WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 14, Issue 18, 645-654. Review Article ISSN 2277–7105

SHATAPUSHPA (*ANETHUM SOWA*)-BOON TO WOMEN: A REVIEW ARTICLE

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Article Received on
30 July 2025,

Revised on 20 August 2025,
Accepted on 10 Sept. 2025

DOI: 10.20959/wjpr202518-38341

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ABSTRACT

Shatapushpa (*Anethum Sowa* Kurz.), extensively documented in *Ayurvedic* classical texts particularly *Kashyapa Samhita*, represents a cornerstone therapeutic agent in traditional gynecological practice. This comprehensive review examines the multifaceted applications of *Shatapushpa* in managing diverse reproductive health conditions including amenorrhea *(Anartava)*, dysmenorrhea *(Kashtartava)*, oligomenorrhea *(Artava-kshaya)*, infertility *(Vandhyatva)*, polycystic ovarian syndrome and menopausal disorders. The herb's therapeutic efficacy stems from its unique pharmacological profile characterized by *Madhura rasa*, *Ushna veerya*, *katu vipaka* and *Vata-kapha shamaka properties*, which collectively regulate the hypothalamo-pituitary-ovarian axis and restore hormonal equilibrium. Phytochemical analysis reveals significant bioactive compounds including carvone, limonene, coumarins, kaempferol, and apiol, which demonstrate phytoestrogenic, antispasmodic, anti-inflammatory, anti-oxidant, anti-cancer and anti-microbial properties. The herb's versatility extends to various pharmaceutical preparations including *Shatapushpa Kalpa*, medicated oils for *Nasya*, *Abhyanga*, and *Basti* therapies, and powder formulations with specific *Anupanas*. Contemporary research validates its traditional applications, particularly in PCOS management through insulin sensitivity improvement and ovarian volume reduction, while establishing safety profiles with minimal adverse effects. This review synthesizes classical *Ayurvedic* wisdom with modern scientific validation, positioning *Shatapushpa* as a

promising alternative therapeutic approach for comprehensive women's reproductive healthcare.

KEYWORDS: *Artava-kshaya, Basti,* Infertility, Phytoestrogens, *Shatapushpa.*

INTRODUCTION

Women encounter numerous health conditions that require prompt identification and treatment to prevent serious complications. Traditional *Ayurvedic* texts outline numerous herbs and formulations that provide significant therapeutic value for treating female reproductive health issues. Among these, *Shatapushpa* emerges as a particularly significant and widely utilized natural remedy for various gynaecological conditions. *Shatapushpa* described by *Kashyapa* possess different properties having *Ritupravartini*, *Yonishukra-vishodhani*, *putrapada and viryakari*.[1] This study examines *Shatapushpa* through classical *Ayurvedic* literature, contemporary scientific evidence and analyzes its chemical composition, therapeutic properties and clinical applications in treating various women's reproductive health disorders.

MATERIALS AND METHOD

The present study follows a review-based approach, incorporating textual resources that provided various citations from traditional literature, scientific studies and academic journals. The botanical name of *Shatapushpa* is *Anethum sowa*, which is part of the Umbelliferae family. Apart from its use in cooking, *Shatapushpa* functions as a widely recognized medicinal remedy for different gynaecological disorders. Special focus was placed on controlled clinical studies conducted with *Shatapushpa*. Conclusions were derived from comprehensive evaluation of all collected data and reviewed literature.

Scientific classification[2]

Latin name- *Anethum sowa Kurz*

Kingdom- Plantae

Subkingdom- Tracheobionta

Super division- Spermatophyta

Division- Magnoliophyta

Class- Magnoliopsida

Sub-class- Rosidae

Order- Apiales

Family- Apiaceae (Umbelliferae)

Genus- Anethum

Species- *Anethum Sowa*

Synonyms[3]

- ***Madhura-*** Having Madhura rasa
- ***Karvi-*** It is a potent drug
- ***Mishi-*** Digestive stimulant
- ***Chhatra-*** Inflorescence is umbel
- ***Peetika-*** flowers are yellow in color
- ***Chhatrapushpa-*** Flowers are arranged in umbel inflorescence
- ***Shatapushpa-*** Having many flowers
- ***Shatahwa-*** Having numerous flowers and the word 'Shata' is properly used for this plant

