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Critical Analysis of Antidotes for Plant Poisons in *Anupana Manjiri (Samuddesha)*: A Review Study

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ABSTRACT

Agadatantra is one of the eight branches of *Ashtang Ayurveda* that deals with the treatment of animate and inanimate poisons and toxic foods. Poison is a substance that destroys life and impairs the body functions. To counteract consequences of *Visha* specific drugs and formulations are described in the texts which are known as *Agada* or *Prativisha*. Antivenoms and chelating agents and are used in modern medicine to nullify the effect of *Visha* (Poison), but it has own limitation. *Anupana Manjiri*, published by Gujarat Ayurveda University press, is an important *Ayurvedic* textbook for physicians of *Ayurveda*. This text clearly mentions about different types of *Visha* (Poison), and its *Prativisha* (antidotes) in *Visha Chikitsa* (treatment of poison). This paper highlights different types of *Sthavara Visha* (poisons of plant origin) and its antidotes mentioned in *Anupana Manjiri*. References about poisons are not collectively present in one chapter but they are scattered in the book. So it is an effort to put them in organized manner for the sake of students and researchers of *Agadatantra*.

KEYWORDS

Agadatantra, Ashtang Ayurveda, Anupana Manjiri, Prativisha



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INTRODUCTION

Poison has its origin from plant, animals, minerals, metals, toxic foods, denatured cumulative poisons, improperly cooked food, antagonistic food materials, food incompatibility. *Charaka* says that anything or drug wisely used can act as nectar otherwise it is a poison¹. That is even a strong poison can be converted into excellent medicine if administered properly. So intention of the physician to cure the patient is most necessary. But in clinical practice poisonous and semi poisonous substances may cause side effects if not handled correctly. These side effects may be due to overdose, improper processing or incorrect use etc. Hence doctor should be well equipped and aware about the management of such unexpected adverse reactions and effects. Knowledge of judicious use of drugs and management of complications if happened is must for the practitioner. Modern science follows seven principals of removing the poison from body, out of them one is 'use of specific antidotes'. There are few antidotes for each poison and they manage the patient by general life saving procedures. To nullify the deleterious action of *Visha*, *Ayurveda* has described definite and precise *Prativisha* for most of the poisons.

Though *Visha chikitsa* is one among the *Ashtang Ayurveda*, a single hand information of these at one place is not available in various classical texts. *Anupana Manjiri* is a famous book in the arena of *Agadatantra*, and *Rasshastra*. It is written by scholars of *Saurashtra* and Gujarat regions and is well known by all physicians in the region. Book was written in eighteenth century by *Acharya Shree Vishrama*, it was divided into five *Samuddeshya* (Parts). Writer has already mentioned in the commencement of the book that objective of writing this book is to pacify the diseases produced by metals, submetals, plant poisons and animal poisons. So it is exclusively book of treatments of all types of poisons. Literal meaning of *Anupana* is adjuvants hence for some specific formulations adjuvants are also mentioned. Thus it is a clinically oriented book. Division of metals into metals and submetals is one of the speciality of *Anupanmanjiri*. *Anupana Manjiri*, is written by *Acharya Shree Vishrama* in 18th Century. It is a very distinctive text which is absolutely dedicated to management of side effects of different drugs of herbal, animal and mineral origins. *Anupana Manjiri* is of outmost important in the field of *Agadatantra* but is not explored comprehensively. There are very few books



available in *Agadatantra* which are totally devoted to its therapeutic aspect, *Anupana Manjiri* is one of them.

Aims and Objectives: To analyze means “to break into parts and examine the components”. Here is an effort to critically analyze the available data into drug wise antidotes, *Anupana*, animal origin drugs, plant origin, others, mineral origin, numerical about verses and *Samuddesha* from *Anupana Manjiri*.

MATERIALS AND METHODS

In this context, a review was made with the help of matter related to poisons and anti-poisons substances of various origin and treatment of various poisons from the book *Anupana Manjiri*. After that results were discussed conceptually for fruitful outcome from the inferences of the study.

