SCRENNING OF ANTI-TOXIC (VISHAGHNA) PROPERTY OF PIPPALYADI AGADA - A REVIEW

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ABSTRACT
Agadtantra is one of the eight branches of Ayurveda. Which deals with the identification of Visha (poison), types of Visha (poison), sings, symptoms and their treatment. Poisons(Visha) have faster action due to its Vyavayi, Vikasi, and Ashukari Guna. In various Ayurveda samhita various Agada Kalpas are described which have faster action and potent ingredients. sorrow and depression is caused by Visha(poison) and body and it also creates sadness to the world. Many Agadas are described in the Agadtantra and in various Ayurvedic Granthas. Pippalyadi Agada is one among the several Agada Kalpas which is explained in Yogaratnakara. According to Yogaratnakara Pippalyadi Agada is prepared by using Vishaghana herbs and it is used in Dooshivisha Chikitsa and their symptom like Kitibha, Urticarial rashes etc. The ingredient of Pippalyadi Agada having anti-inflammatory, antifungal, antimicrobial insecticidal, anti-oxidant, hepatoprotective, immunostimulatory action. In this review article pharmacological & therapeutic action, as well as anti-toxic(Vishaghna) property of Pippalyadi Agada along with each ingredient will be discussed.

KEYWORD: Pippalyadi Agada, Visha, Antimicrobial, Antioxidant, Dooshivisha, Skin.

INTRODUCTION
Agadtantra is the branch of Ayurveda, which deals with treatment of poisonous bites such as snakes, insects, spiders, rats etc. symptoms of different types of poisons along with their combinations.[1] Gada means the disease, Visha (poison), pain and Agada means a medicine for counteracting the effects of poison disease, etc. Agada means an antidote, (Vishaghna kalpa).[2] In Ayurveda Visha is a substance which after entering the body disturbs all the function of body and it also creates sorrow (Vishada) in the mind of the affected human being.[3] In modern science poison is defined as a poison is a substance which, when administered, inhaled or ingested, is capable of acting deleteriously on the human body.[3] In Ayurveda literature various Agada Yoga formulations are described and these are used in various poisonous treatment. Pippalyadi Agada is one of the formulation described by Yogaratnakara, it is used in Dooshivisha Chikitsa[6], to treat symptoms like pustules, Kitibha and urticarial rashes.[3] According to Aacharya Sushruta the persons suffering from Dooshivisha will be having symptoms are toxicity of food, loose motion, vomiting, thirst, rashes on skin, swelling feet, hand and face, irregular fever.[8] Pippalyadi Agada is available in Kwatha form.[6] This article is based on the textual review and descriptions related to Pippalyadi Agada which are collected from classical text Yogaratnakara, the related scientific publications and textual literature are also referred. The ingredients of Pippalyadi Agada as described in Yogaratananakar along with Rasapanchaka (table no. 1).

AIM
1. To study the anti-toxic (Vishaghna) action of Pippalyadi Agada.

OBJECTIVE
1. Collectively study the pharmacological, therapeutic, and anti-toxic (Vishaghna) action of each ingredient of Pippalyadi Agada.
2. To study the pharmacological, therapeutic and anti-toxic (Vishaghna) action of Pippalyadi Agada.
MATERIAL AND METHODS
The whole study is based on literary review collected from Ayurved Samhita.

Method of preparation of Pippalyadi Agada
All ingredients are taken in same quantity. Then all ingredient mentioned above are mixed then Kwaatha are prepared as classical way with 16 times of water by volume with respect to raw material and reduced to 1/4 th of its initial volume. Madhu as prakshepa are added after preparation of Kwaatha. Then this whole preparation is known as Pippalyadi Agada. 

Table 1: Rasapanchaka of the ingredients of Pippalyadi Agada.[10,11]

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dravya (Drug)</th>
<th>Rasa (Taste)</th>
<th>Guna (Property)</th>
<th>Veerya (Potency)</th>
<th>Vipaka (Metabolic property)</th>
<th>Karma (Action)</th>
<th>Doshaghnata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pippali</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Deepana, Kushtahara, Rasayan</td>
<td>Vatakaphahara</td>
</tr>
<tr>
<td>2.</td>
<td>Maricha</td>
<td>Katu</td>
<td>Laghu, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Shoolaghna, Krimihara</td>
<td>Kaphavatara</td>
</tr>
<tr>
<td>4.</td>
<td>Lodhra</td>
<td>Kashaya</td>
<td>Laghu, Ruksa</td>
<td>Shita</td>
<td>Katu</td>
<td>Shothahara, Kushtaghna, Jwaraghna, Rakta$tambhama, Chakshushya</td>
<td>Kapha-pitta shama</td>
</tr>
<tr>
<td>5.</td>
<td>Dhanyaka</td>
<td>Kashaya</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Shothahara, Shukrakshaya – kara, Shulahara, Mutrala, Deepana, Krimihara, Shvaskashra</td>
<td>Tridoshahara</td>
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<td>8.</td>
<td>Balak (Sugandhi Wala)</td>
<td>Tikta, Madhura</td>
<td>Ruksa, Laghu</td>
<td>Shita</td>
<td>Katu</td>
<td>Vishaghna, Kushtaghna, Jwaraghna, Twagadoshah–ara, Raktparasadana, Varnya, Kaphanismarak-a, Hrudysama-ka</td>
<td>Kapha-Pittahara</td>
</tr>
</tbody>
</table>

