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# A COMPARATIVE CRITICAL REVIEW ON ASTAVARGA OF BHAVAPRAKASH NIGHANTU WITH KAKOLYADI GANA OF SUSRUTA SAMHITA: A REVIEW ARTICLE

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## ABSTRACT

'Astavarga' word first of all was used in an ancient text book named as 'Paryayaratnamala'. This book provides knowledgeable information about herbal description of Astavarga plants. 'Ashta' means eight and 'varga' means group, Astavarga literally meaning a group of eight medicinal plants in Ayurveda medicine, Different formulations of Astavarga plant members are used to cure various diseases such as seminal weakness, fever, abnormal thirst, diabetic conditions as well as a cure for vata, pitta, rakta doshas.[1] Kakolyadi gana is one of the first gana which is first described in Sushruta Samhita. Charaka had already described those dravyas in Jivaniya Mahakasaya with some changes. Vagbhatta mentioned these drugs (except draksha) in a gana with another name called Padmakadi gana. Astavarga means group of eight species of medicinal plants which includes Kakoli, Kshirkakoli, Jeevak, Meda, Mahameda, Rishbhak, Ridhhi and Vridhii. Astavarga is a formulation developed from eight different plants by Ashwani Kumars to treat the frail and emaciated body of Rishi Chyavan. This

formulation created the magic of rejuvenating Chyavan and since then is referred to as still famous Chyavanprash. Both Kakolyadi gana of Susruta and Astavarga of Bhava Prakash have properties like- Jeevaniya (drugs strengthening vitality, immunity system etc.), Brhimhaniya (increase flesh in the body by activating cell regeneration even in old age) and Vayasthapan (metabolic processes especially anabolism become active and leads to youthful body complexion).[2,3,4]

**KEYWORDS:** Astavarga, Ayurveda, Kakolyadi gana, Chyavanaprash.

## INTRODUCTION

The World Health Organisation (WHO) estimated that 80% of the population of developing countries relies on traditional medicines, mostly plants, for their primary health care needs.[5]

India holds the highest proportion of medicinal plants known for their medicinal value of any country in the world. The Indians have been using plants to cure diseases since ages, according to ancient documents on traditional medical systems based on plants; the Rigveda (4500–1600 BC), Charak Samhita (1000–800 BC) and Sushrut Samhita (800–700 BC).[5]

Paryayaratnamala was the first ancient text to use the word Astavarga and provide its description.[6] Astavarga is a group of eight medicinal plants mentioned in Bhava Prakash, namely, Jīvaka (*Microstylis mucifera,* Orchidaceae), Riṣabhaka *Microstylis wallichi,* Orchidaceae), Meda (*Polygonatum cirrhifolium,* Asparagaceae), Mahā Meda (*Polygonatum verticillatum,* Asparagaceae), Käkoli (*Roscocea procera,* Zingiberaceae*)*, Ksīra Käkoli (*Fritillaria roylei*, Zingiberaceae) Riddhi (*Habernaria intermedia*, Orchidaceae) and Vṛddhi (*Habernaria accuminata,* Orchidaceae).

As per Indian mythology, Ashwani Kumars, choose to revive sage Chyavan, through the Astavarga.[7] Ashwani Kumars came out with a formulation using eight different plants which miraculously rejuvenated the body of Rishi Chyavan and this preparation came to be known as Chyavanprash. The group of these eight plants is called Astavarga. With the disappearance of Gurukul system, the knowledge of medicinal plants started fading away coupled with no written details, most of the medicinal plants over the several centuries, hence, a great confusion about their actual identity had taken its deep roots The red list of rare and endangered species have included almost 560 herbal species of India .Astavarga member-plants are also reported to work as antioxidants and have massive capacity of cell

regeneration. Different formulations of Astavarga plant members are used to cure various diseases such as increasing seminal fluid concentration weakness, fever, abnormal thirst, diabetic conditions as well as a cure for vata, pitta, rakta doshas. Astavarga drugs have Jeevaniya and Vayasthapana properties with nutritive and anti-ageing effects.[8]

## MATERIALS AND METHODS

Concepts related to Astavarga and Kakolyadi gana are collected and analysed in perspective of their clinical application from Ayurvedic literatures like Brihat Trayees, Laghu Trayees, commentaries, Philosophies, nighantus, internets, journals and different review articles through an extensive literary review.

