



**A REVIEW - EFFECT OF HARITAKI IN PCOS**

**<sup>1</sup>Dr. Tejaswini Prasad Babar and <sup>2</sup>Dr. Vivek Gokhale**

<sup>1</sup>D.Y.A, M.D (Dravya Guna), Ph.D Scholar, (Bharati Vidyapeeth Ayurved College - Dravyaguna Department).

<sup>2</sup>College of Ayurveda Bharti Vidyapeetha Associate Professor Department of Dravyaguna Vigyana, MD (Dravyaguna), PhD (Dravyaguna), Pune.

**\*Corresponding Author: Dr. Tejaswini Prasad Babar**

D.Y.A, M.D (Dravya Guna), Ph.D Scholar, (Bharati Vidyapeeth Ayurved College - Dravyaguna Department).

Article Received on 27/06/2021

Article Revised on 14/07/2021

Article Accepted on 04/08/2021

**ABSTRACT**

PCOS (Polycystic ovary syndrome) is a hormonal disorder which is very common among women of reproductive age. It is characterised by the increase in the male hormones, androgen and enlarged ovaries with multiple cysts (hence the name polycystic). It is also one of the main causes for infertility. PCOS or Polycystic Ovarian Syndrome is one of the common problem that women face today. Due to the change in lifestyle, many women suffer from this health problem that can lead to obesity, hormonal imbalance, menstrual dysfunction and finally infertility. Ayurveda believes that PCOS are caused mainly due to imbalance among the Tridosha; Vata, Pitta and Kapha. These three dosha should be in balance to be healthy and Concord life. Terminalia chebula is rich in vitamin C and minerals like selenium, potassium, manganese and copper. It is a digestive tonic and has been found effective on disorders like constipation, flatulence, colitis, etc. It has antibacterial, anti-tumor and anti-inflammatory properties. It also helps in protecting the heart, improving appetite and regulating mood. Also it has action on increased levels of testosterone, Hence this article focuses on uses and application of haritaki in PCOS.

**KEYWORDS:** Haritaki, PCOS.

**INTRODUCTION**

PCOS is one of the biggest reasons for obesity, menstrual problems and infertility in women of reproductive age around the world. Ugly cystic acne, hair loss, unsightly facial hair and patches of pigmented skin are among the cosmetic woes of women with PCOS.<sup>[1]</sup>

Terminalia chebula is rich in vitamin C and minerals like selenium, potassium, manganese and copper. It is a digestive tonic and has been found effective on a variety of disorders like constipation, flatulence, colitis, etc. It has antibacterial, anti-tumor and anti-inflammatory properties. It also helps in protecting the heart, improving appetite and regulating mood.

Haritaki is mentioned in prajasthapan and garbhasthapan gana by charaka and ashtang sangraha still it is varjya (contraindicated) in garbhini (pregnancy) and bala (infants) this shows that Haritaki is useful in treatment of vandhyatva/infertility.

Many evidence have been created with various branches of sciences for its uses in PCOS. This article is focusing on all the details of Haritaki in relation with PCOS.

**OBJECTIVES:** To understand the various literature about effect of Haritaki in PCOS.

**MATERIAL and METHODS:** Manual searching and collection

**Materials**

- 1) Charaka Samhita with chakrapanidatta commentary
- 2) Sushruta Samhita with Dalhana commentary
- 3) Ashatanga Hrudaya with Arundatta Commentary
- 4) Ashatanga Sangraha with Arundatta Commentary
- 5) Pub Med and Google web search regarding Haritaki

**Methods**

- 1) References from ayurvedic classical textes were enlisted
- 2) The review of the selected references from mentioned text's for their Sanskrit names, Latin names Rasadi properties, Doshagnata, part used, and its actions and contraindications were taken.
- 3) The PubMed and Google web search of enlisted information was done for its pharmacognosy, phytochemicals, pharmacological actions and other PCOS related data.
- 4) Locating, selecting, extracting, and synthesizing of properties and actions on the basis of above review was done.

- 5) Critical analysis of these references was done to enlist the reasons for which Haritaki is mentioned in PCOS.

## LITERATURE REVIEW

### Nirukti

**Haritaki:** 1) Because it grows in the place of residence of Hara, that is the Himalayas so it is called Haritaki.

2) Because it is by nature harita (greenish yellow) in colour, so it is called Haritaki, and

3) Because it takes away (Hr = to take away) diseases, therefore it is called Haritaki.

