



PHARMACO-THERAPEUTIC REVIEW OF *PATOLADI GANA* FROM *ASHTANG HRIDYA*

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ABSTRACT *Patoladi Gana* mentioned in *Ashtang Hridaya* is a formulation which is a combination of *Patol*, *Kutaki*, *Chandan*, *Murva*, *Guduchi* and *Patha*. This formulation has caught the attention because of its therapeutic potential. In Ayurveda, this *Gana* has various therapeutic indications. The contents of this *Gana* are enriched with several phytochemical constituents having tremendous pharmacological properties. In general, phytoconstituents play a vital role in the treatment of various diseases and for the improvement of human health. This *Patoladi Gana* is known to be having antioxidant, anti-inflammatory, immunomodulator, antimicrobial, hepatoprotective, nephroprotective and many more therapeutic applications. To grab all the benefits of this formulation, its phytoconstituents and pharmacotherapeutic aspect have to be thoroughly studied. This review can be very useful for researchers in medical field to find out solutions for many modern diseases.

The current review is focused on phytochemical constituents of *Patoladi Gana* along with its pharmacological activities and its therapeutic use. It also sheds light on the action of this drug as per Ayurveda. The review will pave a path for researchers to study this formulation further for therapeutic benefits.

KEYWORDS : Patoladi Gana, Patol, Kutaki, Chandan, Murva, Guduchi, Patha.

INTRODUCTION

The eternal science of life i.e., Ayurveda has abundant medicinal herbs. The ancient sages have well secured them by classification of these herbs in different *Gana*. Group of herbs means *Gana* and it is named on the basis of its first ingredient. Each *Gana* represents a group of herbs having similar pharmacological actions. Though they appear to have dissimilar presentations and properties, their pharmacodynamics is almost the same.

In *Ashtang Hridaya*, *Vagbhat* has mentioned 33 such *Gana* in the chapter *Shodhanadi Gana Sangraha* of *Sutrasthana*¹. Even though these *Ganas* have multiple indications, but they are named on the basis of its first herb ingredient, which is thought as the prime.

Patoladi Gana is one such group of herbs mentioned in this chapter. The contents of this *Gana* are *Patol*, *Kutaki*, *Chandan*, *Murva*, *Guduchi* and *Patha*. These drugs pacify *Kapha*, *Pitta* and act on *Kushtha* (Skin diseases), *Visha* (toxic), *Jwara* (fever), *Vami* (Vomiting), *Arochak* (Anorexia) and *Kamala* (Jaundice) diseases.²

Apart from this, the contents of *Patoladi Gana* possess many other properties too. Thus, the intend of this review is to discover pharmacotherapeutic importance of this *Gana*.

MATERIALS AND METHODS:

This study is a literary review to point out efficacy and importance of *Patoladi Gana*.

Literature has been reviewed from both Ayurveda & Contemporary sciences.

Also, critical literary search was done on internet.

Review of literature

All the relevant information was compiled with both Ayurveda and Modern aspect and collected information was presented.

A. Review of *Patoladi Gana* from Ayurveda classics

Table 1: Botanical name and Family of contents of *Patoladi Gana*^{3,4}

Sr No	Drug	Botanical name	Family
1	<i>Patol</i>	<i>Trichosanthes dioica</i>	Cucurbitaceae
2	<i>Kutaki</i>	<i>Picrorrhiza kurroa</i>	Scrophulariaceae
3	<i>Chandan</i>	<i>Santalum album</i>	Santalaceae
4	<i>Murva</i>	<i>Clematis gouriana</i>	Ranunculaceae
5	<i>Guduchi</i>	<i>Tinospora cordifolia</i>	Menispermaceae
6	<i>Patha</i>	<i>Cissampelos pareira</i>	Menispermaceae

Table 2: *Rasa, Guna, Veerya, Vipak, and Doshagnata* of contents of *Patoladi Gana*⁵

