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## Critical Review on Anjanadi Gana- A Scientific Evaluation

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### Abstract

**Aim of the study:** The present study is aimed to reveal the ancient texts and find a group of drugs (*Anjanadi gana*) for treatment of *Pittaja vyadhi* like coagulopathies, burning sensation and poisoning.

**Materials and method:** A systematic and comprehensive literature search was conducted on Ayurvedic classics to explore the rationale behind the traditional uses of *Anjanadi gana*. In order to enhance clarity and scientific accuracy, the Ayurvedic Pharmacopoeia and other relevant scientific works were also consulted. Additionally, international and national journals, as well as other published materials, were searched to provide scientific evidence for the uses of *Anjanadi gana*. This research aims to intrigue scholars who are interested in *Anjanadi gana*.

**Discussion:** *Anjanadi gana* dravya are hepatoprotective, anti-allergic, radio-protective, haemostatic, anti-hemorrhoidal, anti-microbial, anti-inflammatory, neuro-protective and anti diabetic activity.

**Conclusion:** The present review article throws ancient luminosity behind the therapeutic uses of *Anjanadi Gana* of *Ashtanga Hridaya*. Drugs of *Anjanadi gana* are mostly aromatic and helpful in function of liver detoxification, so that poisonous drugs may be easily detoxified and may be useful in cumulative poisoning of pesticides and diseases due to incompatible diet.

**Key words:** *Anjanadi gana*, *Pittaja vyadhi*, Aroma therapy, *Visha chikitsa*, Detoxification

**Introduction:** Our ancient Acharyas classified drugs on the basis of similar morphological characters (*Aakriti sadharmya*), properties (*Guna sadharmya*) and therapeutic uses (*Karma-sadharmya*) into groups known as *Ganas*. In this way, a single drug when combined with other drugs sometimes shows new properties (cumulative effect) and the combined results are supposed to be best with respect to a particular disease.<sup>1</sup> Group of drugs described as *Gana* in *Samhita*. *Anjanadi gana* is one out of 33 *Ganas* mentioned in *Ashtanga Hridaya*, with 9 drugs in it.<sup>2</sup> Most of the drugs in this *Gana* are with *Madhura*, *Tikta*, *Kashaya rasa*, *Sheeta veerya* and *Kapha-Pitta* and *Vata-Pitta Shamaka* properties. They are indicated in *Pittaja-vyadhi* (eg. *Abhyanatara daha*, *daurgandhya*) and *Visha* (~diseases due to poison). Most of drugs of *Anjanadi gana* are fragrant and containing volatile oils that may be a future of aroma therapy. *Acharya Vagbhat* has described that drugs indicated in specific diseases are in short form as *Gana* and for the therapy according to *Dosha bala-abala*, some drugs may be added and expand theses *Gana*.<sup>3,4</sup>

**Materials and methods:** Attempt has been made to review the classical *Ayurvedic Samhitas* to derive a detailed account of properties, action and uses mentioned in them. Contemporary research evidences have been reviewed to establish ancient-modern concordance for *Anjanadi gana*.

## Anjanadi Gana in Samhita

According to *Ashtanga Hridaya* in *Anjanadi gana* 9 drugs are described as- *Anjana*, *Phalini*, *Mansi*, *Padma*, *Utpala*, *Rasanjana*, *Ela*, *Madhuka* and *Nagakesar*. *Anjanadi gana* are indicated in *visha chikitsa*, *abhyantara daha* and balances *pitta*.<sup>2</sup> With same content and indications *Anjanadi gana* is also mentioned in *Ashtanga Sangraha*.<sup>5</sup> In *Shashilekha* commentary of *Ashtanga Sangraha*, *Anjanadi gana* are said to pacifies *visha*.<sup>6</sup>