Ayurvedic pharmacological properties[4]

1. **Rasa-** Madhura, Katu, Tikta
2. **Guna-** Laghu, Ruksha, Teekshna
3. **Virya-** Ushna
4. **Vipaka-** Katu
5. **Doshaghnata-** Kapha-Vata shamaka
6. **Karma-** Artavajanana

Classifications of *Shatapushpa* in different *Samhitas* and *Nighantus*

Samhita/Nighantu	Description	Verse No
Charak Smahita	Asthapanopag, Anuvasanopag, Madhura Skandha	Sutra Sthana, 4/25-26
Sushruta Samhita	Kaphaghna	Sutra Sthana, 39/9
Kashyap Samhita	Shatapushpa Shatavari Kalpa Adhyaya	Shatapushpa shatavari kalpa, 5-6
Ashtanga Sangraha	Kaphaghna, Madhura skandha	Sutra Sthana, 14/12
Dhanwantari Nighantu	Shatapushpadi varga	1-3
Raj Nighantu	Shatavhadi varga	10-13
Kaiyadev Nighantu	Aushadhi varga	1190-1193
Bhavaprakash Nighantu	Haritakyadi varga	80-81
Madanpala Nighantu	Shunthyadi varga	24-25
Shodhal Nighantu	Shatapushpadi varga	289-290
Ashtanga Nighantu	Viprakirna prakaran	266

Botanical description[5]

➢ **Distribution**

- It is often cultivated throughout the tropical and subtropical areas of India.
- It is native to the eastern Mediterranean region and western Asia.
- It has been widely cultivated throughout the world, with naturalization having occurred in some parts of Europe, North and South America. It is distributed in Germany, Hungary, Netherlands, Pakistan and USA.
- In India, it is found in Rajasthan, Gujarat, J&K, Orissa, Madhya Pradesh and Punjab.

➢ **Morphological description**

- It is a glabrous perineal herb, 1-3 ft height. Leaves 2-3 and are bipinnate or tripinnate and linear. Flowers are white coloured and petals yellow coloured with small style. There are large vittae solitary in each furrow with 2 on the commissure.

➢ **Macroscopic**

- Fruits, dark brown, often stalk attached, broadly oval and compressed dorsally.

➢ Mericarps usually separate and free, 4 mm long, 2-3 mm broad and 1 mm thick, glabrous, traversed from the base to apex by 5 lighter coloured primary ridges.

➢ **Microscopic- (a) Fruit**

- Pericarp of fruit shows epidermis of polygonal tabular cells having thick outer wall and striated cuticle.
- Mesocarp, parenchymatous, some cells lignified and show reticulate thickening.
- Endocarp consists of tabular cells sometimes with sinuous anticlinal walls.
- Endosperm much flattened and consists of thick-walled, cellulosic, parenchyma containing fixed oil and numerous aleurone grains upto 5 µ in diameter containing micro-rosette crystals of calcium oxalate; carpophore split, passing at the apex into the raphe of each mericarp containing a vascular strand of sclerenchymatous fibres and spiral vessels.

(b) Powder- Brown, shows spiral vessels, micro-rosette crystals of calcium oxalate and oil globules, aleurone grains upto 5 µ in diameter.

Parts Used- *Beeja*, *Phala*

Dose : 1-3 g of the drug in powder form.

Therapeutic uses[6]

Abhyantara prayog: *Udarshoola, Aadhman, Pakshaghaat, Sandhivata, Karnashoola*

Bahya prayog: *Aruchi, Agnimandya, Ajirna, Adhman, Udarsula, Hriddourbalya, Shotha, Kasa-Svas-Hikka, Mutrakriccha, Rajorodha, Yonishula, Kashtartav, Sutika vikara, Stanyakshay, Charmavikara, Jvara.*

Phytochemical constituents[7]

Lupeol, Limolene, Carvone, Apiol, B-sitosterol, stigmasterol, Eugenol, Anethole, alpha phellandrene, Quercetin, Kaempferol, coumarins, estragole, and Umbelliferones.