Sr. No	Content	<i>Rasa</i> [Taste]	<i>Guna</i> [Properties]	<i>Veerya</i> [Potency]	<i>Vipak</i> [Post digestive effect]	<i>Doshagnata</i> [Action on <i>Doshas</i>]
1	<i>Patol</i>	<i>Tikta</i>	<i>Laghu, snigdha</i>	<i>Ushna</i>	<i>Madhur</i>	<i>Tridoshghna</i>
2	<i>Kutaki</i>	<i>Tikta</i>	<i>Laghu, Ruksha</i>	<i>Sheet</i>	<i>Katu</i>	<i>Vatakar, Pittakaphaharak</i>
3	<i>Chandan</i>	<i>Tikta, katu</i>	<i>Laghu, Ruksha</i>	<i>Sheet</i>	<i>Katu</i>	<i>Pittaghna, Vatkar</i>
4	<i>Murva</i>	<i>Tikta, Kashay</i>	<i>Guru, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Tridoshghna</i>
5	<i>Guduchi</i>	<i>Tikta, Katu, Kashay</i>	<i>Fresh- Snigdha, mrudu, Dried- Laghu, Ruksha, mrudu.</i>	<i>Ushna</i>	<i>Madhur</i>	<i>Tridoshghna</i>
6	<i>Patha</i>	<i>Tikta, katu</i>	<i>Laghu, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Tridoshghna</i>

Table 3: *Karma and Rogagnata* of contents of *Patoladi Gana*⁴

Sr. No	Content	<i>Karma</i> [Therapeutic action]	<i>Rogagnata</i> [Action on diseases]
1	<i>Patol</i>	<i>Pittavirechan, Jwaraghna, Deepana, Paachan, Vrushya, Balya</i>	<i>Kushtha, Kandu, Jwara, Daha, Raktavikar, Kamala</i>
2	<i>Kutaki</i>	<i>Pittavirechan, Jwaraghna, Deepana, Paachan, Stransan Bhedan, Hrudya</i>	<i>Jwara, Shwas, Krumi, Yakrutvikar, Kamala, Paandu, Sangrahani, Krumi</i>
3	<i>Chandan</i>	<i>Daahashamak, Varnya, Graahi, Pipasahar, Hridayasanrakshak, Kandughna, Vrishya, Raktaprasadak, Mutral, Durgandahara, Vishaghna</i>	<i>Jwar, Pittaj Vikar, Daha, Trushna Raktapitta, Mutrakrichha, Mutraghaat, Raktameha, Raktapradar, Ushnavaat, Raktatisaar, Skin diseases.</i>
4	<i>Murva</i>	<i>Stransan, Kushthaghna, Swedajanann</i>	<i>Raktapitta, Kushtha, Kandu, Upadansha, Gandamala, Jwara</i>
5	<i>Guduchi</i>	<i>Rasayan, Balya, Jwarhar, Deepan, Mutrajanan, Pittasarak, Twakroghar, Vishaghni</i>	<i>Jwara, Daha, Trushna, Vami, Vaat-rakta, Prameha, Pandu, Bhrama, Vali, Palit, Kushtha</i>
6	<i>Patha</i>	<i>Grahi, Stanyashodhan, Jwarhar, Balya, Bastishodhak, Mutrajanak, Deepana, Paachan</i>	<i>Jwara, Atisaar, Mutravikar, Shopha, Kasa, Artav Vikar, Arsha</i>

B. Review of contents of *Patoladi Gana* from published research studies-

Chemical constituents of contents of *Patoladi Gana*

Patol: Phenolic acids, polyphenols and flavonoids, alkaloids, glycosides, steroids and tannins.⁶

Kutaki: Iridoid glycoside picosides I, II, III, and kutkoside, known collectively as kutkin, flavonoids, triterpenes, alkaloids, and coumarins such as apocynin, glycosides, nine cucurbitacin, drosin, and triterpenoid ursolic acid.⁷

Chandan: Phenolics, flavonoids, alkaloids, tannins, saponin, Santalbic acid, palmitic acid, carbohydrates, glycosides, proteins aminoacids, fixed oils, mucilage α -santalene, β -santalene, α -santalol, β -santalol.^{8,9}

Murva: Alkaloids, flavonoids, terpenoids, saponins, tannins, glycosides and phenol.¹⁰

Guduchi: Alkaloids, diterpenoid lactones, steroids, glycosides aliphatic compounds and polysaccharides.¹¹

Patha: Alkaloids (bisbenzylisoquinoline, hayatine, hayatidine, berberine, cissampareine, dicentrine, insularine, cycleanine, curine and isomerubrine), flavanoids, tannins, volatile oils and glycosides etc.¹²

Pharmacological actions of contents of *Patoladi Gana* as per contemporary research

Patol: Anti-inflammatory, Antioxidant and Immunomodulator activity, Ameliorative, Anti Diabetic, Anti toxic, Antipyretic, Antidiarrheal, Antimicrobial, Hepatoprotective, Anti-Convulsant, Cytotoxic, Cholesterol lowering, Wound Healing, Anti-worm, laxative properties.^{13,14}