**Table 1: Drugs of Anjanadi gana as per commentators<sup>2</sup>**

S.N.	Drug	Commentators' views
1.	<i>Anjana</i>	<i>Srotoanjana</i> , <i>Sauveeranjana</i> (S.S.), <i>Srotoanjana</i> (A.R.)
2.	<i>Phalini</i>	<i>Priyangu</i> (S.S.)
3.	<i>Mansi</i>	<i>Krishnajata</i> (S.S.)
4.	<i>Padma</i>	<i>Pushkaram</i> (S.S.)
5.	<i>Utapala</i>	<i>Shashipriyam</i> (S.S.)
6.	<i>Rasanjanam</i>	<i>Tarkshyashailam</i> (S.S.)
7.	<i>Ela</i>	<i>Bahula</i> (S.S.), <i>Sukshmaila</i> (A.R.)
8.	<i>Madhuka</i>	<i>Madhuyashti</i> (S.S.)
9.	<i>Nagahvam</i>	<i>Nagkesarm</i> (S.S.)

(S.S.-Sarvanga Sundara, A.R.-Ayurveda Rasayan)

## Anjanadi gana in Sushruta Samhita<sup>7</sup>

According to *Acharya Sushruta*, in *Anjanadi gana* 8 drugs are present in which *Nalada* is considered in place of *Mansi* (while in *Sushruta Samhita Nibandha-sangraha* commentary by *Dalhana* *Nalada* is considered as *Jatamansi*), *Ela* is not considered and rest drugs are same as in *Ashtanga Hridaya*. *Dalhana* has explained, *Anjana* as *Sauviranjana*, *Rasanjana* (as formulation of *Daruharidra*), *Nagapushpa* as *Nagakesara*, *Nalinakesara* as *Padmakesara*.

## Anjanadi gana in Nighantus<sup>8,9,10,11</sup>

In *Nighantus*, *Anjanadi gana* is also mentioned in *Abhidhana manjari*, *Ashtanaga nighantu*, *Madanadi nighantu* (with some other indications like-it pacifies *Kapha*, *arochaka* and *Visham jwara*) and in *Saushruta Nighantu* with same content and indications as in *Ashtanga Hridaya*.

## Drugs of Anjanadi Gana<sup>12</sup>

**1. Anjana:** In *Ashtanga Hridaya*, from *Anjana* -*Arunadatta* has considered *Srotoanjana*, *Sauviranjana* both, *Hemadri* has considered only *Srotoanjana* from *Anjana*.<sup>2</sup> In *Rigveda* "*Aanjana*" is described as highly fragrant drug from which whole forest was scented *Rigveda* (10/146/6). In *Shatapatha Brahman* *Anjana* is described as mineral origin *Shatapatha Brahman* (3/1/3/11). In commentary of *Charaka Samhita chikitsa*(7/171) by *Chakrapani*, he has described *Anjana dwe* as *Sauviranjana* and *Rasanjana*. *Dalhana* has described *Anjana* as *Sauviranjana*. *Acharya Priya vrata Sharma* has described *Anjana* as a tree "**Haritabhesaja**" (***Hardwickia binata* Roxb.**) and the word "*Anjanam*" should be taken as *Sauviranjana* or *Rasanajna*. *Acharya P.V. Sharma* has described as *Anjanaka* as specific drug that pacifies *Pitta*. (*Kalyankaraka* 10/20) . *Thakur Balwant Singh* has described *Anjana* as *Sauviranjana* in his book "Glossory of vegetable drugs in Vrihatrayi".<sup>13</sup>

According to above view of commentators three drugs *Srotoanjana*, *Sauviranjana* and *Hardwickia binata* Roxb. from *Anjana* has been taken. So, in this article, description of these 3 drugs will be done one by one to validate its therapeutic effect in context of *Anjanadi gana*.

