



SATAWAR(ASPARAGUS RACEMOSUS): ASTOUNDING MEDICAL BENEFITS

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ABSTRACT

Asparagus racemosus (*A. racemosus*) commonly known as Shatavari or satawar belongs to family of Liliaceae. Shatavari means "who possesses a hundred husbands or acceptable to many". It is considered both a general tonic and a female reproductive tonic. Shatavari may be translated as "100 spouses", implying its ability to increase fertility and vitality. It is grown in tropical areas of India, Sri Lanka and Himalayas. Shatawar reduce the stress levels, controls high cholesterol and triglyceride levels. It is widely used in infertility, cancer, depression, oedema, infection like bacterial or fungal, epilepsy, kidney disorders, chronic fevers, excessive heat, stomach ulcers and liver cancer, increases milk secretion in nursing mothers and regulates sexual behaviors. The dried root extracts of the plant are used as drug. The root extracts are proved for to possess pharmacological efficacies such as antioxidant potential, antimicrobial property, anti-tumor potential, hepatoprotective role and antidiabetic activity. The present article explores the therapeutic properties of *A. racemosus* root which are reported so far. In unani system of medicine satawar is considered to be effective as antispasmodic, appetizer, stomach tonic, aphrodisiac, galactagogue, astringent, antidiarrhoeal, antidysenteric, laxative, anticancer, anti-inflammatory, blood purifier, antitubercular, antiepileptic and also in night blindness, kidney problems and in throat complaints

KEYWORDS : *Asparagus racemosus*, hepatoprotective, antispasmodic, aphrodisiac, galactagogue**Satawar****Botanical Name:** *Asparagus racemosus***Vernaculars: -**

Arabic : Shakakul

Bengali : shatamuli

Sanskrit : Shatavari, Abhiru

Hindi : shatavari, satavari, satamuli, sadabori

Marathi : Asvel,

Telgu : callagadda,

Satavarimul

challagadda

Tamil : Kilavari, Satavali

Kannada : Callagadda

Malayalam : Chatavali

English : Wild asparagus, Sparrow grass

INTRODUCTION:

Asparagus racemosus is a scandant spinous herb or shrub, flowers are small and white. Growing up to 2 meter in length and extensively branched. The leaves are reduced to needle-like, suberect, soft spines. The root stocks are tuberous; bearing numerous fusiform, succulent tuberous roots 3-10 cm and 1-2 cm thick and the stem is woody, pale grey or brown in colour and armed with strong spines. Flowers are tiny, white in colour, fragrant and profuse, in simple or branched racemose. The plant grows throughout the tropical and subtropical parts of India up to an altitude of 1500m. The plant is a spinous under-shrub, with tuberous, short rootstock bearing numerous succulent tuberous roots (30-100 cm long and 1-2 cm thick) that are silvery white or ash colored externally and white internally. These roots are the part that finds use in various medicinal preparations(1,2,3) The stem is woody, climbing, whitish grey or brown colored with small spines. The plant flowers during February-March leaving a mild fragrance in its surrounding and by the end of April, fruits can be seen with attractive red berries.

Shatawar is actually considered to be the most helpful herb for women as it helps in balancing the female hormonal system. It is the main herbal rejuvenative for women. Shatawar totally nourishes and cleanses the blood and the female reproductive organs, enhancing female fertility. It nourishes the womb and ovum and almost prepares the female organs for pregnancy and prevents threatened miscarriage. It also improves super lactation. Shatawar contains the phytoestrogens, the precursors of estrogen and is really very useful

for women who suffer from low natural estrogen levels as a result of menopause, hysterectomies or oophorectomies(4).

**Asparagus Root**

Shatawar is a woody climber growing to 1 to 2 meters in height. The leaves are like pine needles, small and uniform and the flowers are white and have small spikes. It is commonly found at low altitudes in shade and in tropical climates throughout India, Asia, Australia and Africa.

Shatavari has more than 50 organic compounds including steroidal saponins, glycosides, alkaloids, polysaccharides, mucilage, racemosol and isoflavones which are responsible for the multiple medicinal properties exhibited by the herb.

Shatawar has been mentioned in Unani texts. It is stated that shatavari promotes maternal health and its meticulous use as a galactagogue (enhances breast milk secretion in lactating mothers). Shatawar actually literally means "having a 100 spouses" and Unani texts accurately claim that shatavari strengthens a woman to the point where she is being capable of producing thousands of healthy ova.

Habitat And Distribution :

Throughout tropical and subtropical india and Ceylon up to 1000 ft in the Himalayas , from Kashmir eastwards . tropical Africa , jawa and Australia . shatavari occurs as wild plant in dry and deciduous forests of Maharashtra .

Cultivation And Collection:

Usually it is collected from wild plants. It is cultivated in gardens as potted plant for its graceful feathery leaves and flowers. Shatavari bears white, fragrant flowers in the form of simple racemes. Fruits are red coloured berries.