Nutritional value[8]

- *Shatapushpa* contains **Carbohydrate** 35.7%, **Crude fibre** 20.7% and **Proteins** 13.1%
- The **Essential oil** composition of the root of *Anethum sowa*, consisted of palmitic and linoleic acid 33.81 and 30.03% respectively, which contributes to major saturated and unsaturated fatty acids.
- **Amino acids** like Glycine, Threonine, Alanine, Tyrosine, Leucine, and Isoleucine are major components found in *Shatapushpa*
- It is rich in **Vitamins** such as vitamin A, thiamine, riboflavin, ascorbic acid, niacin and vitamin B6.
- *Shatapushpa* is also rich in **Minerals** like calcium, potassium, zinc, magnesium, sodium, iron, phosphorus, chromium, nickel, cobalt, copper, titanium, molybdenum and vanadium.

Pharmacological properties of phytochemical constituents[9]

Class	Chemical Constituents	Pharmacological property
Benzodioxoles	Apiol	Anti-cancer
Benzopyrones	Coumarins, Umbelliferones	Anti-thrombotic, Anti-cancer, Anti-microbial
Phenolic compound	Eugenol, Anethole, estragole	Anti-oxidant Anti-inflammatory
Terpenoids	Lupeol, Limolene and Carvone, alpha-phellandrene	Phyto-estrogen property Anti-microbial Anti-oxidant
Steroids	Beta-sitosterols Stigmasterols	Anti-inflammatory, Anti-cancer, Anti-microbial, Anti-fungal
Flavonoids	Quercetin Kaempferol	Anti-inflammatory, Anti-cancer, Anti-oxidant, Anti-diabetic, cardio-protective.

Formulations- Some formulations which contains ***Shatapushpa* as ingredient** frequently used in Stri and Prasuti Roga-

S.No.	Formulations	Rogadhikara	Use	Reference
1	***Narayana Taila***	Bandhyatva	Basti, Abhyanga, Nasya, oral	Sharangdhar, Madhyam Khanda-9
2	***Shatapushpa Taila***	Bandhyatva, Rajodosha	Basti, Abhyanga, Nasya,	Kashyapa Kalpa Sthana-5
3	***Shatapaka Taila***	Vatavyadhi	Basti	Sushruta, Chikitsa sthana 38
4	***Dhanvantara Taila***	Sarvarogahara Chikitsa	Basti, Abhyanga,	Astanga Hridaya, Sharira 2
5	***Bala Taila***	Bandhyatva	Nasya, Basti, Abhyanga, Oral	Astanga Sangraha, Chikitsa 23
6	***Shatapushpa kalpa***	Bandhyatva	Oral	Kashyapa, Kalpa Sthana-5
7	***Shitakalyana ghrita***	Alpapushpa, Bandhyatva	Oral	Yoga Ratnakara, Pradara Roga Chikitsa
8	***Phalaghrita***	Bandhyatva	Oral	Sharangdhar, Madhyam Khanda-2
9	***Dashmoolarishta***	Bandhyatva, Pushtikaraka, Teja-shukra-bala prada	Oral	Sharangdhar, Madhyam Khanda-10
10	***Kumaryasava***	Shukra-dosha	Oral	Sharangdhar, Madhyam Khanda-10
11	***Maharasnadi Kwath***	Vatavyadhi	Oral	Sharangdhar, Madhyam Khanda-2
12	***Jeevantyadi Anuvasana Yamaka***	Rajo-dosha, Bala-shukra-agni vardhan	Basti	Charaka, siddhi sthana 4
13	***Brihada Kushmanda Avaleha***	Rajo-dosha	Oral	Bhava Prakash, Chikitsa 9
14	***Mustadi Yapana Basti***	Rajodosha	Basti	Astanga Sangraha, Kalpa sthana 5

DISCUSSION

Acharya *Charaka* said that without vitiation of *Vata,* Yoni never gets impaired. *Vata* is the governing factor of the whole reproductive physiology. *Shatapushpa* is best remedy for *Vataja* disorders which has been rightly mentioned as nector for the women by *Acharya Kashaypa* as it has got multi-dimensional positive therapeutic effects over the health of the women. It possess *Madhura Rasa, Ushna virya and Katu vipaka* which are known to act as *Kapha-vata Shamaka,* hence it is useful in various female disorders. The *Ruksha and Teeksha Guna* of *shatapushpa* pacify the Vitiated *kapha Dosha* which leads to *srotoshodhana.* The *Ushna Virya* also helps in controlling the *Sheeta Guna of Vata and Kapha.* Because of its *Anulomaka Guna* it will cause *Anulomana of Doshas* and *Malas* and it will change *Gati of*