**Abhaya-** not fearful of any diseases.

**Pathya-** good to take.

**Kayastha-** sustains the body and enter in the it has beneficial action to body

**Putana-** It is virechaka (i.e. laxative), so it clears all the excreta from the body.

**Chetaki-** It clears the obstruction of channel and maintains the sensation intact.

### Varga /gana

**Charaka Samhita** – *Prajasthapan, Jwaraghna, Kushthaghna, Kasaghna, Arshoghna.*

**Sushrut Samhita** – *Aamalakyadi, Parushakadi, Triphala*

**Ashtang Sangraha** – *Arshoghna, Kushthaghna, Hidhma Nigrahana, Kasaghna, Garbhashthapan, Vayasthapan, Varanadi Gana.*

### Importance of Haritaki

- Haritaki Pathyanam- Haritaki can be. (Ch. Su. 25.)
- Kashay skandha shreshtha dravya.-best amongst astringent drugs
- Sarvaroga hara (ch. Chi. 1)- capable to cure all the diseases
- Santarapan krutan rogan praya hanti Haritaki. (ch. Chi. 1) specifically treats over- nourishment disorders

### PROPERTIES

#### Raspanchaka of Haritaki

Rasa (Taste) –predominantly astringent, having five taste except salty taste.

Guna (Quality)-Laghu, Ruksha.

Veerya (Potency) – Ushna/Hot

Vipaka –madhura/sweet

**Prabhav:** Tridoshghna

**Pramukh Karma** – Anuloman, Stroto-vishodhan

### Parts used

The fruits (immature and mature), bark, gum, leaves and galls are used.

**Pharmacognosy:** Powder microscopy of seeds shows the presence of trichomes and endosperms containing polygonal cellulosic cells and xylem containing lignified cells with oil globules, aleurones grains and

calcium oxalate crystals. (Ref: Akhilesh Kumar: Pharmacognostical And Phytochemical Evaluation Of Haritaki (Terminaliachebula Retz.) Fruit Pulp, Ijpcbs 2017, 7(4), 381-387.

**Phytochemicals:** The phytochemical analysis of fruit pulp extract shows that tannin protein, amino acid, glycosides, flavonoids, vitamins, alkaloids and phenolic compounds are present while carbohydrates, and steroids are absent. (Ref: Akhilesh Kumar: Pharmacognostical And Phytochemical Evaluation Of Haritaki (Terminaliachebula Retz.) Fruit Pulp, Ijpcbs 2017, 7(4), 381-387.

### Actions (Ayurveda)

Haritaki when taken: by chewing it promotes digestive fire. : by cooking it is constipating.: by grinding it clears waste products.: by drying it is pacify all three doshaa. (Bha.Ni.Haritakayaadi varga/30- 33/pg.6)

### Pharmacological actions on doshas

Dosha Karma- Tridoshghna.

**IMPORTANT FORMULATIONS** – Abhayarishtha, Gandharva Haritaki, Agastya Haritiki, Gomutra Haritaki,

**DOSE** - 3-6 gm of the drug in powder form.

### Effect of Haritaki in PCOS.

### Aetiology of PCOS

Insulin resistance, Hormonal imbalance, Genetic factors , Bisphenyl A (BPA), Stress and other psychological factors & Miscellaneous.

PCOS is also referred to as a lifestyle disease and mostly affect people living in the urban settlement. One of the primary causes of this syndrome is an unhealthy lifestyle, lack of exercise accompanied by unhealthy diets. The main characteristic symptoms of this condition are:

- Ovulatory dysfunction in women along with multiple cysts in ovaries
- Problems related to obesity, insulin resistance, fatty liver, digestion issues, anemia, infertility in some patients to name a few
- PCOS also leads to cardiovascular problems, neurological and psychological effects on quality of life (including anxiety and depression).

The medicinal herbs found in the above formulations also treat inflammation and hormonal imbalance that are at the root of PCOS. They also work against other complications of PCOS such as digestive disorders, weight gain, insulin sensitivity, and improving mood.

### Effect of haritaki on PCOS

is one of the ingredient of triphala, which acts on PCOS because, It is a rich source of Vitamin C, a powerful natural antioxidant which reduces the inflammation by scavenging free radicals. *Triphala* helps in cleansing and detoxifying the. The phenolic compounds in *Triphala* is

found to possess the ability to scavenge free radicals as DPPH (diphenylpicrylhydrazyl) and superoxide. It may be helpful in controlling various hormonal influences which are causing menstrual irregularities. [Naik GH et al. In vitro antioxidant studies and free radical reactions of Triphala, an Ayurvedic formulation and its constituents. *Phytherap Res.*, 2005; 1(2): 54-59.]

