

**ROLE OF AMALAKYADI GANA IN EYE DISORDERS: A REVIEW**

**Dr. Eresh Kumar<sup>1\*</sup>, Dr. Mukesh Kumar<sup>2</sup>, Dr. Rameshwar Lal<sup>3</sup>, Dr. Pradeep Soni<sup>4</sup> and  
Dr. Ashwini Kumar Sharma<sup>5</sup>**

<sup>1,2,3</sup>M.D. Scholar, Department of Dravyaguna Vigyan, MMM Govt. Ayurved College,  
Udaipur (RJ.).

<sup>4</sup>Asst. Professor, Department of Dravyaguna Vigyan, MMM Govt. Ayurved College, Udaipur  
(RJ.).

<sup>5</sup>Professor, Department of Dravyaguna Vigyan, MMM Govt. Ayurved College, Udaipur  
(RJ.).

Article Received on  
30 May 2023,

Revised on 20 June 2023,  
Accepted on 10 July 2023

DOI: 10.20959/wjpr202312-28395

**\*Corresponding Author**

**Dr. Eresh Kumar**

M.D. Scholar, Department of  
Dravyaguna Vigyan, MMM  
Govt. Ayurved College,  
Udaipur (RJ.).

**ABSTRACT**

Eyes serve as the mind's windows. The most appealing quality in a person is a set of bright eyes. These days's altered job demands, which call for extended computer use hours nutritional deficiencies, pollution, stress, and an uptick in allergy illnesses, among other factors contribute to eye ailments. Of those, some are treatable and some are not. The avoidance of these should thus be emphasised because the eye is the most vital and delicate of the human body's five sense organs. Since or before the creation of humans, *ayurveda* has been used as a kind of medicine. In today's digital age, protecting the eyes from numerous disorders and maintaining good eyesight are of utmost significance. Particularly vulnerable and prone to *Kapha* are the eyes. Because of

this, conditions affecting *Pitta* or *Kapha* will result in eye problems. *Chakshushya* and *Rasayana Dravyas* should be used correctly to preserve eye health and stave against age-related eye conditions. *Acharya Sushruta* noted the *Chakshushya* effect of *Amalakyadi gana* in the *Sutra Sthana*. *Amalaki*, *Haritaki*, *Pippali*, and *Chitraka* are the four medications found in "*Amalakyadi Gana*." The four medications might perform wonders when together. This review article could inspire researchers to further explore *Amalakyadi Gana's* benefits for ocular illnesses.

**KEYWORDS:** *Netra, Ayurveda, Amalaki, Haritaki, Pippali, Chitraka.*

## INTRODUCTION

Ancient Indians placed a high value on eyes and stressed the significance of protecting them, believing that males should make every effort to do so throughout their lives. *Ayurveda's* fundamental theory is based on the *tridosha* (*vata*, *pitta*, and *kapha*), which governs healthy bodily functioning and, when vitiated, causes disease. Since the function of the *doshas* varies from organ to organ, the etiological causes of *dosha* vitiation likewise vary depending on the organ. *Alochaka pitta* is thought to play a role in visual perception in the eye. In other words, *tejas* predominate among all *mahabhootas*<sup>[1]</sup> (in terms of ocular composition), making the eyes particularly vulnerable to *kapha*.<sup>[2]</sup> Therefore, conditions that are vitiating *pitta* or *kapha* will result in eye disorders. The oldest known health science is *ayurveda*, which has been used for centuries in India. Humans' primary and most essential sense of sight is provided by the highly specialised sensory organ known as the eye.

The most sophisticated sense organs in our body are the eyes. In actuality, vision occupies a much bigger portion of the brain than combined hearing, taste, touch, and smell. As people become older, the frequency of vision loss and blindness rises<sup>[3]</sup>, *Naimitika Rasayana* and *Achara Rasayana* are the two primary *Rasayana* used in the development of eye health. *Chakshushya* and *Rasayana Dravyas* should be used properly to preserve the *Netra's* health and ward against age-related eye problems. *Acharya Sushruta* discussed the *Chakshushya* effect of *Amalakyadi gana* in the *Sutra Sthana*.<sup>[4]</sup> *Amalaki*, *Haritaki*, *Pippali*, and *Chitraka* are the four medications found in "*Amalakyadi Gana*." All four medications include the *Rasayana* characteristic, which is critical for both preventing age-related changes in the eyes and preserving the function of the ocular muscles.