## RESULTS

### Astavarga

*जीवकर्षभकौ मेदे काकोल्यौ ऋद्धिवृद्धिके ।। १२० ।।*

*अष्टवर्गोऽष्टभिर्द्रव्यैः कथितश्चरकादिभिः ।*
*अष्टवर्गो हिमः स्वादुः बृम्हण शुक्रलो गुरुः ।।१२१।।*
*भग्नसन्धानकृत्कामबलासबलवर्द्धनः ।*
*वातपित्तास्त्रतृड्दाहज्वरमेहक्षयप्रणुत् ।।१२२।।*
(Bhavaprakash Nighantu Haritkyadi Varga Vol I)

Astavarga plants found in high altitude areas of the Himalayan northern valleys. Acharya Charaka designated a group of eight drugs as Asta varga which comprises of *Jīvaka, Rişabhaka, Meda, Mahā Meda, Käkoli, Ksīra Käkoli. Riddhi and Vṛddhi.*[3]

**Table no. 1: Depicting rasa panchaka of astavarga in general.**

| SL. NO. | Rasa-Panchaka | In general properties of astavarga- |
|---|---|---|
| 01. | Rasa | Madhura(sweet) |
| 02. | Guna | Guru(heavy) |
| 03. | Virya | Shita(cool) |
| 04. | Vipaka | Madhura(sweet) |
| 05. | Karma | Brimhan (strength promoting), Sukrala (increase semen production), Bhagna-sandhankar (heal fractures), Vajikaraka (increase libido), Rakta – pitta hara (allieviates rakta and pitta diseases), Trishna (alleviates thrist), Daha(removes burning sensation), Jwara(alleviates fever), Prameha (cure diabetes) and Kshaya hara (helpful in tissue wasting). |
| 06. | Dosa- karma | Kapha vardhak (increases kapha), Vata-pitta samak (alleviates vata and pitta). |

**Table no. 2: Depicting Morphology and Habitat of astavarga.**

| SL. NO. | Dravya | Botanical name and family | Habitat | Morphology |
|---|---|---|---|---|
| 01. | Jihvak | *Microstylis muscifera* (Orchidaceae) | Peak of Himalaya | Hollow tubers, minute leaves |
| 02. | Rishvak | *Microstylis wallichii* (Orchidaceae) | Peak of Himalaya | Hollow tubers, minute leaves. |
| 03. | Meda | *Polygonatum cirrhifolium* (Asparagaceae) | Morang (South-East of Nepal) | White tubers and secrets latex. |
| 04. | Mahameda | *Polygonatum verticillatum* (Asparagaceae) | Moranga (South-East of Nepal) | Ginger like tubers. |
| 05. | Kakoli | *Roscocea procera* (Zingiberaceae) | Morang (South-East of Nepal) | Blackish, resembling Satavari. |
| 06. | Kshira-Kakoli | *Fritillaria roylei* (Zingiberaceae) | Morang (South-East of Nepal) | Resembles with Satavari and has fragrance. |
| 07. | Riddhi | *Habenaria intermedia* (Orchidaceae) | Kosala mountain | Porous & white tuber. |
| 08. | Vriddhi | *Habenaria accuminata* (Orchidaceae) | Kosala mountain | Porous & white tuber. |

**Substitutes of Astavarga[3]**

*मेदाजीवककाकोलीऋद्धिद्वन्द्वेऽपि चासति । वरीविदार्यश्वगन्धावाराहींश्चक्रमात् क्षिपेत् ।।१४४।।*

**(Bhava Prakash Haritkyadi Varga Vol I)**

**Table no. 3: Depicting substitutes of astavarga.**

| Sl. No. | Drug name | Substitutes |
|---|---|---|
| 01. | Meda, Mahameda | Satavari |
| 02. | Jihwak, Rishwak | Vidarikanda |
| 03. | Kakoli, Kshirakakoli | Aswagandha |
| 04. | Riddhi, Vriddhi | Varahikanda or Charmakaralu |

In today's era there are no drugs of astavarga which are available. Also, the plants morphology described in nighantus, bhrihat trayees, laghu trayees are not similar to what we found today. Due to this unavailability of original astavarga dravya their substitutes are used as opined by Acharya Bhava Mishra.[3]

**Table no. 4: Other substitutes for Astavarga which are opined by modern scholars.**

| Sl. no. | Drug name | Substitute |
|---|---|---|
| 01. | JIHVAK | Guduchi |
| 02. | RISHVAK | Vansalochan |
| 03. | MEDA | Salam mishri |
| 04. | MAHAMEDA | Prasarani |
| 05. | KAKOLI | Black Musali |
| 06. | KSHIRAKAKOLI | Safed Musali |
| 07, | RIDDHI | Chiriya kanda,<br>Bala. Utvanga seeds. |
| 08. | VRIDDHI | Mahabala, Beejabanda |