### I. *Srotanjana*

**Synonyms-** *Yamun, Kapotanjana*

**English-**Stibnite (Black antimony), **Varna-** *Krishna* (Black)

**Therapeutic use--***Vishapaham* (pacifies poison), *asrikahrita* (pacifies bleeding disorders), *daha shamaka* (pacifies burning)<sup>14</sup>

### II. *Sauviranjana*

**English-**Galena (Lead Sulphide)

**Therapeutic use-**1.External-*Netra roga* (Eye diseases)

2. *Bhasma* of *Sauveeranjana- Rakta-pitta* (~Coagulopathies), *visha dosha*(~poison), *rajorodha, rakta pradara* (~menorrhagia)

**Dose-**60-125mg of *bhasma*

**Precaution-** should not be used for more than 3 days in *Rakta pradara*((~ menorrhagia).<sup>15</sup>

### III. *Anjana (Hardwickia binata Roxb.) family-Fabaceae*

**Morphology-**It is a moderate to large sized deciduous ornamental tree. Bark is dark grey, rough, peeling off in papery flakes, leaves alternate, bifoliolate, leaflets sessile, entire, obliquely-ovate, coriaceous, flowers yellowish green, in lax panicles, pod strap-shaped, narrow at both ends with seed near the tip.<sup>16</sup>

**Chemical-constituents-** Heart wood contains  $\beta$ -sitosterols, taxifolins, catechin.<sup>18</sup> *Hardwickia binata* is rich source of Manganese, Iron, Calcium and Zinc.<sup>17</sup>

**Useful part-** roots, leaves, bark, seed, wood, husk.

**Pharmacological activity-**Antibacterial activity, antifungal activity, analgesic activity, hepato-protective activity, anti-inflammatory, anticancer activity.<sup>18</sup>

**2. Phalini:** In *Shadvinshati Brahman (5/2)*, the word *phalawati* is used for *Priyangu* that on later verses indicate the synonym *phalini*.<sup>19,20</sup>

**Botanical name-***Callicarpa macrophylla* Vahl., **Family-***Verbenaceae*

**Synonyms-** *Phalini, kanta, shyama, aanganpriya, gandhaphala*.<sup>21</sup>

**Chemical-constituents-**Amyrin, ursolic acid, betulinic acid, beta-sitosterol, daucosterol, caliterpenone,  $\beta$ -Selinene-rich essential Oils<sup>22</sup>

**Therapeutic use-***Raktaatisaar, Daurgandhya, Sweda, Daha, Jwarapaha*<sup>23</sup>

**Pharmacological activity-**Anti-inflammatory, anti-bacterial, antifungal, anti-oxidant, Analgesic, Hepatoprotective activity.<sup>24</sup>

Types-1. *Priyangu- Callicarpa macrophylla* Vahl.

2. *Gandhpriyangu- Prunus mahaleb* Linn.<sup>21</sup>

Useful part- Flowers. Dose-3-6 gm

**Folklore claims** -The plant is reported to be useful to stop internal and external bleeding and to treat burns. In Bangladesh, Tripura tribes use this plant as a tonic, as antidote to poison. In a preparation the plant is used in skin disorders to purify the blood and eliminate toxins.<sup>24</sup>

**3. Mansi:** Botanical.name- *Nordostachys jatamansi* DC., Family-*Valerianaceae*

Synonyms- *Bhootjata, tapsvini, sulomasha, naldam, jatila, palamkasha*.<sup>25</sup>

**Chemical-constituents**- rich in sesquiterpenes and coumarins eg- valeranol, nardostachone, Jatamasic acid, jatamansone, nardal, angelicin.<sup>26</sup>

**Therapeutic use**-*Daha, Visarpa, Kushtha, Kantibalprada, Medhya*<sup>27</sup>

**Pharmacological activity**-Hepatoprotective activity, anti-depressant, anti-convulsant, cardio-protective, antifungal and antibacterial, antioxidant, hair growth promoting activity, radio-protective, anti-inflammatory activity<sup>28</sup>

**Useful part**-rhizome and root, **Dose**-500-1000mg

**4. Padma:** Botanical name-*Nelumbo nucifera* Gaertn. , Family-*Nymphaeaceae*

**Chemical constituents**-Stamens are abundant in flavonols, including kaempferol, myricetin, quercetin, isorhamnetin, arbutin,  $\beta$ -sitosterol.<sup>29</sup>

**Pharmacological activity**-antioxidant, anti-inflammatory, antiviral, hepato-protective, anti-cancerous, antipyretic activity, anti-arrhythmia, cardioprotective.<sup>29</sup>