A careful assessment of the individual or combined effects of *Amalakyadi Gana* medicines on eye health was the goal of this study. *Sushruta Samhita's Amalakyadi Gana* was chosen for analysis of its contents for eye diseases. For investigating the effects of *Amalaki*, *Haritaki*, *Pippali*, and *Chitraka* in eye illnesses, a variety of accessible *Samhitas* (treatises), *Sangraha grantha* (compendia), formularies, and academic publications were observed. The four parts of the *Amalakyadi Gana* all have *Rasayana* properties. *Rasayanas* are widely known for preventing age-related symptoms and indications. If we examine the *Amalakyadi Gana's* combined characteristics, we find that *Katu*, *Madhura*, *Amla*, *Tikta*, *Kashaya Rasas*, and *Laghu*, together with *Ushna*, *Virya*, and *Madhura Vipaka*, predominate. So, it may function

as *Tridoshashamaka*. In the modern day, a great deal of study has been done on certain *Amalakyadi gana* plants that support their *Chaksushya* benefits.

## MATERIALS AND METHODOLOGY

### Material

Using Google search, we gathered relevant information about eye disorders, *netra roga*, and its management in our ancient *Samhitas*. The *Sushruta Samhita Sutra sthana* Chap.38, '*Amalakyadi Gana*' and its commentaries, as well as a number of *Dravyaguna literature*, were used to study '*Amalakyadi Gana*' drugs in depth.

### METHODOLOGY

There are four drugs mentioned in *Amalakyadi gana*- *Haritaki*, *Amalaki*, *Pippali* and *Chitraka*. All are showing their different properties and the combination of all these four drugs are beneficial in *netra roga*.

#### *Rasapanchaka of Amalaki, Haritaki, Pippali and Chitraka.*<sup>[5]</sup>

Drug	Botanical Name	Family	Rasa	Guna	Virya	Vipaka	Prabhava
<i>Haritaki</i>	<i>Terminalia Chebula</i>	<i>Combretaceae</i>	<i>Kashaya, Tikta, Madhura, Katu, Amla</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshashamaka, Especially Vata shamaka</i>
<i>Amalaki</i>	<i>Emblica Officinalis</i>	<i>Euphorbiaceae</i>	<i>PanchaRasa (Alavana)</i>	<i>Guru, Ruksha, Sheeta</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Tridosha Shamaka</i>
<i>Pippali</i>	<i>Piper longum Linn.</i>	<i>Piperaceae</i>	<i>Katu</i>	<i>Laghu, Snigdha, Tikshna</i>	<i>Anushna Sheeta</i>	<i>Madhura</i>	<i>Kapha-Vata Shamaka</i>
<i>Chitraka</i>	<i>Plumbago Zeylanica</i>	<i>Plumbaginaceae</i>	<i>Katu</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Ushna</i>	<i>Ushna</i>	<i>Vatakapha shamaka, Pittavardhaka</i>

**Haritaki-** (*Terminalia chebula*) held a high regard in *Ayurveda* for its ability to prevent and treat a variety of illnesses. *Ayurvedic* ancient literature has vividly described the therapeutic effect of the various types of *Haritaki*. *Abhaya* (variety of *Haritaki*) is mentioned for eye disease. *Haritaki* is one of the ingredients of the renowned formulation *Triphala*, which is a well-established combination beneficial for eye diseases. *Acharya Charaka* has also quoted positive action of *Harktaki (Terminalia chebula)* on *Indriyas* in *Rasayanadhyaya*.<sup>[6]</sup> *Haritaki (Terminalia chebula)* is mentioned as *Chakshushya* (beneficial for eyes), *Netrya* (good for

ocular health) and *Netra-roga-nashini* (Therapeutic effect on eye diseases) etc. in various classical texts Of *Ayurveda* like *Charaka*, *Bhavprakas*.<sup>[7,8,9]</sup> *Haritaki* (*Terminalia chebula*) reduce Muscles Spasm & augment muscle tones with the help of *Kashaya Rasa*. *Vilayana* (dissolution) of vitiated *Kapha* and *Meda* occurs with its *Ushna virya*, *Laghu*, *Ruksha Gunas* & *Tridosahara* properties. *Haritaki* (*Terminalia chebula*) improve eye muscles tone by its *Rasayana karma* (Rejuvenation property).<sup>[10]</sup>

