

PATOLADI GANA OF ASHTANGA HRIDAYA: A COMPREHENSIVE REVIEW

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ABSTRACT

Background: *Patoladi gana* is one among the 33 *gana* described in 13th chapter of *Ashtanga Hridaya Sutrasthana*. It is a combination of *Patola*, *Katurohini*, *Chandana*, *Madhusrava*, *Guduchi* and *Patha*. It is a frequently used formulation with therapeutic efficacy in *Kushtha* (~integumentary disease), *Visha* (~poisoning), *Jwara* (~fever), *Vami* (~vomiting), *Arochaka* (~Anorexia) and *Kamala* (~clinical features of Jaundice). **Aim:** To study the *dravyas* of *Patoladi gana* and review *Patoladi gana* from various literature and its therapeutic efficacy as *kapha-pitta shamaka* in various diseased conditions. **Materials and Methods:** Various classical *Ayurvedic* texts and articles published in various journals regarding *Patoladi gana* were explored. All the data were collected, summarized, and critically analyzed to find scientific evidence for the pharmaco-therapeutic efficacy of *Patoladi gana*.

Results: It was found described in *Sushruta Samhita*, *Ashtanga Hridaya*, *Madanadi Nighantu*, *Ashtanga Nighantu* etc. The contents of this *Gana* are enriched with several phyto-constituents having tremendous pharmacological properties. This *Patoladi Gana* has antioxidant, anti-inflammatory, immunomodulator, antimicrobial, hepatoprotective, nephroprotective, and many more therapeutic applications. **Conclusion:** *Patoladi gana* containing 6 *dravyas* predominantly has *Tikta-kashaya rasa*, *Laghu-ruksha guna*, *Ushna virya* and *katu vipaka* which are responsible for its therapeutic effect by alleviating vitiated *Kapha-pitta doshas* in various diseases. This review can be useful for researchers in medical field to find out solutions for many modern diseases.

KEYWORDS: *Patoladi gana*, *Patola*, *Kutaki*, *Chandana*, *Murva*, *Guduchi*, *Patha*.

INTRODUCTION

Ayurveda has described abundant medicinal herbs and the ancient sages have classified these herbs in different *Gana* (Group of herbs). *Gana* is named on the basis of its first ingredient and represents a group of herbs with similar pharmacological action or therapeutic use. Considering the condition of disease and the diseased, group of drugs can be used separately, two or three together or the group itself divided or complete which depends on the *yukti* of *Bhishaka* (S.Su.36/34).

In *Ashtanga Hridaya*, 33 such *gana* has been described in the chapter *Shodhanadi Gana Sangrah* of *Sutrasthana*.^[1] *Patoladi Gana* is one among them containing *Patol*, *Katurohini*, *Chandana*, *Madhusrava*, *Guduchi* and *Patha*. This group of drugs pacify *Kapha-Pitta dosha* and indicated in *Kushtha* (integumentary disease), *Visha* (toxic), *Jwara* (fever), *Vami* (Vomiting), *Arochaka* (Anorexia) and *Kamala* (Jaundice).^[2] The contents of *Patoladi Gana* possess many other properties too.

Thus, this review is intended to discover pharmaco-therapeutic importance of this *Gana* in various diseased conditions.

MATERIALS AND METHODS

Literature regarding *Patoladi gana* has been reviewed from Classical *Ayurveda* texts. Individual drugs have been studied thoroughly for their properties, actions and uses from various literatures. Articles related to *Patoladi gana* and its contents were searched online from various journals using Google scholar, PubMed, Scopus, Web of Science etc. to establish ancient-modern concordance for *Patoladi gana*. A market study was done for available pharmaceutical preparations.

RESULTS

3.1. *Patoladigana* in *Samhitas*

Among *Brihatrayi*, this *gana* is described in *Sushruta Samhita* (S.Su.38/33-34) and *Ashtanga Hridaya* (A.H.Su. 15/15). In *Sushruta Samhita*, *Kuchandana* is also included in the contents of this *gana* and it is also included in *vrana*. Description of contents of this *gana* in different commentaries on *Samhita* is given in table no.1.