Kutaki: Antioxidant, Antiallergic, Antiasthmatic, Anticancerous and Immunomodulatory properties, Anti-inflammatory, Nephroprotective, Hepatoprotective, and Hypolipidemic activities.^{15,16,17}

Chandan: Antioxidant, Antiviral, Anticancer, Antifungal, Antibacterial, Anti-Inflammatory, Analgesic, Antipyretic, Anti-Arthritic, Anti-HIV and Anthelmintic activities.¹⁸

Murva: Anti-Inflammatory, Antioxidant activities.¹⁹

Guduchi: Anti-Inflammatory, Diuretic, Antidiabetic, Antioxidant and Hepatoprotective, Anticancer, Analgesic, Antimicrobial, Immunomodulatory, Nephroprotective, Anti-Stress, Anti Spasmodic, Anti-Pyretic, Anti-Allergic, Antileprotic, Anti-Hyperlipidaemic activities.²⁰

Patha: Anti-Inflammatory, Analgesic, Antipyretic, Immunomodulatory, Antivenom, Memory-Enhancing, Anti-Diarrhoeal, Antidiabetic, Hepatoprotective, Muscle Relaxant, Antiurolithic, Cardiovascular, Antioxidant activities.²¹

DISCUSSION-

All the information obtained from Ayurveda texts and various published research studies has been reviewed and discussed.

Patoladi Gana was reviewed comprehensively for its therapeutic and pharmacological actions as per Ayurveda and modern science. The contents of this *Gana* show their efficacy in various health ailments. This *Gana* mainly contains *Tiktarasatmak*, *Katu Vipaki* and *Ushna Veerya Dravyas* i.e., *Patol*, *Kutaki*, *Chandan*, *Murva*, *Guduchi* and *Patha*.

Patoladi Gana is *Tridoshagna* in nature, especially *Pitta-Kapha Shamak*. *Patol* with its *Madhur Vipak* and *Ushna Guna*, *Guduchi* with its *Snigdha* and *Ushna Guna* and *Patha* and *Murva* with its *Ushna Veerya* pacifies *Vata*. *Kutaki* and *Chandan* due to *Tikta Rasa* and *Sheeta Veerya*. *Patol* and *Patha* due to *Tikta Ras* while *Guduchi* with its *Tikta*, *Kashaya Rasa* pacifies *Pitta Dosha*. Most of the contents of *Patoladi Gana* pacify *Kapha Dosha* due to their *Tikta*, *Katu* and *Kashay Ras*, *Katu Vipak*, *Laghu*, *Ruksha*, *Ushna* and *Tikshna Gunas*.

Due to its *Dhatwagnideepan*, *Dhaatuprasadak*, *Aampachan*, *Pittavirechan*, *Jwaraghna*, *Vrushya*, *Balya*, *Bhedan*, *Hrudya*, *Daahashamak*, *Varnya*,

Graahi, *Pipaasahar*, *Mutral*, *Kandughna Strotoshodhan*, *Vranashodhan*, *Raktashodhak*, *Bastishodhak*, *Mutrajanan*, *Shothahar*; *Kothaprasaman*, *Rasayan* and *Vishaghna* nature, it is effective in various disorders.

As far as their pharmacological properties are concerned, majority of these drugs have Anti-inflammatory, Antioxidant, Immunomodulator activity, Ameliorative, Anti Diabetic, Anti toxic, Antipyretic, Antidiarrheal, Antimicrobial, Antiurolithic, Nephroprotective, Hepatoprotective, Anti-Convulsant, Cytotoxic, Cholesterol lowering, Wound Healing, Anti-worm, laxative properties. Most of these researches were preclinical studies consisting laboratory based or animal studies which show its efficacy.

Thus, its organ protecting activity can be due to its Antioxidant and anti-inflammatory activity as per contemporary science and due to *Tridoshghnata* as per Ayurveda. Due to its *Dhatwagnideepan*, *Dhaatuprasadak*, *Aampachan*, *Strotoshodhan*, *Raktashodhak*, *Bastishodhak*, *Vishaghna* nature, it can be effective in various diseases also.

CONCLUSION-

After reviewing the available literature, it can be said that, chemical constituents of contents of *Patoladi Gana* possess antioxidant activity which provide organ protection and also can be used to treat various diseases. Also, as per Ayurveda, it balances *Tridoshas* by its *Tridoshghna* nature and thus aids in disease protection. By taking all this literature into consideration, it can be concluded that *Patoladi Gana* has organ protective activity.

Further advanced studies are needed to establish its efficacy in various diseases for betterment of Ayurveda and human being.

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