**Useful part**-panchanga (specially padmakesar (*kinjjalaka*))

**Therapeutic use**-*Sangrahika, raktapitta prashaman*<sup>30</sup>

**5. Utpala:** Botanical name- *Nymphaea stellata* Willd. Family-*Nymphaeaceae*

**Synonyms**- *Utpala, kumuda*

**Chemical Constituents** -Nymphayol, nymphasterol<sup>31</sup>

**Pharmacological property**-Anti-diabetic activity, anti-hepatotoxic effect, analgesic, anti-inflammatory, antimicrobial, anti-ulcerogenic, anti-hyperlipidemic activity<sup>31</sup>

**Useful part**-*moola, pushpa, beeja*

**Dose**-*Swarasa*-10-20ml, *Hima*-50-100ml, *Churna*-3-6gm

**Therapeutic use**-*Raktapitta prashaman*<sup>32</sup>

**6. Rasanjana:** Botanical name- Extract of *Berberis aristata* DC., Family-*Berberidaceae*

**Synonyms**- *Taksharya shaila, rasagarbha, tarksyajam*<sup>33</sup>

**Chemical-constituents**-Berberine, berbamine, palmatine, lupeol<sup>34,35</sup>

Pharmacological activity-Hepato-protective, antioxidant, anti-microbial, anti-diabetic, anti-inflammatory, antiulcer, neuro-protective, anti-cancerous<sup>34,35</sup>

Dose-500mg-2gm

**Therapeutic use**-*Visha, Netra vikara, Vranadoshahrit*<sup>33</sup>

**7. Ela:** Botanical name- *Elettaria cardamomum* (L.) Maton. , Family-*Zingiberaceae*

**Synonyms**- *Bahula, Bahula gandha, triputa, truti, dravini, korangi*<sup>36</sup>

**Chemical-constituents**-seed oil contains 1,8-cineole, $\alpha$ -terpineol, linalool, linalyl acetate, $\alpha$ -terpinyl acetate<sup>37</sup>

**Pharmacological activity**-Gastro-protective effect, anti-inflammatory, anti-oxidant, anti-cancer, anti-diabetic, anti-fungal, anti-viral<sup>37</sup>

Useful part-Seed Dose-.5-1 gm

**Therapeutic use**-*Arsha, mootrakrishahrit*<sup>36</sup>

**8. Nagakesar:** Botanical name- *Mesua ferrea* Linn., Family-*Guttiferae*

**Synonyms**-*champeya, Keshara, nagapushpa, kanchanahya, kumbhaphala, dwip, naga*<sup>38</sup>

**Chemical constituents**-Stamens give  $\alpha$  and  $\beta$ -amyryn,  $\beta$ -sitosterol, bioflavonoids-mesuaferrones A and B, mesuol, rhusflavanone, lupeol<sup>39</sup>

**Pharmacological activity**-Antioxidant, anti-hemorrhoid activity, analgesic, anti-inflammatory, anti-allergic, anti-venom activity, wound healing activity, antimicrobial activity, anti-ulcer activity<sup>39</sup>

Useful part-stamens, Dose-powder-1-3gm

**9. Madhuka:** Botanical.name-*Glycyrrhiza glabra* Linn., Family-*Fabaceae*

**Synonyms** - *Klitaka, yastimadhu*<sup>40</sup>

**Chemical-constituents**-Glycyrrhizin, glabrene, glycyrrhetic acid<sup>41</sup>

**Pharmacological activity**-Anti-ulcerogenic, anti-allergic antioxidant, antimicrobial activity, hepatoprotective, anti-inflammatory, anti-diabetic, analgesic, immuno-stimulatory effect<sup>41</sup>

