepika Comm. Chakrapanidatta Ed. R.K. Sharma, Bhagawandash, Chowkhamba Sanskrit Series, Varanasi, 1984.
- [8]. Baghel MS. Researches in Ayurveda, Mridu Ayurvedic Publications & Sales, Jamnagar, 2005.
- [9]. Sharma PV, Dravyaguna Vijnana, Chaukhambha bharti Academy, Varanasi, XI Edition.
- [10]. Narahari Pandit, Raja Nighantu, Hindi commentary by Indradeva Tripathi, Ed. I, Chaukhambha Sanskrit series, Varanasi, (1982).
- [11]. Pandey Dr. Gyanendra, Dravyaguna Vijnana Vol. I, II, III, 1st Edition, Chaukhambha Orientalia, Varanasi.
- [12]. Bapalal Vaidya, Nignantu Adarsh, 2nd edition; Chouknambha Bharti Academy, Varanasi. (1999).
- [13]. Nadkarani KM, Indian Materia Medica Vol 1, 3rd Edition, Bombay, Popular Prakashan, Mumbai, 1982
- [14]. Shastry Dr. J.L.N, Dravya Guna Vijnana Vol-I and II, 1st Edition, Chaukhambha Orientalia, Varanasi.
- [15]. Bennett and Brown, Clinical Pharmacology, 19th Edition, Published by Elsevier, New Delhi, 2005.