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**“A LITERATURE STUDY ON CONCEPT OF TOXICITY ACCORDING TO AGADATANTRA IN AYURVEDA AND MODERN TOXICOLOGY”****Dr. Priyanka Krushna khairnar<sup>1</sup>, Dr. Sanjay Nandedkar<sup>2</sup>**

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**ABSTRACT:**

Ayurveda The Indian medical system is founded on eight branches, one of which is Agadatantra, primarily focused on poisons and their therapeutic administration. Ayurveda Samhitas such as Sushruta and Charaka encompass discussions of ancient toxicology themes. The Charaka Samhita elucidates Visha Upakrama for the management of poisoning circumstances. Contemporary science addresses poisoning situations and their treatment within the domain of toxicology. Contemporary methods for treating poisoning encompass several strategies, including the removal of unabsorbed toxins, resuscitation, administration of antidotes, utilisation of adsorbents to remove toxins, and the mitigation of toxic effects. The inanimate poison is referred to as Sthaavara, whereas the alive poison is termed Jangama. Inanimate poisons originate from plants, toxic minerals, and metals, whereas animate poisons derive from animals such as snakes, worms, insects, and scorpions. Ayurvedic treatment for enhancing cognitive function. The standardisation of Ayurvedic formulations is crucial for ensuring consistent biological activity, a uniform chemical profile, and an effective quality assurance program for the development and manufacturing of herbal medications. The WHO's criteria for evaluating the safety, efficacy, and quality of herbal medicines are essential for worldwide harmonization. The objective of the current study is quality standards and toxicity assessment.

**KEY WORDS:-** Ayurveda, Visha, Agadatantra, Poisons, Antidote.**Corresponding Details:**

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## INTRODUCTION

Ayurveda offers various methods for maintaining and enhancing physical and mental wellness. In this context, Ayurveda delineates various disciplines, one of which is Agadtantra, focussing on toxins and the care of pathological disorders related to poisons.<sup>1</sup> Ayurveda toxicology (Agadtantra) facilitates the identification of poisons, categorises many sorts of poisons, and differentiates between mineral, plant, and animal toxins, along with their respective therapeutic methods.<sup>2,3</sup>

The therapeutic methods of Agadtantra assist in the treatment of toxins originating from the following sources.<sup>4</sup>

- **Animal poisons:** insects, Birds, reptiles and worms, etc.
- **Poisonous Mineral:** Leads, arsenic and mercury, etc.
- **Poisonous plant:** Belladonna and aconite, etc.
- **Environmental poisons:** Pollutants, gases and trace elements, etc.
- **Artificial poisons:** Synthetic poison and cyanide, etc.
- **Dietary sources:** Incompatible food articles

## VIRUDDHA AHARA

As previously stated, poisons may originate from several sources; nevertheless, the quantity of such compounds significantly influences their toxic effects. For instance, metals in minute quantities do not generate toxicity until they accumulate to a lethal level.<sup>5</sup> Poisonous substances not only induce toxic effects, but certain toxins are utilised as medicinal agents following appropriate processing and contingent upon medical emergencies. Poisonous minerals such as lead and mercury are utilised in Rasa medicines following purification and size reduction processes.<sup>6</sup>

## General therapeutic principles of Agadtantra

- Elimination of toxins via faeces, urine, perspiration, and respiration.
- Mitigation of the effects of toxins.
- Counteracts the effects of toxins
- Impede rapid dissemination of toxins within the body
- Administration of medications with opposing properties
- Adsorption of toxins is followed by extraction utilising natural adsorbents to inhibit the dissemination of toxins throughout the organism.
- The Akritrima (natural) poisons originate from natural origins, encompassing both inanimate or static sources (Sthaavara) and animate or mobile ones (Jangama). Akritrima



- Poisons are prevalent and cause lethal effects, but Kritrima (made) poisons are less lethal and produce toxic effects during prolonged accumulation in the body, including synthetic poisons, industrial pollutants, and gasses. Ayurveda identifies another form of poison known as gara; things become toxic solely by their combination, or toxicity develops from the incompatibility of mixed components.<sup>7</sup>
- Substrata of natural inanimate poisons comprise plant components containing toxic substances, including roots, fruits, resins, leaves, flowers, bark, latex, heartwood, toxic minerals, and tubers.
- The foundational elements of biological toxins are teeth, vision, respiration, fangs, claws, excrement, urine, semen, menstrual fluid, saliva, pincers, anal region, bile, hair, beak bones, and cadavers.
- The composition of manmade poisons (gara) includes components such as bug remnants, faecal matter, animal blood, ashes from toxic plants, and hazardous minerals and metals.<sup>8</sup>