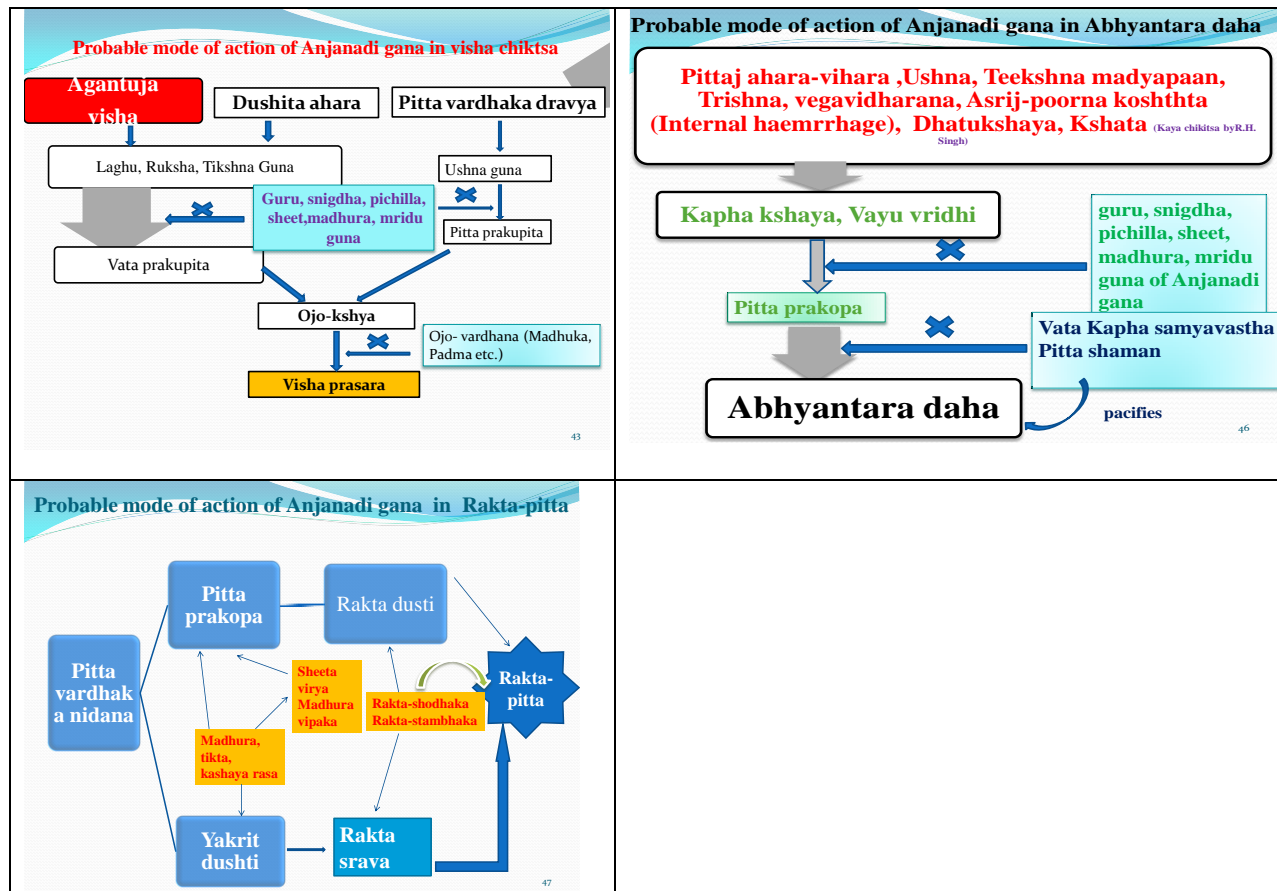
Useful part-root, Dose-3-5 gm

**Discussion**-Botanical identity of each drug of *Anjanadi gana* as per commentators is given. Most of drugs of *Anjanadi gana* are *tikta, kashaya, madhura rasa, sheeta veerya, madhura* or *katu vipaka* and contain *guru, snigdha, pichilla, mridu guna*, they are having *Kapha-pitta shamak* or *vata-pitta shamaka* properties.<sup>42</sup> *Anjandi gana* drugs mainly work on *Pitta dosha*. Mode of action of drugs of *Anjandi gana* is described as 4 ways-

1. *Shodhan* of *dushita pitta* eg. *Rasanjana*
2. *Shamana* of *pitta* eg. *Utpala*
3. By *Ojo-varadhana* eg. *Madhuka, Padma*
4. Purification of blood eg. *Nagkesar*.