RESULTS AND DISCUSSION

Review of *Anupana Manjiri*:

Classification of poisons was done on the basis of their origin into Plant poisons, Animal poisons and Parthiva poisons (Table 1).

Table 1 Brief account of structure and contents of each *Samuddeshha* of *Anupana Manjiri*

<i>Samuddeshha</i>	Brief description about contents
1	<i>Saptadhatu</i> and <i>Mishraloha</i>
2	<i>Updhatu- Parad, Suta, Abhraka, Makshika, Tutha, Mrudarshrunga, Kasis, Gairika,</i>

	Though of animal origin- <i>Mukta</i> and <i>Praval</i> are considered under <i>Updhatu</i>
3	<i>Sthavara Visha- Ahiphena, Bhanga, Dantibija, Ucchata.</i> Disease named as “ <i>Luka</i> ”
4	<i>Jangam Visha- Sarpa, Vrishchika, Kukkura, Rat (Maraki (Plague)disease caused by Shweta Akhu), Jalauka</i>
5	Described in two parts-1. <i>Dhatu-updhatu Shodhana</i> 2. Disease wise Adjuvants

Plant poisons are classified as *Mulini, Phalini, Kshirini, Pushpavarga, Pallava, Tvakvarga, Kantaka, Truna* etc. Animal poisons are classified as *Damshtri, Vishani, Ekshapha, Sarisrupa, Bileshaya* etc. *Parthiva* are classified into *Dhatu, Updhatu, Rasa, Uprasa, ratna, Upratna, Visha, Upavisha, Kshara* etc.

The main subject of the *Anupana Manjiri* is management of poisons (*Visha Chikitsa*) as mentioned in its first verse. The annexure of the book details about , 110 drugs of herbal origin, 20 of animal origin, 36 of mineral origin, indicated for management (table 2) of *Vishaktata* (Poisoning).

Table 2 List of poison and its specific antidotes (*Samuddesha III Sthavara Visha Shanti Prakarana*)

<i>Visha</i>	<i>Vikarshanti</i>
1. <i>Nagaphena</i> ² (<i>Papavar somniferum</i>)	1. <i>Bruhatkshudra</i> (<i>Solanum indica</i> Linn.)juicewith(cow’s Milk)
	2. <i>Vacha</i> (<i>Acorus calamus, Saindhava</i> (rocksalt), <i>Pippali</i> (<i>Piper longam</i> Linn. and <i>Madanphala</i> (<i>Catunaregam spinosa</i> (Thunb)for emesis