Table 1: Description of contents of patoladigana in different commentaries on Samhita.

S.no.	Name of Content	Nibandhasangraha vyakhya (Dalhan)	Sarvangasundara vyakhya	Ayurvedarasayanam vyakhya
1.	Patola	-	Panduphalam	-
2.	Katurohini	-	Katuka	-
3.	Chandana	Kuchandanam raktachandanam.	Gandhasaram	-
4.	Madhusrava	Murva dudhauda, chorasnayuka ..	Murangi	Murva
5.	Guduchi	-	Chinnaruha	-
6.	Patha	-	Ambashtha	-

3.2. Description of Patoladigana in various Nighantus

This gana is described in few *nighantus*. Its references in various *nighantus* are summarised in Table no.2.

Table 2: Patoladigana in Nighantus.

S.No.	Nighantu	Gana	Reference
1.	Saushruta Nighantu	+	17/207
2.	Ashtanga Nighantu	+	7/63-65
3.	Abhidhana Manjari	Madanadigana (Trayodasha varga)	13/191-196
4.	Madanadi Nighantu	Panchadash gana	15/1-4

3.3. Botanical identification of contents of Patoladi gana^[3,4]

Botanical name, family and synonyms of the contents of this gana is described in Table no.3.

Table 3: Botanical identification of contents of Patoladi gana.

S.no.	Name of Drug	Botanical name	Family	Synonyms	Part used
1.	Patola	<i>Trichosanthes dioica</i> Roxb.	Cucurbitaceae	<i>Kulaka, Karkashchada, Rajiphala, Bijagarbha,</i>	<i>Patra</i>
2.	Katurohini	<i>Picrorhiza kurroa</i> Royle ex Benth.	Scrophulariaceae	<i>Katuka, Tikta, Kandarua, Krishnabheda.</i>	<i>Moola, Bhaumik kanda.</i>
3.	Chandana	<i>Santalum album</i> L.	Santalaceae	<i>Shrikhanda, Gandhasaara, Malayaja.</i>	<i>Kandasaara</i>
4.	Madhusrava	<i>Marsdenia tenacissima</i> W. & A.	Asclepiadaceae	<i>Tiktavalli, Murva</i>	<i>Mula</i>
5.	Guduchi	<i>Tinospora cordifolia</i> (Thunb.) Miers	Menispermaceae	<i>Amrita, Chinnaruha, Chakralakshanika</i>	<i>Kanda</i>
6.	Patha	<i>Cissampelos pareira</i> L.	Menispermaceae	<i>Vartikta, Avidhhakarni, Piluphala.</i>	<i>Moola, Bhaumik kanda.</i>

3.4. Rasapanchaka of drugs in Patoladi gana^[5]

Rasa, guna, virya, vipaka and doshakarma are mentioned in Table no. 4

Table 4: Rasapanchaka of drugs in Patoladi gana.

S.No.	Dravya	Rasa	Guna	Virya	Vipaka	Dosha karma
1.	Patola	Tikta	Laghu, Ruksha	Ushna	Katu	Tridoshashamaka
2.	Katurohini	Tikta	Laghu, Ruksha	Shita	Katu	Kaphapittashamaka
3.	Chandana	Tikta, Madhura	Laghu, Ruksha	Shita	Katu	Kaphapittashamaka
4.	Madhusrava	Tikta, Kashaya	Guru, Ruksha	Ushna	Katu	Tridoshashamaka
5.	Guduchi	Tikta, Kashaya	Guru, Snigdha	Ushna	Madhura	Tridoshashamaka
6.	Patha	Tikta	Laghu, Tikshana	Ushna	Katu	Kaphapittashamaka

3.5. Karma and Rogaghnata of drugs in Patoladi gana^[6]

Actions of different drugs with their therapeutic effects are described in table no. 5.

Table 5: Karma and Rogaghnata of drugs in Patoladi gana.

