

SCOPE OF AGADA TANTRA (TOXICOLOGY) IN AYURVEDA: A REVIEW

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ABSTRACT

Introduction: *Ayurveda*, the foundation of the Indian medical system consisted of eight branches, one of which dealt primarily with poisons and their therapeutic management. *Agadtantra* is an *Ashtanga* Ayurvedic special branch that deals with the source, *guna*, symptoms, and management of poison. *Agadtantra* is a combination of two words: *Agada* and *Tantra*. *Agada* refers to anything that eliminates a poison, and *Agadtantra* is a knowledge method for eliminating poisons. **Aim:** The purpose of this study is to make awareness about the role of Toxicology in Ayurveda. **Methods:** Reviewed from various Ayurvedic literature, websites, and various journals. **Result:** Ayurveda defined *Agadtantra* as a branch of poison and the treatment of pathological diseases related with poisons. *Agadtantra* described various poisonous substances that have both natural and synthetic origins. Animals, plants, minerals, metals, environmental toxins, and *Viruddha Ahara* are

only a few examples of the various harmful sources. **Conclusion:** The basic therapeutic principles of *Agadtantra* include the evacuation of poison through feces, urine, perspiration, and breath, the delaying and reversal of poison effects, the prevention of poison's circulation and the adsorption of poison to limit their mobility within the body, etc.

KEYWORDS: *Agadtantra*, *Agada*, poison, *Ayurveda*.

INTRODUCTION

Ayurveda, the foundation of the Indian medical system consisted of eight branches, one of which dealt primarily with poisons and their therapeutic management. *Ayurveda Samhitas* such as *Sushruta* and *Charaka* contain descriptions of classical toxicology concepts. *Visha Upakrama* was explained by *Charaka Samhita* for the treatment of poisoning conditions. The inanimate poison is known as *Sthavara*, while the animate poison is known as *Jangama*. Inanimate poisons are derived from plants, toxic minerals, and metals, whereas animate poisons are derived from animals such as snakes, worms, insects, and scorpions, among others. *Ayurveda* toxicology is deeply rooted in traditional Indian medicine, with a focus on the principles of body balance and harmony. Toxic substances, known as '*Visha*,' according to *Ayurveda*, can disrupt the body's natural equilibrium and cause illness. To counteract the effects of toxins and restore balance. *Ayurvedic* toxicology employs herbs, minerals, and other natural substances. It emphasizes detoxification methods such as *Panchakarma*, which includes therapies such as *Vamana* (emesis), *Virechana* (purgation), and *Basti* (enema).

AIM AND OBJECTIVES

1. To study the concept of *Agada tantra* according to *Ayurveda*.
2. To study the role of *Agada tantra* in *Ayurveda*

MATERIAL AND METHOD

The entire study is based on a literary review of classical *Ayurvedic* texts and various journals. References to *Agada tantra* will be gathered from *Ayurvedic* texts, websites, and various journals, and available information will be presented in this article.

REVIEW OF LITERATURE

Agada Tantra

Agada Tantra is one of *Ayurveda*'s eight clinical branches that deals with various types of poisons, their mechanisms of action, clinical manifestations, and treatments. The concepts of *Viruddhahara* (incompatible food/diet), *Gara Visha* (Concocted Poison), and *Dooshi Visha* (Denatured/Latent Poison) are also explored in *Agada Tantra*. In comparison to plant, mineral, and venom poisoning, cases of *Viruddhahara*, *Gara Visha*, and *Dooshivisha* poisoning are on the rise. These three concepts, as well as their management, are a gift from *Agada Tantra* to humans in order to improve their health and longevity.^[1]

Agadtantra's general therapeutic principles

1. Elimination of poison by sweat, urine, and feces.
2. Prevent rapid distribution of poison in the body.
3. Postponing the effects of toxins.
4. Administration of drugs with opposing properties.
5. To prevent poison movement in the body, adsorption of the poison is followed by removal using a natural adsorbent.