Most of herbs contain  $\beta$  sitosterols, which has prominent anti-inflammatory and anti-oxidant property. Most of herbs of *Anjanadi gana* are fragrant and containing volatile oils that may be a future of aroma therapy.

**Flow chart: Probable mode of Action of Anjanadi gana in different Indications**



**Conclusion:** In this gana, from Anjana there should be taken Srotonjana for two reasons-

1. Ashtanga hridaya su.15/14, Hemadri has taken srotonjana from anjana.
2. Sauviranjana has same properties as srotoanjana, but in both anjana srotoanjana is said to be best.<sup>43</sup>(B.P.N.Dhatvadi varga 139)

Drugs of Anjanadi gana (on internal use) may be helpful in function of liver detoxification, so that poisonous drugs may be easily detoxified and may be useful in cumulative poisoning of pesticides and diseases due to incompatible diet. Anjanadi gana dravya are good hepato-protective and detoxifier of liver as well as anti-allergic, so may be helpful in visha chikitsa. Due to wide range of anti-microbial, anti-inflammatory activity, Anjanadi gana may be helpful in external application in Skin diseases (Acne), Herpes infection, wound healing and oosing gums. Due to Radio-protective and hepato-protective effect, drugs of Anjanadi gana may be useful during radiotherapy and chemotherapy in cancer treatment. Haemostatic and anti-hemorrhoidal may be useful in gynaecological disorders (pradara) and piles and ulcers. Due to neuro-protective and anti-diabetic property, they may be useful in peripheral neuropathy and burning sensation.

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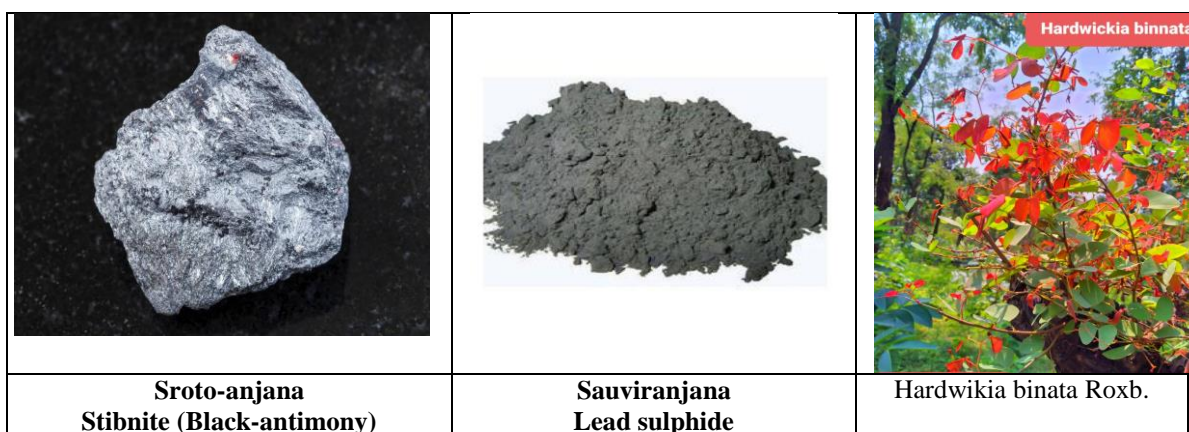
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**Image: Drugs of Anjanadi Gana**





		
<p><i>Callicarpa macrophylla</i> Vahl.</p>	<p><i>Nardostachys jatamansi</i> DC.</p>	<p><i>Nelumbonucifera</i> Gaertn.</p>
		
<p><i>Nymphaea stellata</i> Willd.</p>	<p>Extractum Berberis</p>	<p><i>Elettaria cardamomum</i> Maton.</p>
		
<p><i>Mesua ferrea</i> Linn.</p>	<p><i>Glycyrrhiza glabra</i> Linn.</p>	