	3. <i>Tankan</i> (borax and <i>Tuttha</i> (copper sulphate) for emesis)		<i>Mrudvika</i> (<i>Vitis vinifera</i> Linn., <i>Vrukshamla</i> (<i>Garcinia indica</i> Choisy), <i>Amlarasatmaka</i> <i>Amla</i> <i>Dadima</i> (<i>Punica granatum</i> Linn.), <i>Amalika</i> (<i>Tamarindus indica</i> Linn.), <i>Phalsa-Parushaka</i> (<i>Grewia asiatica</i>) and <i>Khanda</i> (sugar in the form of big crystals) all together)
2. <i>Dhattura</i> ³ (<i>Datura metel</i> Linn.)	1. <i>Vruntakphala</i> <i>bija</i> (juice of <i>Solanum mwloungena</i> Linn.) <i>Rasa</i> 1 <i>Pala</i> 2. <i>Godugdha</i> (cow's Milk) with <i>Sharkara</i> (sugar) 3. <i>Karpasa-asthi</i> and <i>Pushpa</i> (bija- seeds and flower of <i>Gossypium herbaceum</i> Linn.) <i>Kwatha</i> (decoction) with <i>lavana</i> (common salt/rock salt)	8. <i>Pugiphala</i> (<i>Areca catechu</i> Linn.)	1. Cold clothing's and air generated from wet cloth. 2. Internally only <i>Sharkara</i> or <i>Madhuyukta</i> (honey) with <i>Sharkara</i> (sugar)
3. <i>Vatsnabha</i> ⁴ (<i>Aconitum ferox</i> Linn.)	<i>Patavana</i> (juice of <i>Gossypium arboretum</i> /kydia <i>calycina</i> Roxb.) <i>Rasa</i> with <i>Sharkara</i> (sugar)	9. <i>Kodrava</i> ⁹ (<i>Paspalum scrobiculatum</i> Linn.)	1. <i>Murcha</i> syncope caused by <i>Kodrava</i> - cold milk (cow's Milk) 2 <i>Mada</i> intoxication caused by <i>Kodrava-Kushmand</i> [juice of <i>Benincasa hispida</i> (Thunb) cogn.] <i>Rasa</i> with <i>Guda</i> (<i>Jaggery</i>)
4. <i>Bhallattaka</i> ⁵ (<i>Semicarpus anacardium</i> Linn.F)	1. <i>Meghnada</i> (Juice of <i>Amaranthus spinosus</i> Linn.) <i>Rasa</i> with <i>Navnita</i> (cow's butter) <i>subsides the shopha</i> (swelling) caused by <i>Bhallattaka</i> 2. <i>Daru- Daru</i> <i>haridra</i> (<i>Berberis aristata</i> DK), <i>Sarshapa</i> (<i>Brassica capastries</i> var. <i>sarson prain</i>), <i>Musta</i> (<i>Cyperus rotandus</i> Linn.) with <i>Navnita</i> (cow's butter) 3. <i>Navnita</i> (cow's butter) and <i>Tila</i> (<i>Sesamum indicum</i> Linn.) with <i>Sharkara</i> (sugar), <i>Ghee</i> <i>Subsides</i> painful condition caused by <i>Bhallattaka</i>	10. <i>Karnavira</i> ¹⁰ (<i>Nerium odorum</i> Soland// <i>Thevetia nerifolia</i> Juss. Ex. Steud.)	<i>Mahish Dugdha</i> (Buffalow's milk) or <i>Mahish Dadhi</i> (Buffalo's curd) <i>Arka tvacha</i> [bark of <i>Calotropis procera</i> (Ait) R.Br.] powder with water.
5. <i>Bhanga</i> ⁶ (<i>Cannabis sativa</i> Linn.)	Cows curd, <i>Shunthi</i> , freshroot of <i>Sandesada</i> – [fresh roots of <i>Delonix elata</i> (L.) Gamble] triturated with water or administration of <i>Ardraka</i> (<i>Zingibar officinale</i> Roscoe)	11. <i>Vajrivisha</i> ¹¹ (<i>Euphorbia antiquorum</i>)	Cold Water with <i>Sharkara</i> (sugar) Cold air, shade, clothes like cotton 14
6. <i>Ucchhata</i> ⁷ (<i>Abrus precatorious</i> Linn.)	1. <i>Meghnada</i> (Juice of <i>Amaranthus spinosus</i> Linn.) with <i>Sharkara</i> (sugar) 2. Only <i>Godugdha</i> (cow's Milk) Alone	12. <i>Snuhi Arka</i> ¹² (<i>Euphorbia Nerifolia</i> Linn.), <i>Arka</i> (<i>Calotropis procera</i> (Ait) R.Br.)	1. Local application of <i>Chinchapatra</i> (leaves of <i>Tamarindus indica</i> Linn.) triturated with water. 2. Intake of <i>Suvarngairika</i> (red ochre) with <i>Jala</i> (water)
7. <i>Madya</i> ⁸ (Alcohol)	<i>Madhu</i> (honey), <i>Khajura</i> (<i>Phoenix sylvestries</i> Roxb., <i>Draksha</i>	13. <i>Dantibija</i> ¹³ (<i>Baliospermum montanum</i> Muell-Arg.// <i>Croton tiglium</i> Linn.)	<i>Dhanyaka</i> (leaves of <i>Coriandrum sativum</i> Linn.) triturated with water taken along with <i>Shita</i> (sugar)
		14. <i>Vishakochak</i> ¹⁴ (<i>Strychnus nuxvomica</i> Linn.)	Repeated continuous consumption of <i>Ghee</i> along with <i>Madhu</i> (honey) <i>Sharkara</i> (sugar)