**Picture depicting astavarga which is enumerated as followed**

1. Jihvak 2.Rishvak
3. Meda 4. Mahameda
5. Kakoli 6. Kshirakakoli
7. Riddhi 8. Vriddhi

**Kakolyadi Gana**[2]

*काकोलीक्षीरकाकोलीजीवकर्षभकमुद्गपर्णीमाषपर्णीमेदामहामेदाच्छिन्नरुहाकर्कट-*

*शृङ्गीतुगाक्षीरीपद्मकप्रपौण्डरीकर्धिवृद्धिमृद्वीकाजीवन्त्यो मधुकं चेति ।। ३५ ।।*

*काकोल्यादिरयं पित्तशोणितानिलनाशनः ।*

*जीवनो बृंहणो वृष्यः स्तन्यश्लेष्मकरस्तथा ।। ३६ ।।*

(Susruta Sutra Sthan 38/35-36)

**Table no. 5: Depicting kakolyadi gana and their part used.**

| Sl. no. | Drug name | Botanical name & family | Part used |
|---|---|---|---|
| 1. | Kakoli | *Roscoea procera* (Zingiberaceae) | Roots |
| 2. | Kshirakakoli | *Fritillaria roylei* (Zingiberaceae) | Roots |
| 3. | Jihvaka | *Microstylis muscifera* (Orchidaceae) | Tuber |
| 4. | Rishwaka | *Microstylis wallichii* (Orchidaceae | Tuber |
| 5. | Mudgaparni | *Phaseolous trilobus* (Fabaceae) | Panchanga |
| 6. | Mashaparni | *Teramnus labialis* (Fabaceae) | Panchanga |
| 7. | Meda | *Polygonatum cirrhifolium* (Asparagaceae) | Rhizome |
| 8. | Mahameda | *Polygonatum verticillatum* (Asparagaceae) | Rhizome |
| 9. | Chinnaruha/ Guduchi | *Tinospora cordifolia* (Menispermiaceae) | Stem |
| 10. | Karkatasringi | *Pistacia integerrima* (Anacardiaceae) | Gall |
| 11. | Tugakshiri | *Curcuma angustifolia* (Zingiberaceae) | Niryasa |
| 12. | Padmaka | Prunus cerasoides (Rosaceae) | Stem Bark |
| 13. | Prapaundarika | *Prunus species* (Rosaceae) | |
| 14. | Riddhi | *Habenaria intermedia* (Orchidaceae) | Tuber |
| 15. | Vriddhi | *Habenaria accuminata* (Orchidaceae) | Tuber |
| 16. | Jivanti | *Leptadenia reticulate* (Asclepiadaceae) | Root |
| 17, | Madhuka | *Glycerrhiza glabra* (Fabaceae) | Root & stolen |

**Table no. 6: Depicting rasapanchak of kakolyadi gana.**

| Sl. no. | Drug Name | Rasa | Guna | Virya | Vipaka | Karma |
|---|---|---|---|---|---|---|
| 01. | Kakoli | Madhura | Guru,Snigdha | Sita | Madhura | V-P ↓ |
| 02. | Kshirakakoli | Madhura | Guru,Snigdha | Sita | Madhura | V-P ↓ |
| 03. | Jihvaka | Madhura | Guru,Snigdha | Sita | Madhura | V-P ↓ |
| 04. | Rishwaka | Madhura | Guru,Snigdha | Sita | Madhura | V-P ↓ |
| 05. | Mudgaparni | Madhura | Guru,Snigdha | Sita | Madhura | Tridosa ↓ |
| 06. | Mashaparni | Madhura | Guru,Snigdha | Sita | Madhura | V-P ↓ |
| 07. | Meda | Madhura | Guru,Snigdha | Sita | Madhura | P-R-V ↓ |
| 08. | Mahameda | Madhura | Guru,Snigdha | Sita | Madhura | P-R-V ↓ |
| 09. | Chinnaruha/ Guduchi | Madhura | Guru,Snigdha | Ushna | Madhura | Tridosa ↓ |
| 10. | Karkatasringi | Kasaya | Laghu,Ruksha | Ushna | Katu | K-V ↓ |
| 11. | Tugakshiri | Madhura | Laghu,Snigdha | Sita | Madhura | K-P ↓ |
| 12. | Padmaka | Kasaya | Laghu,Snigdha | Sita | Katu | K-P ↓ |
| 13. | Prapaundarika | Kashaya | Laghu,Snigdha | Sita | Katu | K-P ↓ |
| 14. | Riddhi | Madhura | Guru,Snigdha | Sita | Madhura | Tridoṣa ↓ |
| 15. | Vriddhi | Madhura | Guru,Snigdha | Sita | Madhura | V-R ↓ |
| 16. | Jivanti | Madhura | Guru,Snigdha | Sita | Madhura | V-P↓ |
| 17. | Madhuka | Madhura | Guru,Snigdha | Sita | Madhura | V-P↓ |