- **PIPPALI**[12]
  
  Latin name – *Piper longum* linn, Family – Piperaceae.
  
  Chemical constituent – Piperine, pipilatrine, sesamin, pipilasterol, two alkaloids piperlongumine and piperlonguminine, essential oils.[12]
  
  Pharmacological action – Antibacterial, anti-inflammatory, insecticidal, antimalarial, CNS stimulant, hepatoprotective, antinarcotic, antilcerogenic, antispasmodic, antiaguliant, hypoglycaemic, antitubercular, immunostimulatory, analgesic, analeptic.[13] Antimicrobial activity, anticancer, antioxidant, antiplatelet activity, antidepressant activity, bioavailability enhancer, antiamoebic activity, larvicidal activity.[13], etc.
  
  Therapeutic action – Agnidipaka, Vrushya, Rasayana, Rechaka, Swasaaghna, Kasagha, Udarogahara, Jwaraghna, Kushtaghna, Aamvatanasaka, Pitaprapokapa, Shirovirechana, Sugandhi, Pachaka.[14]
  
  Anti-toxic action – It is one of the important ingredient of Gandhahasti Agada[10], which is used in the treatment of Shirapradeshi sthita visha, Dashta, Preetvisha, Vidagdha Vishavega in the form of Lepa. For Garavisha treatment, Dantheharitaki[27], Dudhika Ghruta[18], Dhanvantara Ghruta[19], Bilvamuladiyoga[20] is used. It is one of the content of Mrutasanjeevan Agada[21], Mahagandhahastinam Agada[22], Mahasugandhi Agada[21], Yapanakhyya Agada[24], Sanjeewan Agada[25], Kshara Agada[26], Amruta Ghruta[27], which is used in the treatment of all types of poisoning. It is also used in the following anti-toxic preparation like Dooshivishari Agada[28] in Dooshivisha chikitsa, Lodhraidhi Yoga[29] used in the treatment of animal bites like snakes(Sarpa), rats(Akh,us), Cat(Marjura), hornet(Konabhu) etc., Dushanga Agada[30] used in all insect (Kita) bite poisoning.

- **MARICHA**[11]
  
  Latin name – *Piper nigrum* linn, Family – Piperaceae.
  
  Chemical constituent – Piperide characterised as isobutylamide, Alkaloids (piperine, chavicine, piperidine, pipertine) and essential oil.[11]
  
  Pharmacological action - Antioxidant, anticonvulsant,
sedative, analgesic, insecticidal, pesticidal, CNS depressant, muscle relaxant, antipyretic, anti-inflammatory, antifungal, hepatoprotective, Antimicrobial, antulcer, antibacterial, lipolytic cyclo – oxygenase inhibitory activity. [32]

Therapeutic action – Agnidipana, Vatashamaka, Pittarakara, ShvasaghhnaShulaghhna, Krimighna, Chedana, Ruchya, Medohara, Chedi, Hrudroghahara, Sugandhi, Uttejaka, Svedajanana, Mutrajana, Lekhanana, [33]

Anti-toxic action – It is included in Ashhtanga Lavana [24], having anti-toxic action, which is used in Madayya chikitsa. It is one of the ingredients of anti-toxic formulation like Mandar Agada [25], Mahasaghhndhi Agada [23], Yapanakhy Agada [24], Suryodaya Agada [36], Kshma gadd [27], Tarun Patalsha Kshard [38], Abhuyarishtha [39], Ajita Agada [40], which is used in the treatment of all types of poisoning. It is mentioned in Bilvamuladi yoga [29], Mahagandhahasti Agada [22], used in the treatment of rats(Akhru) bite, snakes(Sarpaa) bite,spiders(Luta) bite, poisoning etc.

LODHRA [41]

Latin name – Symplocos racemosa Roxb., Family – Symplodiacceae.