15. <i>Lukarog (Loo)</i> ¹⁵ Due to <i>Dushta Vata</i> (bad air)- hot and stormy air , <i>Ravi</i> <i>Tapas</i> - extreme heat of the sun	<i>Chinchamalaka</i> (<i>Tamarindus indica</i> Linn.) and <i>Sharkara</i> (sugar)separately given with <i>Madhu</i> (honey)and <i>Jala</i> (Water)
16. <i>Daha</i> ¹⁶ caused by <i>Shitala</i> (Measels)	Honey and water taken with sugar <i>Nilika</i> (<i>Indigofera</i> <i>tinctoria</i> Linn.) triturated with Ghee

DISCUSSION

In *Tritiya Samuddesha* number of drugs used in *Anupanamanjiri* is forty three. Out of which twenty seven are of plant origin, seven of animal origin, four are metals and minerals and five are others. *Tritiya Samuddesha* consists of twenty two verses and it explained the management of toxicity of fifteen poisonous plant drugs. And other two treatments are described for *Lukarog* and *Daha* which does not come under toxicity. *Anupana* used are totally nine in number -*Ghee*, *Madhu* (honey), *Sharkara* (sugar), *Jala* (Water), *Guda* (Jaggery), *Godugdha* (cow's Milk), *Shita*(sugar not in powdered form, it is considered as more cold in potency), *Khanda* (sugar in the form of big crystals), *Navnita* (cow's butter). In *Kuchala Vishaktata*, use of antidotes are indicated as continuous or regular basis. Such frequency for intake of antidote is not mentioned vividly in other poisons. *Suvarngairik* (Red ochre) is the only mineral which is used as an antidote and *Tankana* (Borax: $\text{Na}_2\text{B}_4\text{O}_7, 10\text{H}_2\text{O}$) and

Saindhava (Rock salt) are classified under other criteria. Remaining all poisonous substances are of plant origin drugs.

Upadhatu explained are *Suvarnagairika* (*Red ocre-Fe₂O₃*) and *Tutthaka* (*Blue vitriol* $\text{CUSO}_4, 5\text{H}_2\text{O}$). Zoological name of drugs of animal origin are *Godugdha* (Cow's Milk)-*Bos Taurus*, *Madhu* -honey, *Navnita* (Cow's butter)- *Bos Taurus*, *Mahish Dugdha* (Buffalow's milk)or *Mahish Dadhi* (Buffalow's curd)- *Bubalus bubalis*. *Goghrita*- *Bos Taurus*. *Patavana* (*Gossypium*) similar family named as *Malvaceae*., but difficult to decide what is expected for the specific purpose of antidote activity. *Patavana* is controversial for its botanical identity.*arboretum//kydiacalycina* Roxb) comes under controversial drug of plant origin as both belongs to Otherwise all forty one drugs mentioned in this *Samuddesha* are noncontroversial and can be easily used in day to day practice.

CONCLUSION

Every system of medicine has its own line of treatment for removing toxins caused by poisonous substances. *Ayurveda* has explained several antidotes which are easily available at home too. But such remedies are not much explored. Throughout the world, Lower socioeconomic regions of the



society shows greater mortality due to poisoning as there is little awareness and publicity for emergency treatment. This article focuses on the explanations of specific antidotes of plant poisons explained in *Anupana Manjiri*, which are easily available and applicable by a laymen. Third *Samuddessha* of *Anupana Manjiri* is discussed here to simplify the anti poisonous remedies for *Sthavara Visha* (Plant origin). This is the high time to diverge the scope of research in the turf of antidotes for new improved antidotes.



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