Gara Visha

Poison is everywhere; only the dose determines its effects. *Gara Visha*, a concocted poison, is one of the hidden poisons. This *Visha* is defined by *Ayurveda* as a combination of poisonous and non-poisonous substances that causes chronic toxicity by interfering with the digestion process.^[2] According to *Acharya Charaka*, it is defined as *Kalantar avipaki*, which means that it takes a long time to digest and thus does not exhibit acute toxicity but causes a variety of diseases.^[3] *Gara Visha* is a toxic combination of substances that produces effects over time and does not kill a person instantly. It is known as concocted poison because it is made by combining two or more substances.^[4]

Symptoms of Garavisha

The onset of *Garavisha* symptoms typically occurs between 15 days and 1 month following ingestion. Certain symptoms, such as a pale and weak body, loss of appetite, tachycardia, limb oedema, *Grahani*, *Rajyakshma*, *Gulma*, *Dhatukshaya*, *Jwara*, etc., are suggestive of poisoning with *Garavisha*.

***Treatment of Garavisha*^[5]**

1. Hridya Shodhan - Vamana Karma with Tamra Churan (copper powder) mixed with honey.
2. Suvarn Prashan - after Vamana Karma patient should be given Savarn Bhasam with Madhu.
3. Agadapaana - Nagadantiaadi Ghrita.

Dooshi Visha (Denatured/Latent Poison)

Acharya Sushruta stated that *Dooshi Visha* is a part of *Sthavara* (Inanimate), *Jangama* (Animate), or *Kritrima* (Artificial) poison that accumulates and cannot be excreted completely from the body due to its chronic and cumulative nature or becomes less potent

after digestion or counteraction of antidotes and accumulates in the body for a prolonged period and slowly vitiates the body. *Dooshi Visha's veerya* is small, so there is no immediate danger. On the other hand, it undergoes *Kapha* (lipophilic Binding) and remains in that state for years. We can now associate it with bio-accumulation. Bio-accumulation is the accumulation of substances in an organism, such as pesticides or other organic or inorganic chemicals. It happens when an organism absorbs a toxic substance at a faster rate than the substance is lost.^[6] A xenobiotic is a term used to describe a foreign or synthetic substance found in the body, such as a drug, food additives, pesticides, pollutants, and so on. In poison, the concept of *Apaki Guna* (not being assimilated in the body) explains the mechanism of xenobiotics. Oxidative stress in the body is caused by xenobiotics.^[7]

Symptoms of *Dooshi Visha*^[8]

Subsequently, it results in an inebriated feeling following meals, indigestion, an aversion to food, circular patches and urticarial rashes on the skin, stupor, loss of vital body components, the hands, feet, and face, ascites, vomiting followed by diarrhea, discoloration, fainting, intermittent pyrexia, and excessive thirst. Certain poisons cause insanity, while others cause constipation, leprosy, and other diseases that are similar to these symptoms.

Chikitsa of *Dooshivisha*

1. *Ajeya Ghrita*
2. *Dushi Vishaari Agada*

This treatment is effective for *Dooshivisha* and other poisonous conditions.

Viruddhahara (Incompatible food/diet)

Ayurveda defines *Viruddhahara* as a specific diet and its combinations that disrupt the metabolism of tissue, inhibit the process of tissue formation, and have the opposite property to tissue.^[9] *Viruddhahara* is a diet that stimulates bio-energetic humors without eliminating them.^[10] Incompatible foods can be found in restaurants, hotels, and even homes. We eat them unknowingly and then suffer from a variety of health problems as a result.

Examples of *Viruddhahara*

Fish (especially Chilmil fish) should not take along with milk

Both substances have a *Madhura* (sweet) taste and remain sweet after digestion. This combination is known as *Abhishyandi*, which leads to increased moisture in the tissue and

obstruction of various channels. Both have the opposite (incompatible) potency. Milk has a cold potency, while fish has a hot potency. The opposite potencies significantly affect the three doshas: *Vata*, *Pitta*, and *Kapha*.

Dadhi (curd) should not be consumed at night. Because curd is naturally acidic. It aggravates *Pitta* and *Kapha doshas*, causing a lot of heat in the stomach. A curd is heavy, slow to digest, and causes constipation. It is best digested at lunchtime, when the digestive system is at its strongest.

Warm honey should not be consumed by anyone suffering from heat exhaustion or sunstroke. Because honey becomes poison when heated, which can lead to death.