Chemical constituent – Monomethyl pelargonidin glucosides (I & II), Loturnine, reducing sugar [41]

Pharmacological action - Antimicrobial, antidiarrhoeal, spasmygenic, heart depressant, blood pressure depressant, anti-inflammatory [42]

Therapeutic action – Grahi, Rakapitpattghna, Ratakivakararaha, Jwarghna, Atissararaha, Shothaghna, Raktastambaka, Sleshmahgghna, Vranaropana, Balya, Kushtaghna. [43]

Anti-toxic action – It is known anti-toxic drug. It is one of the ingredients of anti-toxic preparations like Amruta Ghruha [25], Mahasaghhndhi Agada [23], Sanjeevana Agada [23], which is used in the treatment of all types of poisoning. It is also used to prepare Hridrayugmadi Agada [44], a remedy useful in Luta (spider) Visha and all types of poisoning.

JATAMANSI [14]

Latin name – Nardostachys jatamansi D., Family – Valerianaceae.

Chemical constituent – Essential oil and resinous matter, sesquiterpenes & coumarine active principle. [14]

Pharmacological action – Anticonvulsant, hepatoprotective, hypotensive, antiparkinson’s, tranquilizing, antidiabetic, CNS depressant, hypothermic, anhelmintic, diuretic, antifungal, antimicrobial, antulcerogenic, antirarrhythmic, antispasmodic, anti-implantation, analgesic, antibacterial, antioxidigenic, antiaxiety, bronchodilatory effect, etc. [35]

Therapeutic action – Kasaghna, Vishaghna, Twachya, Medhajanaka, Kantikaraka, Balaprada, Dahashamaka, Visarpahara, Kushtaghna, Deepana, Pachana, Materula, Vatanulomaka, Mruduvirechaka, Aartavajanana, Jwraghna, Twakadoshahara, Hrdya, Balya. [46] Anti-toxic action – It is important ingredients of following anti-toxic preparation Chandrodaya Agada [47], Rushabha Agada [48], Dashanga Agada [49], Mahagandhahasti Agada [22], Mrutasanjeevana Agada [21], Tarunapalasha Kshard [38], Yapanakhy Agada [24], Sanjeevan Agada [22], which is used in the treatment of all types of poisoning.

DHANYAKAMA [50]

Latin name – Coriandrum sativum linn., Family – Umbelliferae.

Chemical constituent – Essential oil, Coriandrol. [50]

Pharmacological action – Antibacterial, Radical scavenging activity, antioxidant, hepatoprotective, antihyperglycemic, antihyperlipidemic, antimicrobial activity. [51]

Therapeutic action – Mutralam, deepana, Pachana, Jwarghna, Rechhaka, Grahi, Trashnanigrhara, Dahapreshama, Yamaka, Svasaghhna, Kasaghna, Krimighna, Vatanulomaka [52]

Anti-toxic action – Yapanakhy Agada [24], Sanjeevana Agada [23], used in Garavishva and all types of poisoning. Traksha Agada [53] used in Takshha Sarpa Visha Chikitsa. Manadar Agada [53] used in Keeta, Luta Visha Chikitsa. It is also content of Dooshivishari Agada [28], Mrutasanjeevana Agada [23], Mahagandhahasti Agada [29], Ajaya Ghruha [54], which is used in the treatment of specific cases of poisoning.

SUKSHMA ELA [55]

Latin name – Elettaria cardamomum maton, Family – Zingiberaceae

Chemical constituent – Volatile oil terpene, terpineol. [55]

Pharmacological action – Antioxidant, antimicrobial activity, antulcerogenic activity, gastroprotective activity. [56]

Therapeutic action – Kasaghna, Svasaghn, Kaphanisaraka, Arshoghna, Mutral, Mukkhashodhana, Durgandhanasaka, Chardinigrhara, Trushnigrhara, Deepana, Pachana, Ruchya, Sugandhi, Vatanulomaka, Uttejaka. [35]

Anti-toxic action – It is one of the content of following anti-toxic preparation Balasurya Agada [57], Sugandhakhy Agada [58], Kalyanaka Ghruha [59], which is used in the treatment of all poisoning. Gandhamadana Agada [60] is also anti-toxic preparation used in Keeta, Luta Visha Chikitsa.

BRUHADA ELA [61]

Latin name – Amomum subulatum Roxb, Family – Zingiberaceae.