- *Haritaki* (*Terminalia chebula*) fruit and seeds reveal dose dependent reduction in blood glucose of streptozotocin induced diabetic rats both in short term and long term study.<sup>[11]</sup>

**Amalaki-** *Amalaki* also known as Indian gooseberry or *Emblica officinalis*, is a well-known medicine with Indian origins. Its medicinal benefits are well known and have been widely applied in India since earliest times. *Amalaki* (*Emblica officinalis*) is known as a wonderful fruit for persons who are interested in staying in shape.<sup>[12]</sup> It has a strong ability to regenerate tissue. *Amalaki* is a strong plant that contains a moderate amount of vitamin C, gallic acid, antioxidants, and tannin. *Chaksushya* (good for the eyes), *Ajara* (anti-aging), and *Rasayana* (adaptogenic) qualities are all present in *Amalaki*.<sup>[13]</sup> *Amalaki* is also effective in the treatment of various eye diseases like *Abhishyanda* (conjunctivitis), *Adhimantha* (glaucoma) and diabetic eye complications like Diabetic Retinopathy etc. *Amalaki* enhances both *Alochaka Pitta* (*Pitta* responsible for proper functioning of the eyes/ vision) and *Ranjaka Pitta* (*Pitta* responsible for proper functioning of the liver and blood formation). *Amalaki* is a very renowned drug expressing Antioxidant property due to presence of high content of vitamin C. *Triphala* (*Amalaki*, *Haritaki*, *Vibhitaki*) *Churna* along with *Madhu* (honey) and *ghrita* (ghee) is the best rejuvenate prescription for eye disorders.<sup>[14]</sup> Due to its purgative effect, it lowers intraocular pressure. *Amalaki* is also beneficial for patients with a variety of age-related and chronic eye conditions, such as cataract,<sup>[15]</sup> ARMD (age-related macular degeneration), mucosal xerosis (dry eye), pterygium, pinguecula, rubor, and other inflammatory conditions of the eye. *Amalaki* (*Embelica officinalis*)'s antioxidant properties were demonstrated by a rise in lens glutathione levels and a fall in malondialdehyde levels. *Amalaki* (*Embelica officinalis*) alleviates cataractogenic conditions by raising the lens's total and soluble protein content.

**Recent study** to show *Chaksushya* effect-<sup>[16]</sup> A Therapeutic study on the efficacy of the *Amalaki Rasayana* and *Trataka Karma* on Computer vision Syndrom.

**Pippali-Pippali** (*Piper longum*) is widely used in several formulations for eye problems as a bioavailability booster. In the *Charaka Samhita*, *pippali* (*Piper longum*) is renowned for its *Yogvahi guna*, which may be thought of as a bioavailability booster. In other words, *Pippali* (*Piper longum*), when used in conjunction with either mix of herbs, improves the property as opposed to using it alone. Long pepper, ginger, and black pepper combined into *Trikatu* is another well-known bioavailability enhancer that works by either promoting rapid absorption through the gastrointestinal tract, preventing the drug from having its first pass effect through the liver after absorption, or by a combination of both mechanisms.<sup>[17]</sup> *Pippali* (*Piper longum*) have “piperine” as the principal phytoconstituent, which enhances the bioavailability of drugs, nutrients, vitamins etc.<sup>[18]</sup> *Pippali* (*Piper longum*) has a chief phytoconstituent named Piperene, which has proven property of bioavailability-enhancer.

- Many formations are mentioned in *Sushruta Uttratantra* for vision impairment in combination with *Pippali*-<sup>[19]</sup> Fomentation is prepared with the combination of *Pippali*, *Madhu*, and *Sendhav lavan*, *Animal Maans* is good in *kaphaja Timira*.
- <sup>20</sup>Fomentation is prepared with the extract of *Nagarmotha*, *Pippali*, *Sendhav Lavan*, *Yastimadhu* and milk is beneficial in all types of eye problems.