Taste: sweet.

Parts Used: root

Root:

The root contains diassacharides and saponins which on hydrolysis yields sarsopogenins, glucose and rhamnose.

Chemical Constituents:

shatawari root contains 4 steroids saponins: shatavarine 1-1V, shatavarin 1 is the major glycoside with 3 glucose and rhamnose moieties attached to sarsapogenin, where in shatavarin IV two glucose and one rhamnose moieties are attached. Alkaloids , proteins , starch, and tannins. Asparagamine , a polycyclic alkaloid. Polysaccharides, mucilage is present in the root.

Therapeutic Uses:

Asparagus racemosus is mainly known for its phytoestrogenic properties. With an increasing realization that hormone replacement therapy with synthetic oestrogens is neither as safe nor as effective as previously envisaged, the interest in plant-derived oestrogens has increased tremendously making Asparagus racemosus particularly important. The plant has been shown to aid in the treatment of neurodegenerative disorders and in alcohol abstinence-induced withdrawal symptoms. In Unani literature, Asparagus racemosus has been described as a galactagogue herb and has been used extensively as an adaptogen to increase the non-specific resistance of organisms against a variety of stresses(2,3).

Asparagus root possesses aphrodisiac, demulcent, general tonic, diuretic, anti-inflammatory, antiseptic, anti-oxidant and antispasmodic properties. Regular use of asparagus root treats infertility, impotence, leucorrhoea, menopause syndromes, hyperacidity, and certain infectious diseases such as herpes and syphilis.

It is also useful in treatment of epilepsy, kidney disorders, chronic fevers, excessive heat, stomach ulcers and liver cancer, increases milk secretion in nursing mothers and regulates sexual behaviors.

Asparagus racemosus cleanses, nourishes, and strengthens the female reproductive organs and so, it is traditionally used for PMS, amenorrhoea, dysmenorrhoea, menopause and pelvic inflammatory disease (PID) like endometriosis. Asparagus racemosus is considered as the most potent female health tonic.

Asparagus racemosus also supports deeper tissue and builds blood, helping in treating infertility, prevents miscarriage and acts as a post-partum tonic as it increases lactation, regularizes the uterus and balances hormones, probably due to phyto-estrogens. A. racemosus is also suggested for its soothing agent upon systemic dryness which is part of the natural aging process. It endorses positive emotions that calming fresh sensitivity and the sizzling emotions such as irritability, anger, jealousy, resentment, and hatred. It also helps with pain, restless sleep, disturbing dreams, and those who have weak emotional and physical heart(1,2).

Asparagus racemosus possesses a strong rejuvenating, fostering, and stabilizing action on excessive air, gas, dryness and agitation in the body and mind; for this action, the root infusion is traditionally used in treating nervousness,

anorexia, insomnia, hyperactive children, and slow growing of humans.

According to unani system of medicine; Asparagus racemosus is conceivably the best known as a female rejuvenative, used for stimulation of milk production in lactating women, useful for childlessness, decreased libido, threatened miscarriage, menopause, leucorrhoea and has the capability to balance pH in the cervical area, and as a good remedy for impotence and general sexual weakness.

Asparagus racemosus is prescribed for stomach ulcers, hyperacidity and diarrhea, dry and irritated membranes of the vagina and in the upper respiratory tract. It is beneficial in treating bronchitis as well.

Asparagus racemosus may constitute a very important component of as feed supplement in the animal diets because of their higher availability of nutrients. Crude protein, crude fiber, ether extract, nitrogen free extract and ash content have been analyzed and found that this herb is very rich in nitrogen free extract and minerals like Ca, Mg, Fe, Cu, Zinc etc.

Galactagogue:

It has been investigated by a number of researchers and they found that its roots, and root extracts can improve lactational inadequacy in lactating mothers(5,6)

Research on these demonstrated increase in milk secretions(7,8,9) . Lactogenic effects of these were investigated in guinea pigs(10), goats(11), buffaloes(12,13) and humans(14). After administration of alcoholic extract of A.R. a significant increase in milk yield has been observed along with increased growth of the mammary glands, alveolar tissues and acini(14).

A group of researchers studied A.racemosus for its antidopaminergic activity with a working hypothesis, that therapeutic effects, of shatavari like dyspepsia and galactagogue , may be due to an active principle containing dopamine receptor antagonistic activity because shatavari produced similar effects when compared to metoclopramide, a dopamine receptor antagonist.

An increase in prolactin level comparable to metoclopramide was demonstrated, but the antidopaminergic activity was not observed (15). The intramuscular administration of alcoholic extract of shatavari root produced an increase in weight of mammary glands in post partumestrogen primed rats and increased uterine weight in estrogen primed group. These were an increase in weights of adrenals coupled with depletion of ascorbic acid, suggesting the release of pituitary ACTH (15). The growth of lobuloalveolar tissue and milk secretion in the estrogen primed rats was thought to be due to the action of released corticoids or prolactin.