Haritaki churna is advised for action of strotovarodha/removal of obstructions and helps in apana- vatanulomana [Ayurvedic approaches to polycystic ovarian disease(PCOS): A Review]

In a case report of PCOS for an ovulation induction, gandharva Haritaki is used along with other treatment which results in to Stimulation of ovary leads to Ovulation, ovarian volume decreased thus size of ovaries also reduced. symptoms of PCOS are relieved with Remarkable decrease in weight and normalizing hormones. Thus Ayurvedic treatment proved to be successful in treating PCOS.[OVULATION INDUCTION IN PCOS: A CASE REPORT]

In the Management of vandhyatwa with anovulatory cycles along with some other treatment plan abhayadi modak is used for virechana and triphala kwatha for yoni prakshalana/vaginal douche. Both these formulations is having Haritaki as main contain.[ managementof vandhyatwa with anovulatory cycles (artava dosha) by ayurvedic medicines]

In the Ayurvedic management of aartava kshaya w.s.r. polycystic ovarian syndrome, Haritaki is used along with amalaki and bhibhitaki as decoction form in the 1<sup>st</sup> stage of management and in 3<sup>rd</sup> stage as an ingredient of rasayana kalpa it is used. Which gives better results in PCOS. [AYURVEDIC MANAGEMENT OF AARTAVA KSHAYA W.S.R. POLYCYSTIC OVARIAN SYNDROME – A CRITICAL REVIEW]

Anti-fertility effect of aqueous-ethanolic (1:1) extract of the fruit of Terminalia chebula is proved as herbal contraception in males which significantly shows decreased plasma testosterone levels was, this can be helpful in PCOS where plasma testosterone levels are increases abnormally in females. [Anti-fertility effect of aqueous-ethanolic (1:1) extract of the fruit of Terminalia chebula: Rising approach towards herbal contraception]

Another animal study shows that Inhibition of hyaluronidase activity of human and rat spermatozoa along with decreased plasma testosterone levels by Terminalia chebula. [Inhibition of hyaluronidase activity of human and rat spermatozoa in vitro and antispermatogenic activity in rats in vivo by Terminalia chebula, a flavonoid rich plant]

## DISCUSSION

As Acharya Charak mentioned Haritaki in prajasthapan and garbhasthapan gana this shows that Haritaki is useful in treatment of vandhyatva.

An imbalance in the doshas can affect the efficiency of the Shukra dhatu. When “doshas” affect the efficiency of the Shukra dhatu in women, it leads to excess production of male hormones and other symptoms of PCOS such as the appearance of cysts in the ovaries.

Ayurvedic treatment by haritaki focuses on correcting the imbalance of the doshas or forces of energy.

Terminalia chebula is rich in vitamin C and minerals like selenium, potassium, manganese and copper. It is a digestive tonic and has been found effective on a variety of disorders like constipation, flatulence, colitis, etc. It has antibacterial, anti-tumor and anti-inflammatory properties. It also helps in protecting the heart, improving appetite and regulating mood.

The normal Doshas plays a significant role in the ovulatory cycle also. For the proper maturation and rupture of follicle in the ovary Vata and Pitta plays an important role along with Agni. Due to vitiated Vata and Kapha which blocks the function of Pitta leads to improper maturation of follicles and forms small cysts. The increased number of cysts in ovary produces a Sophavastha in the ovary (bulky ovaries). Evidences also suggest that a low grade chronic inflammation is present in ovary of PCOS patients.

(Ref. International Journal of Ayurveda and Pharma Research Case Study AYURVEDIC MANAGEMENT OF POLYCYSTIC OVARIAN SYNDROME BY PALASADI BASTI AND PATHADI CHOORNA: A CASE REPORT S. Archana).

It helps alleviate mental tension and anxiety, increasing the development of libido hormones. It boosts female fertility, treats a variety of fertility disorders, and raises potency and endurance among women.

Haritaki consists of ingredients which are recognized to have healing properties including anticancer, antibacterial, antidiabetic and anti-oxidant properties. Haritaki is very nutritious containing essential vitamins, minerals, and proteins. It is a source of vitamin C, manganese, selenium, potassium, iron and copper. It also contains plant chemicals like – tannic acid, gallic acid, palmitic acid, stearic acid and behenic acid.

It has a unique property of maintaining the balance of three doshas.

## CONCLUSION

According to literature and References- Haritaki is useful for treating PCOS/PCOD.

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