**Chitraka-** Due to its beneficial therapeutic qualities, *chitraka* holds a significant position in *Ayurveda*. It demonstrates the *Rasayana* (Rejuvenator) property<sup>[21,22]</sup> and performs *Deepana-Pachana Karma*, increasing the *Jatharagni* or site of *Pachaka Pitta* by virtue of which *Ama* is digested, which is thought to be the primary cause of all ailments. Given that it is a *Rasayana* (Rejuvenation), it could be beneficial to stop long-term degenerative changes in the eyes.

## RESULT

From this review we found that drugs of *Amalakyadi gana* carries various properties like *Haritaki laghu*, *ruksha guna*, *ushna virya* and *madhura vipaka* due to which showing *tridoshashamaka* action, especially *vatashamaka* action and some of the recent studies on *Haritaki* shows it acts as an antioxidant and due to its *Rasayana* property it prevents human beings from age related degenerations.

*Amalaki* consist of *Rasapanchaka* (*Alavana*), *guru*, *ruksha*, *sheeta guna* and *sheeta virya*, *madhura vipaka* due to which it showing *tridoshashamka* action and some recent studies tells

about its *Rasayana* and *Vayasthapana* properties, Which helps to keep human beings away from age related disease and disorders.

*Pippali* consist of *katu rasa*, *laghu*, *Snigdha*, *Tikshna guna* and *Anushna Sheeta virya* and *kaphavaat shamka* action. Formulations of *Pippali* with other drugs are very effective in eye disorders showed in literatures. In the other side one drug of *Amalakyadi Gana*, *Chitraka* showed its *deepana pachacna* properties, which enhances the *Jatharagani* and helps in the digestion of *Aama*. *Mandagani* and *Aama* is the main cause of several diseases.

From this review it is observed that the combination of all four drugs of *Amalkyadi Gana* is useful in eye disorders.

## DISCUSSION AND CONCLUSION

There is increase in the prevalence of visual loss and blindness with increasing age. In the eye, *Alochaka pitta* is considered as responsible factor for visual perception i.e., of all the *Mahabhootas*, *Tejas* dominates, so the eyes are especially susceptible and prone to *Kapha*. That's why the factors, which are vitiating *Pitta* or *Kapha* will lead to eye disorders. The main *Rasayana* adopted in eye health promotion are *Naimitika Rasayana* and *Achara Rasayana*. The appropriate use of *Chakshushya* and *Rasayana Dravyas* will help to maintain the health of the *Netra* and prevents age related eye disorders and in this review we studied the *amalakyadi gana* in *ayurvedic* literatures i.e. *Sushruta sutrasthana* chapter 38 and the combination of all four drugs of *Amalakyadi gana* shows *Chakshushya* properties.

Our ancient preachers have given us a divine wisdom in the form of *Ayurveda*. *Ayurvedic* drugs are exceedingly used in alleviating wide range of ocular conditions. By the review of all the ingredients of *Amalakyadi gana*, we can conclude that all the drugs are potential *Rasayana* which are beneficial for age related ocular diseases like Diabetic Retinopathy, Age related macular disorders etc. *Pippali* being a bioavailability enhancer can enhance potential of the *Amalakyadi gana*. *Chitraka* has *Deepana* and *Amapachana* property. Combination of all the four drugs together may work wonder. Although many research are available on individual drugs e.g., *Amalaki*, *Haritaki* etc. but very few are available on *Amlakyadi gana* formulation. This review work may help to encourage scientists to elaborate its beneficence in prevention and treatment of eye diseases.