Apana Vayu from *Pratiloma* to *Anuloma* that in the turn will help in its proper functioning of *Raja pravartana.*[10]

Mode of Action of *Shatapushpa* in Menstrual Disorders[11]

Its *Ushna Virya* (hot potency) pacifies *Vāta and Kapha*, restoring rhythmic endometrial shedding and menstrual flow in oligomenorrhea and amenorrhea. Bioactive compounds bind estrogen receptors, normalizing both hypo- and hyper-estrogenic states. This regulates amenorrhea, oligomenorrhea, and menopausal symptoms. By reducing *Vata*-induced uterine contraction and scanty flow, it alleviates painful and scanty menstruation (*Artava Kṣaya*).

Mode of Action of *Shatapushpa* in Various Factors of Female Infertility: *Shatapushpa* has been widely regarded as one of the top natural fertility enhancers. It is used as an aphrodisiac. It may be useful in various factors of infertility.

- **Tubal factor**- *Shatapushpa* helps to remove the tubal obstruction due to its Tikshna, Ushna and Vata-kaphahara properties.[12]
- **Ovulation factor**- Its hot potency stimulates ovarian follicular maturation and timely ovulation, addressing anovulatory infertility.[13]
- **Uterine factor-** Enhances uterine endometrial thickness and quality, supporting embryo implantation and gestation.[14]
- **Cervical factor-** *Shatapushpa* has antibacterial, antifungal property which cures cervical infection.[15]

Mode of Action of *Shatapushpa* in Dysmenorrhea[16]

Shatapushpa reduces uterine smooth-muscle spasms and prostaglandin synthesis, providing relief in primary dysmenorrhea.

Mode of Action of *Shatapushpa* in Vaginal Infection

Due to *Katu and Tikta Rasa*, *Shatapushpa* has potent antifungal property; thus, it is effective against Candida species in vitro, is used by women with vulvovaginal candidiasis. It has bactericidal and fungicidal properties, able to kill or inhibit the growth of microorganisms.

Mode of Action of *Shatapushpa* in UTI

Shatapushpa has *Katu, Tikta Rasa, Shrotoshodhaka* properties and limolene and Carvone has antibacterial property. This will help to block the growth of bacteria to prevent UTI.

Mode of Action of *Shatapushpa* in Cancer[17]

Shatapushpa exhibits in vitro cytotoxicity against human cancer cell lines and shows promising in silico binding affinities with cancer-related targets. Thus, *shatapushpa* and its compounds due to its *Rasayana and Shrotoshodhaka* properties are promising drug for cancer control.

Mode of Action of *Shatapushpa* in Lactation

Shatapushpa has *Balya, Brimhana, Rasayana and Shrotosodhaka* properties which enhance lactation.

Mode of Action of *Shatapushpa* in Menopause

It also helps in *Rajonivruti*. The Karma of *Shatapushpa* such as *Rasayana* and *Balya* is very much indicated in Jaravastha and helps in preventing the long-term complications of senility. Lupeol, Limolene and Carvone through their antioxidant activities, have been reported to provide protection against free radical damage in the body. So, consumption of *shatapushpa* in menopausal phase is very effective as it reduces oxidative stress in body and improve postmenopausal symptoms.

CONCLUSION

Shatapushpa exhibits a spectrum of actions beneficial for a range of gynaecological conditions. Its efficacy is particularly notable in addressing diminished menstrual flow (*artavakṣhaya),* painful menstruation *(kaṣhartava),* infertility *(vandhyatā)*, PCOD and Menopausal symptoms. Accordingly, various formulations of *Shatapuṣpa* offer a practical approach for managing these disorders. Concluding all these references, it can be accepted that *Shatapushpa* is a versatile drug for female body. Its *Panchabhautik* as well as chemical constitutions are beneficial for all stages of female life in maintaining reproductive functions and rendering uneventful menopause.

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