Chemical constituent – Cineol, essential oil. [61]

Pharmacological action – Due to terpinols it has analgesic, antimicrobial activity, cardiac stimulant, carminative, diuretic, stomachic. Antioxidant activity, antulcer activity, hpolipidaemic activity. [62]

Therapeutic action – Twagadoshahara, Varnya, Mastsishka-Nadisanth shamaka, Raktapasadana, Hrdya shamaka, Balya, Raktarodhaka, Kaphanisaraka,
Anti-toxic action - It is one of the ingredients of anti-toxic formulation like Mahagandhahasti Agada,[22] Danti Haritaki,[17] Gandhamadana Agada,[66] and Balasurya Agada.[57]

- BALAKA[63] (Sugandhi wala)
  - Latin name - Vetiveria zizanioides, Family - Gramineae.
  - Chemical constituent - Essential oil (vetiver oil), Benzoic acid, furfurol.[63]
  - Pharmacological action - Antioxidant, anti-inflammatory activity, pesticide.[64]
  - Therapeutic action - Antidiarrheal. Used in obesity, arthritis, skin disease, eczema, dermatitis, stomach ulcers, burns, wounds, cough, asthma, vision problem.[77]

- SUVARCHIKA (salt peter)
  - A preservative and curing agent. Is an antimicrobial action.[68]
  - Chemical constituent - Potassium nitrate (KNO₃), Nitrites.[69]

- GAIRIKA[23] - (Kanaka Gairika- fe₂ο₃)
  - Madhura, Kashaya Rasa, Snigdha, Sheeta Guna, Chakshushya, Dahahara, Pittahara, Raktavikarhara, Kaphahara, Hikkahara, Vishaghna, Kanduhara, Udararogahara.[73]

- MADHU (Honey)
  - According to Aacharya Charaka Madhhu has Kashaya Rasa, Rukha, Tikshana Guna, and Kaphashamaka.[74]
  - According to Aacharya Sushruta Madhu has Madhura Rasa, Anurasakasha, Guna Rukha, Lekhana, Shita.[75] According to Yogaratnakara Madhhu is Kushtanashaka, also used in, gulma, Pittaatisara, Grahani, Kshaya, Jwara.[76]

- Pharmacological action - Modern science honey has hygroscopy & fermentation property, also antibacterial, antidiarrheal. Used in obesity, arthritis, skin disease, eczema, dermatitis, stomach ulcers, burns, wounds, cough, asthma, vision problem.[77]

Therapeutic action - Vishaghna, Krumighna, Hrudya, Vijakarana, Vranopana, Chakshushya, Prasadan, Tridoshaprashman, Kaphapitta - Medovrudhinashaka, Prameha, Kasa, Hikka, Shwasa, Trushna nashaka, Sandhana, Shodhana, different types of Madhu are described in Sushruta Samhita.[75]

Anti-toxic action - it is one of the ingredients of anti-toxic preparation like Gomaya Agada,[78] Champaka Agada,[79] Mandara Agada,[35] which is used in the Keeta, Lata Visha Chikitsa. It is also content of following anti-toxic preparation Dwitiya Indroka Rasyana[80] Lodhrai Yog[29] Heemavana Agada,[81] Haridrayugmadi Yoga.[44]

DISCUSSION
Pippalyadi Agada contains 11 drugs. Most of these drugs have Katu Vipaka, Ushana Veerya, Katu, Tikta, Kashaya Rasa, and Vishaghna, Krimihara, Kashthaghana, Twagoshoshara, Deepaniya, Shothahara, Karma. In Dooshivisha Chikitsa Pippalyadi Agada is used. Any poison which has become old, killed by other antipoisonous medicines, dried by forest fire, breeze and sunlight or that which by its very nature is not endowed well with (all) the properties (of the poison) derives the name Dooshivisha. It is less potent and deposited in the body. Poorvaroopa of Dooshivisha is Nidra, Gurutva, Jrumbha etc. also symptoms like pustules, Kitibha, and Urticarial rashes etc. Katu, Tikta, Ushana, And Tikshna porocities of Diaphoretic and diuretic action of some drug individually in the Pippalyadi Agada helps to elimination of poison. pharmacological action of these drug is antibacterial, analgesic, antifungal, antioxidant, anti-inflammatory, hepatoprotective, diuretic, antilucerogenic, antihelmintic, anticonvulsant etc. the preparation of Pippalyadi Agada is useful in the Dooshivisha chikitsa and treatment of poison.

CONCLUSION
Yogaratnakara described Pippalyadi Agada. Most of the ingredient of Pippalyadi Agada having Krimihara, Vishaghna, Deepaniya, Karmas. The use of Pippalyadi Agada in Dooshivisha chikitsa and their symptoms like Kitibha, urtarical rashes, pastules. Most of the drugs in the Pippalyadi Agada is used in skin disease, leprosy, acne, bronchitis, asthma, eye disease, gastric disorders, scorpion sting, convulsions, epilepsy etc. The review of this article is to provide collective information on pharmacological, therapeutic, anti-toxic (Vishaghna) and medicinal use of Pippalyadi Agada.

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