Scientific Studies:

the plant action as a galactagogue has been reported. A study carried out by pandey et al at banaras hindu university, the results suggest an estrogenic effect of shatavari on the female mammary gland and genital organs. In a study it was shown that in the estrogen-primed rats, asparagus racemosus could cause both increase in weight of mammary lobulo- alveolar tissue and the milk yield. The mechanism of action of the extract may through a direct action on the mammary gland or through the pituitary adrenal axis due to secretion of prolactin and ACTH. A study on the plant was shown to possess anabolic properties viz. growth promotion.

Mizaj: satawar is cold and moist in second degree

Substitute: Behman safaid

Important Formulations:

Safoof-e-sailanurreham, Safoof salab

Dose: 5-7 gms

REFERENCES:

1. Christina AJ, Joseph DG, Packialakshmi M, Kothai R, Robert SJ, Chidambaranathan N, Ramasamy M. Anticarcinogenic activity of *Withania somnifera* Dunal against Dalton's ascitic lymphoma. *J Ethnopharmacol.* 2004 Aug;93(2-3):359-61.
2. Kabeeruddin M. *Makhzanul mufradat*, 2nd ed, Idara kitabul shifa, New Delhi, 2010; 75-6.
3. Kabeeruddin M. *Ilmul Advia Nafisi*, Ejaz publishing House, New Delhi, 2007; 238-9.
4. Anonymous. *The Unani pharmacopoeia of India*, Vol 3 Part 1, Government of India. Ministry of Health and Family welfare. Dept. of AYUSH, New Delhi, 2007; 107-108.
5. Najmul Ghani. *Khazainul advia*, Idara kitabul shifa, New Delhi, YNM; 30-1
6. Farah A, Qudsia N, Aslam M. Classification of Unani drugs, Fine Offset works, New Delhi, 2005; 37, 51.
7. Abbas Ali Mahdi, Kamla Kant Shukla, Mohammad Kaleem Ahmad, Singh Rajender, Satya Narain Shankhwar, Vishwajeet Singh, and Deepansh Dalela. *Withania somnifera* improves semen quality in stress-related male fertility, *EvidenceBased Complementary and Alternative Medicine*; 2011; 1-9.
8. Abdel Magied EM, Abdel-Rahman HA, Harraz FM. The effect of aqueous extracts of *Cynomorium coccineum* and *Withania somnifera* on testicular development in immature Wistar rats, *J Ethnopharmacol*, 2001; 75(1):1-4.
9. Panda S, Kar A. *Withania somnifera* and *Bauhinia purpurea* in the regulation of circulating thyroid hormone concentrations in female mice, *J Ethnopharmacol*, 1999; 67(2):233-9.
10. Anup Patil, Vijay Rajee, Nilesh Darekar, Sunil Karale. Effect of alcoholic root extract of *Withania somnifera* on experimentally induced anorexia in rats, *International journal of phytotherapy research*, 2012; 2(3): 1-15.
11. Shukla Kirtiman. Comparative study of *Withania somnifera* and *Ocimum sanctum* for Anthelmintic Activity, *ISCA Journal of Biological Sciences*, 2012; 1(1): 74-76.
12. Jayanthi MK, Prathima c, Huralikuppi JC, Suresha RN, Murali Dhar. Anti-depressant effects of *Withania somnifera* fat (ashwagandha ghrutha) extract in experimental mice, *International Journal of Pharma and Bio Sciences*, 2012; 3(1): 33-42.
13. Dr. Premalata Singariya, Dr. Krishan Kumar Mourya, and Dr. Padma Kumar. Antimicrobial Activity of the Crude Extracts of *Withania somnifera* and *Cenchrus setigerus* In-vitro, *Pharmacognosy Journal*, 2012; 4 (27): 60-65. *Int. Res J Pharm. App Sci.*, 2013; 3(4):59-63 ISSN: 2277-4149 Shaikh Imtiaz et al., 2013 63
14. Venil N Sumantran, Asavari Kulkarni, Sanjay Boddul, Trushna Chinchwade, Soumya J Koppikar, Abhay Harsulkar et al. Chondroprotective potential of root extracts of *Withania somnifera* in osteoarthritis, *J. Biosci*, 2007; 32(2):299-307.
15. Das PK, Malhotra CL, Prasad K. Cardiotoxic activity of ashwagandhine and Ashwagandhinine, two alkaloids from *withania*, *Arch int pharmacodyn ther*, 1964; 21: 356-62. 20. Budhiraja, RD, Sudhir S, Garg KN. Cardiovascular effects of a withanolide from *Withania coagulans* dunal fruits. *Indian j. Physiol. pharmacol.*, 1983; 27: 129-34.