**Pg-7.**


Picture depicting Kakolyadi gana which is enumerated as followed-

1. Kakoli
2. Kshirakakoli
3. Jihvaka
4. Rishwaka
5. Mudgaparnia
6. Mashaparni
7. Meda
8. Mahameda
9. Chinnaruha/ Guduchi
10. Karkatasringi
11. Tugakshiri
12. Padmaka

13. Prapaundarika
14. Riddhi
15. Vriddhi
16. Jivanti
17. Madhuka

Kākolyādi gana, mitigates pitta, rakta and vāta dosas. It is restorative, stoutening, aphrodisiac, increases breastmilk and kapha. It is described as pittaraktahara, jivaniya, bhrimhana vrisya, stanya, and sleshmakar. Thus, Kakolyadi gana of Susruta and Astavarga of Charaka has the same properties. Dalhana mentions Kakolyadi gana as the drug group possessing cold properties and anti-poisonous as mentioned in Kalpa sthan.[2]

## DISCUSSION

In ancient time Astavarga flourished well but now these plants are at the edge of extinction or extinct, therefore, they have been kept in rare and endangered plants list. Due to very less availability of these medicinally important plants, industries related with Ayurveda and herbalists also tried to search suitable alternatives of these plants by other medicinal plants which are available in sufficient quantity and have same or more or less same medicinal property due to similar chemical constituents.[1] Nighantus and commentaries concluded that the Astavarga was rare to kings and therefore suggested, use of substitutes instead of genuine plants. This suggestion put forth hampered further efforts to explore these plants in their habitats. Modern taxonomic system of plant classification facilitated the task of correct identification of Astavarga plants. Effort by several authors on various aspects like distributon, their properties and propagation etc. of Astavarga plants have been discussed, but till date no attempt made in perspective of the correct identification and representative of the Astavarga group, there is much uncertainty about the botanical names of Astavarga plant species, so the present communication deals with correct identification of Astavarga plants described in various Nighantus and Samhitas with their taxonomical description from various floras.[9]

Under Kakolyadi gana 17 drugs are enumerated. Dravya of this gana is predominantly of madhur rasa, madhur vipaka, Sita virya and snigdha guna. Karkatasringi is kashaya rasa and Ushna virya. Guduchi, padmaka and prapaundarika is having tikta rasa. By these properties, this gana is pitta-vatahara, kaphahara, vrishya, stanya, bhrimhana, jivana and raktasodhak. One thing is observed that all the drug which are mentioned in this gana have specific habitat

i.e. found in high altitude and they are not available easily, so the tradition of Pratinidhi dravya comes in to existence. There are two traditions for Pratinidhi dravya described by Bhavaprakasha and Bhaisajyaratnawali. Kakolyadi gana of Sushruta is pitta-raktahara, jivana, bhrimhana, vrisya, stanya, sleshmakara. These properties can also be justified by jivaniya gana mahakasaya which is described by charak with their action same as of Kakolidvaya gana. Due to its madhura rasa, madhur vipaka, Sita virya it paccifies vata,pitta and Rakta dosha. Due to its madhur rasa, madhur vipaka, Sita vriya and snigdha guna it is vrisya, stanya, vrimahana, jivana.[10]

## CONCLUSION

Thus, it can be said both Kakolyadi gana of Susrut Samhita and Astavarga of Bhava Prakash Nighantu, mentioned in haritakyadi varga and Charak Samhita mentioned in Jeevaniya varga are- Jeevaniya (drugs strengthening vitality, immunity system etc.), Bhrimhaniya (increase flesh in the body by activating cell regeneration even in old age) and Vayasthapan (metabolic processes especially anabolism become active and leads to youthful body complexion. Vrisya (improving vitality.) Also they both mitigate, pitta rakta and vata dosas, have restorative functions, aphrodisiac, increases breast milk and kapha. Both Astavaga and kakolyadi gana are strength promoting, increase semen production, increase libido, helpful in tissue wasting, cold properties and antipoisonous as mentioned in kalpa sthan.[1],[2],[3],[4],[9],[11]

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