### Symptoms of poisoning:

- Excessive oral discharge, lingual heaviness, and disordered speech
- Stinging feeling, thoracic discomfort, and loss of consciousness
- Sensation of tightness and unconsciousness
- Severe organ pain
- Yawning and respiratory disturbances
- Nausea, loss of appetite, and swelling
- Xerostomia and oral roughness
- Cephalalgia and catarrhal inflammation
- Purulent lesions accompanied with diarrhoea

### Properties of Poisons

The toxic compounds manifest their effects due to their characteristics. The Rooksha Guna of toxins disrupts Vaata, Pitta, and blood; the potency of poison impacts the brain and triggers signs of insanity. The subtle feature of poison facilitates its distribution through the body's minute pathways. The mobility (Aashutva) facilitates rapid response and triggers instant pathological effects of toxins within the body. Improper digestion (Vyavaayee) alters an individual's Prakriti, whereas the Vikaashitva characteristic of poison has a muscle relaxant effect. The Laghutva characteristic of poison renders it resistant to biotransformation, allowing for rapid dissemination from one location to another.<sup>9</sup>

The Avipaakitva feature of poison maintains its harmful effects since it is not easily digested due to its indigestibility. The avipaakitva characteristic of poison complicates its removal, leading to buildup in the body if medical intervention is delayed. All these features contribute to the detrimental and lethal effects of poisons, inducing life-threatening complications in the patient.<sup>10</sup>

## Biological Effects of Visha

Poisons corrupt the blood and Doshas—Kapha, Pitta, and Vata—which subsequently impact the heart, breathing, cardiac functions, and vasomotor tone. Vata poison ascends to the forehead and eyes, disseminates through the tissues, and occasionally impacts six chakras. Poison disseminates from the Aadnyaa Chakra to the Brahma Randhra, and when the point in the head (Karantaka) succumbs, death ensues.

### Treatment of Poisoning

- **Arishta/Venikabandhana** means tourniquet ligature can help to block spread of venom. This involves arresting of limb by tourniquet ligature above the site of bite using cloth.
- **Mantra chikitsa** is effective for Jangama visha and should be practiced properly by a person of moral reputation. Mantra can block the spread of poison and give moral support.
- **Nishpeedanam** means uses of compression force to squeeze out poison for affected area.
- **Utkartana** means incision at the site of the bite to remove unabsorbed poison from the site.
- **Parisheka** means sprinkling after Raktamokshan, in which the affected part is irrigated by medicated water of Chandana & Usheer.
- **Agnikarma** means cauterisation (control heating) using heated rods of gold and iron. This control heating can help to destroy the effects of poison and also reverse the effects of poison in the affected area.

### Modern View

Environmental contaminants such as air, water, gases, carbon monoxide, lead, industrial waste, fuel combustion, smoke, sulphur dioxide, and fly ash can build in the body and produce detrimental effects. Pesticides, smoke, chemical toxins, acute drug toxicity, cyanide, synthetic poisons, and alcohol overdoses, as well as anaesthetics and drugs, are examples of prevalent manufactured poisons. The accumulated toxicity referred to as Dushi visha in Ayurveda resembles cumulative poisoning. Contemporary science delineates the applications of antidotes, adsorbents, emetics, and several other pharmaceuticals for the management of poisoning cases. Bloodletting therapy, the administration of purgatives, and the use of antidotes can also be employed in the management of poisoning.

## DISCUSSION

Herbal remedies are a significant element of the movement towards alternative medicine. A recent Harvard survey revealed that one in three participants reported utilising at least one alternative therapy in the preceding year. These statistics indicate that around \$13.7 billion

was expended on these therapies in 1990 alone. Tyler characterises herbal remedies as "unrefined substances derived from plants employed for the treatment of diseases, frequently chronic, or to achieve or sustain a state of enhanced health." The present demand for herbal medicines has generated an annual market of \$1.5 billion and enhanced accessibility.

The standardisation of herbal formulations is necessary for evaluating the quality of medications based on the concentration of their active principles, as well as physical, chemical, phytochemical, in vitro, and in vivo criteria. The evaluation of herbal formulations is crucial to validate their acceptance in contemporary medical practices. A significant issue confronting the herbal sector is the lack of stringent quality control standards for natural ingredients and their formulations. The Ayush department of the Government of India initiated a central initiative to establish a standard operating procedure for the manufacturing process aimed at developing pharmacopoeia standards for Ayurveda products. Standardisation of phytopharmaceuticals The standardisation of pharmaceuticals verifies their identity and assesses their quality and purity. Phytotherapeutic agents are standardised herbal formulations composed of plants utilised in numerous nations for the treatment of various ailments. The WHO defines herbal medications as substances that comprise plant components in either crude or processed forms as active ingredients, along with specific excipients, solvents, diluents, or preservatives. Standardised herbal products of uniform quality and containing precisely defined ingredients are essential for dependable clinical trials and to ensure advantageous medicinal outcomes. The pharmacological characteristics of a herbal composition are contingent upon its phytochemical ingredients. Standardisation can be categorised into two sorts as follows:

True standardisation denotes a specific phytochemical or combination of ingredients recognised for their activity. Pseudo standardisation: This relies on producers assuring the existence of a specified percentage of marker chemicals, which do not serve as indicators of therapeutic efficacy or the quality of the plant.