S.No.	Dravya	Karma	Rogaghnata
1.	Patola	Jwaraghna, Deepana, Pachana, Vrishya, Balya.	Kushtha, Kandu, Jwara, Daha, Raktavikara, Kamala.
2.	Katurohini	Pittavirechana, Jwaraghna, Deepana, Paachana, Bhedana, Hridya	Jwara, Shwasa, Krumi, Yakrutvikara, Kamala, Paandu, Krimi
3.	Chandana	Daahashamaka, Varnya, Graahi, Pipaasahara, Hridyasanrakshaka, Kandughna, Vrishya,	Jwara, Pittaja Vikara, Daha, Trushna, Raktapitta, Mutrakrichha, Mutraghaata, Raktameha, Raktapradara, Ushnavaata, Raktatisaara.
4.	Madhusrava	Shransan, Kushthaghna, Swedajanan	Raktapitta, Kushtha, Kandu, Upadansha, Gandamala, Jwara
5.	Guduchi	Rasayana, Balya, Jwarhara, Deepana, Mutrajanana, Pittasaraka, Twakroghara, Vishaghni.	Jwara, Daha, Trishna, Vami, Vaata-rakta, Prameha, Pandu, Vali, Palit, Kushtha
6.	Patha	Grahi, Stanyashodhana, Jwarhara, Balya, Bastishodhaka, Mutrajanaka, Deepana, Pachana.	Jwara, Atisaara, Mutravikara, Shopha, Kasa, Artava Vikara, Arsha

3.6. Chemical constituents and pharmacological activities of drugs in Patoladi gana: Table no. 6

Table 6: Chemical constituents and pharmacological activities of drugs in Patoladi gana.

S.No.	Dravya	Chemical constituents	Pharmacological activity
1.	<i>Patola</i>	β -Sitosterol, its glucosides, and luteolin-7-glucoside, steroidal saponin, 24- α -ethyl-20-ene-7-hydro-stigmast-8 β : 14 β -di-3-O- β -d-xylofuranoside in leaf extract. Phenolic antioxidants- caffeic acid, epicatechin, vanillic acid, p-coumaric acid, quercetin hydrate, and trans-ferulic acid. ^[7]	Anti-inflammatory, Antioxidant, Immunomodulator activity, Anti toxic, Antipyretic, Antidiarrheal, Antimicrobial, Hepatoprotective, and Laxative properties. ^[8]
2.	<i>Katurohini</i>	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. ^[9]	Antioxidant, Antiallergic, Anticancerous and Immunomodulatory properties, Anti-inflammatory, Hepatoprotective and Hypolipidemic activities. ^[10]
3.	<i>Chandana</i>	Phenolics, flavonoids, alkaloids, tannins, saponin, Santalanic acid, palmitic acid, carbohydrates, glycosides, proteins aminoacids, fixed oils, mucilage α -santalene, β -santalene, Santalol 90% - mixture of 2 primary sesquiterpene alcohol α -santalol & β -santalol. ^[11]	Antioxidant, Antiviral, Anticancer, Antifungal, Antibacterial, Anti-Inflammatory, Analgesic, and Antipyretic. ^[12]
4.	<i>Madhusrava</i>	Flavonoids, terpenoids, saponins, tannins, Marsdenosides A–H, 16 polyoxypregnane glycosides - marstenacissides A1-A7 (1–7) and marstenacissides B1-B9 (8-16). ^[13]	Anti-Inflammatory, anti-cancer and Antioxidant activities. ^[14]
5.	<i>Guduchi</i>	Sesquiterpene tinocordifolin, sesquiterpene glycoside tinocordifolioside: an immunologically active arabinogalactan, phytoecdysones ecdysterone and makisterone, Alkaloids- berberine and magnoflorine. ^[15]	Anti-Inflammatory, Antidiabetic, Antioxidant and Hepatoprotective, Anticancer, Antimicrobial, Immunomodulatory, Anti-Pyretic, Anti-Allergic. ^[16]
6.	<i>Patha</i>	Alkaloids (bisbenzylisoquinoline, hayatine, hayatidine, berberine, cissampareine, dicentrine, insularine, cycleanine, curine and isomerubrine), flavanoids, tannins, volatile oils and glycosides. ^[17]	Anti-Inflammatory, Antipyretic, Immunomodulatory, Anti-Diarrhoeal, Antidiabetic, Hepatoprotective, and Antioxidant activities. ^[18]

3.7. References of *Patoladi Gana* in *Ashtang Hridaya* (Table no. 7.)

Table 7: References of Patoladi Gana in Ashtang Hridaya.