## REFERENCES

1. L Hyman. Epidemiology of eye disease in the elderly, *Eye (Lond)*, 1987; 1(Pt 2): 330-41.
2. Tripathi B N, *Ashtanga Hridaya of Vagbhata, Sutra Sthana 23/21*, Nirmala Hindi Commentary, Chaukhambha Sanskrit Pratishtan, Delhi Reprint, 2007. p. 266.
3. Tripathi B N, *Astanga Hridayam of Vagbhata, Uttartantra 13/98*, Nirmala Hindi commentary, Chaukhambha Sanskrit pratishtan , Delhi Reprint 2007, Page No- 977.
4. Yadavji Trikamji, editor, Commentary: *Nibandha Sangraha of Dalhana on Sushruta Samhita of Sushruta, Sutra Sthana*, Chapter 37, verse no. 60-61, 1st edition, Varanasi: Chaukhambha Surbharati Publication; 2007. p. 167.
5. Prof. P.V. Sharma, *Dravyaguna Vijnana*, Vol.2 (Vegetable Drugs), Chaukhambha Bharti Academy Varanasi.
6. Prof. K. R. Srikanta Murthy, *Bhavprakasha*, Vol. 01. Chaukhambha Krishnadas Academy, Varanasi; 2004. p. 67-87.
7. Prof. K. R. Srikanta Murthy, *Bhavprakasha*, Vol. 01. Chaukhambha Krishnadas Academy, Varanasi; 2004. p. 67-87.
8. Shri Brahma Shankar Shastri, *Yogaratanakara*, Chaukhambha Sanskrit Sansthan, Varanasi; 2004. p. 108- 110.
9. Dr. P. Himasagar Chandra Murthy, *Sharangadhara Samhita*, 1st Ed., Chaukhambha Sanskrit Sansthan, Varanasi; 2001. p. 45-47.
10. Dr. Patil Pratik M., Dr. Bobade Rajkumar B., Dr. Firke Arti Ritu Haritaki in Eye-Care. R. International Journal of *Ayurvedic and Herbal Medicine*, 2015; 5(3): 1826–1831.
11. Kannan VR, Rajasekar GS, Rajesh P, Balasubramanian V, Ramesh N, Solomon EK, et al. Anti-diabetic activity on ethanolic extracts of fruits of *Terminalia chebula* Retz. Alloxan induced diabetic rats. *Am J Drug Discov Dev*, 2012; 2: 135–142.
12. Khan H. Role of *Emblica officinalis* in medicine, *Bot Res. Int.*, 2009; 2(4): 218-228.
13. *Dravya Guna Vigyan* by P.V. Sharma Chaukhambha Bharti Academy Publication, 2nd edition, Reprint, Varanasi, vol.2, Chap., 2009; 341: 758.
14. *Vagbhata, Ashtanga Hridaya-Sarvanga Sundari Comm* (2000) Arundatta, Chaukhambha Krishna Das Academy, Varanasi, Uttara Sthana 39/43: 927.
15. Head KA. Natural therapies for ocular disorders, part two: Cataracts and glaucoma. *Altern Med Rev.*, 2001; 6: 141-66.
16. Sakshi Sharma, A therapeutic study on the efficacy of *Amalaki Rasayana* and *Trataka Karma* in computer vision syndrome, *IAMJ*, March 2022.

17. C.K. Atal, Usha Zutshi, P.G. Rao. Scientific evidence on the role of *Ayurvedic* herbals on bioavailability of drugs, *Journal of Ethnopharmacology*, September 1981; 4(2): 229-232.
18. Muttepawar SS, Jadhav SB, Kankudate AD, Sanghai SD, Usturge DR. A review on bioavailability enhancers of herbal origin. *World J Pharm Pharm Sci.*, 2014; 3: 667–77.
19. Shastri Ambika Dutt. Hindi Commentary, *Sushruta Samhita*, vol. II, Chaukhambha Publications, New Delhi; 2011, chap. 17/43.
20. Shastri Ambika Dutt. Hindi Commentary, *Sushruta Samhita*, vol. II, Chaukhambha Publications, New Delhi; 2009. p. 1- 108.
21. Sharma PC, Yelne MB, Dennis TJ. Database on medicinal plants used in *Ayurveda* Volume I, Documentation and publication division, Central council for research in Ayurveda and siddha, New Delhi; 2000. p. 102–113.
22. Sharma PV, *Dravyaguna Vijnana* vol II, Chaukhambha Bharati Academy, Varanasi; 2001. p. 359-362. (Hindi book).