In standardisation, the triple 'P'-based protocols are

1. Pharmacogenetic
2. Physico-Chemical
3. Phytochemical

The standardisation of herbal formulations is crucial for evaluating the quality of pharmaceuticals, predicated on the concentration of their active constituents as well as physical, chemical, phytochemical, and both in vitro and in vivo characteristics. The standardisation of herbal formulations is crucial for evaluating the quality of pharmaceuticals, predicated on the concentration of their active principles as well as physical, chemical, phytochemical, and both in vitro and in vivo characteristics. A significant challenge confronting the herbal sector is the lack of stringent quality control standards for natural ingredients and their formulations.

## CONCLUSION

Ayurveda defines Agadtantra as a branch focused on the management of poisons and the pathological diseases connected with them. Agadtantra delineates varieties of poison derived from both natural and synthetic sources. The various sources of toxins include animals, plants, minerals, metals, environmental pollutants, and incompatible foods (Viruddha Ahara). The fundamental therapeutic principles of Agadtantra encompass the elimination of toxins via faeces, urine, perspiration, and respiration, the postponement of toxic effects, the reversal of toxic impacts, the prevention of toxin circulation, and the adsorption of toxins to inhibit their mobility inside the body. Mantra chikitsa, Arishta/Venikabandhana, Utkartana, Nishpeedanam, and Agnikarma are Ayurvedic methods that can assist in treating poisoning disorders.

## REFERENCES

1. Pandit K Shastri, Dr. G Chaturvedi; Charaka Samhita of Agnivesha; Reprint edition,Chaukhamba Bharati Academy Varanasi; Chikitsasthana 23/44, Vishachikitsa adhyay, 1998; 633.
2. Pt. LalchandShastriVaidya; Ashtangasangraha; 1st edition, Shree BaidyanathAyurved Bhavan Private Ltd,Nagpur;Uttarsthana 42/11, Sarpavishapratishedh adhyay, 1988; 676.
3. Kaviraj Ambikadutta Shastri; Sushruta samhita of Maharshi Sushrut; Part-I, 14th edition, Chaukhamba Sanskrita Sansthana,Varanasi; Kalpastahana 5/16, Sarpadashtavishachikitsa adhyay, 2003; 47.
4. Pandit K Shastri,Dr.GChaturvedi; Charaka Samhita of Agnivesha; Reprint edition,Chaukhamba Bharati Academy Varanasi; Chikitsasthana 23/42, Vishachikitsa adhyay, 1998; 632.
5. Pt. Lalchand Shastri Vaidya; Ashtangasangraha; 1st edition, Shree Baidyanath Ayurved Bhavan Private Ltd, Nagpur; Uttarsthana 42/13- 14, Sarpavishapratishedh adhyay, 1988; 678.
6. Kaviraj Ambikadutta Shastri; Sushruta samhita of Maharshi Sushrut; Part-I, 14th edition, Chaukhamba Sanskrita Sansthana,Varanasi; Kalpastahana 5/14- 15, Sarpadashtavishachikitsa adhyay, 2003; 47.
7. Pandit K Shastri,Dr.GChaturvedi; Charaka Samhita of Agnivesha; Reprint edition,Chaukhamba Bharati Academy Varanasi; Chikitsasthana 23/45, Vishachikitsa adhyay, 1998; 633.
8. Dr.Brahmanand Tripathi, Ashtanghridaya of Srimadvagbhata; Reprint edition, Chaukhamba Sanskrit Pratishthan, Delhi, Uttarsthana 35/38 & 35/55,Vishapratishedha adhyay, 2009; 1148: 1150.
9. Dr.Brahmanand Tripathi, Ashtanghridaya of Srimadvagbhata; Reprint edition,

Chaukhamba Sanskrit Pratishthan, Delhi,Uttarsthana 36/75-76, Sarpavishapratishedha adhyay, 2009; 1162.

10. Kaviraj Ambikadutta Shastri; Sushrutasamhita of MaharshiSushrut; Part-I, 14th edition, Chaukhamba Sanskrita Sansthana, Varanasi; Kalpastahana 5/39, Sarpadashtavishachikitsa adhyay, 2003; 49.

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