S. No.	Chapter	Verse
1.	<i>Visarpachikitsa adhyaya</i>	A.H.Chi 18/5
2.	<i>Balamayapratishedha adhyaya</i>	A.H.U. 2/15

DISCUSSION

The data obtained from Ayurveda texts (*Samhitas*, their commentaries and *Nighantus*) and published research studies in reputed journals has been reviewed and discussed. *Patoladi Gana* and its contents were comprehensively reviewed for their therapeutic and pharmacological actions as described in Ayurveda and modern science.

This *gana* has been described in *Sushruta Samhita*, *Ashtanga Sangraha* and *Ashtanga Hridaya*. In *Sushruta Samhita*, *Kuchandan* has been described along with other 6 drugs and this *gana* has been indicated in *Vrana Chikitsa* which was not mentioned directly in *Ashtanga Hridaya* as it can be included in *kustha*. Description of this *gana* has been given in *Sausruta Nighantu*, *Ashtanga Nighantu*, *Abhidhan manjari* & *Madanadi Nighantu*. Drugs and indications described in them were similar to *Ashtanga Hridaya*.

This *Gana* mainly contains *Tikta-kashaya rasapradhana*, *Laghu-ruksha guna pradhana*, *Katu Vipaki* and *Ushna Veerya Dravyas* i.e., *Patola*, *Katurohini*, *Chandana*, *Madhusrava*, *Guduchi* and *Patha*. *Patoladi Gana* is *Tridoshagna* in nature, especially *Kapha-pitta Shamak*. *Patola* with its *Madhur Vipaka* 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*, *Patola* and *Patha* due to *Tikta Ras* while *Guduchi* with its *Tikta, Kashaya Rasa* pacifies *Pitta Dosha*. So, this drugs of this *gana* can be given in diseased condition where *pitta* and *kapha dosha* are predominant in the pathogenesis. Thereby helps in *samprapti vighatana* and regain the equilibrium of *doshas*.

Dravyas of *Patoladi gana* possess *Dhatwagnideepan*, *Dhaatuprasadak*, *Aampachan*, *Strotoshodhan*, *Raktashodhak*, *Bastishodhak* and *Vishaghna* properties, hence it can be effective in various diseases also. *Patoladi gana* can be used for curative aspect in various skin disorders like urticaria, eczema, psoriasis, itching, ring worm, scabies, acne, pustules etc. Most of the drugs of this *gana* posses Antibacterial /Antiseptic action against bacterial strains like *S.aureus*, *E. coli* in infected wound. Hence these drugs act as *Vrana shodhaka* and *vrana ropaka*. It can be used in *kapha-pitta* dominant *Yonivyapada*. *Patola* can also be used in *Garbhini kandu*.

CONCLUSION

All the 6 contents of *Patoladi Gana* serves multifacet pharmacotherapeutics. Drugs of *Patoladi gana* are *Tikta rasa* predominant. Few drugs are having *Kashaya & Madhura rasa*. Predominance of *Tikta* and *Kashaya rasa* accounts for its *Vranashodhana*, *Kaphahara*, *Kandhughana*, *Krimihara* action in *Dushta vrana* and *Kustha*. Due to *Tikta rasa* and *Ushna virya*, it possesses *Deepana-pachana* properties which are helpful in *Aampachana* in *Chardi* and *Jwara*. *Patoladigana* is mainly *Kapha-pittashamak* which helps in balancing the *tridosha* in body. Further advanced studies are needed to establish its efficacy in various diseases for betterment of Ayurveda and human being.

Conflict of interest statement

We declare that we have no conflict of interest.

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