Agada Yogas

Gada is the root of the word *Agada*. The word *Gada* has two meanings: *Roga* (disease) and *Visha* (poison). Drug is also a synonym for *Agada*. *Agada* is thus a drug that cures disease or poison. Various single herbs, polyherbal formulations, and herb-mineral formulations are mentioned as anti-toxic in *Ayurvedic Samhitas*. *Vishaghna* (Antitoxic) drugs are those that act against toxic substances.^[11]

Agada Yogas

- *Dushivishari Agada*^[12]: In case of dushivisha poisoning and in other type of poisoning also
- *Ajit Agada*^[13]: In case of sthavar and jangam visha poisoning
- *Dashang Agada*^[14]: In Keeta poisoning
- *Mritasanjeevan Agada*^[15]: In unconsciousness

Skin manifestations due to Visha

The largest organ, the skin serves as a barrier between the interior and exterior of the body. It is multilayered, with layers of dead cells on top of layers of living cells. A toxin is a chemical that is naturally produced by plants, animals, and microorganisms that interferes with another organism's ability to function normally. However, any substance that is said to be harmful to health is referred to as a "toxin" by lifestyle journalists and alternative medicine practitioners. This could include the poisons described in *Ayurvedic* treatises as *Sthavara Visha* (poison originating from plants), *Jangama Visha* (poison originating from animals), *Dhatu Visha* (poisonous metals and minerals), *Dooshivisha* (cumulative poison), *Gara Visha* (artificial

poison), etc. *Agada Tantra*, a separate branch of *Ayurveda*, addresses these toxicological issues, including the dermatological manifestation brought on by *Visha*.^[16]

Ayurveda has a separate branch called *Agada Tantra* which deals with the toxicological aspects including the dermatological manifestation due to *Visha*. When the toxin reaches the *Rakta dhatu* and living skin cells, it causes inflammation. *Visha* causes skin manifestations whenever it comes into contact with the body, whether externally or internally. Cosmetic toxicity is one of the leading causes of skin problems.

Lotions contain propylene glycol, which can cause contact dermatitis.

Sunscreen lotions contain cinnamate and salicylate, which are known to cause skin rashes.

Lipstick colors are derived from coal tar dyes, which have the potential to cause skin irritation, allergies, and cancer.

Cleanser and body wash contain sodium and ammonium laurel sulphates, which are skin irritants and potentially carcinogenic.

Environmental toxicity

The main issue we currently face is environmental pollution. Pollution is an ongoing process that results in the collection and storage of pollutants that subsequently affect the elements of the natural environment. Since pollution damages the earth's natural resources—air and water—which are essential to life as we know it, it is a matter that needs to be treated with extreme seriousness. If these were present in unfavorable quantities, plants and animals—including humans—could not survive. Soil, water, and air pollution make up the majority of environmental pollution. The sixth branch of *Ashtang Ayurveda* is called *Agadtantra* (Ayurvedic toxicology), and it deals with poison—that is, how to identify it, what kinds of poison are found in plants, minerals, and animals, as well as how to treat man-made poison. Various texts and classical books have described the concept of environmental pollution. *Acharyas* in Ayurveda briefly describe environmental health in *Dincharya*, *Ritucharya*, and *Janpadodhvansa*.^[17]

Agada Tantra in Oncology

Because of modernisation and urbanisation, everyone is frequently exposed to a variety of toxic substances, the majority of which are carcinogenic. Cancer is caused primarily by

factors such as lifestyle, level of physical activity, environmental pollution, personal hygiene, and food. Chemotherapy's first few doses are therapeutic, but subsequent doses cause serious damage to healthy tissues. The body fails to eliminate excess drugs, resulting in the accumulation of these chemicals in the body and long-term health problems. In *Ayurveda*, various purification methods are explained, as well as *Agada Kalpas*, which help to reduce or eliminate toxicity.

Special *Agada* formulations^[18]

- *Vilwadi*: hepato protective, radiotoxicity protection
- *Kalyanaka*: radio toxicity protection

DISCUSSION

Ayurveda offers a number of strategies for maintaining and enhancing mental and physical well-being. In this regard, *Ayurveda* described various branches that focus on particular topics. *Agadtantra* is one such branch that addresses poisons and the treatment of illnesses linked to poisons. The *Ayurvedic* toxicology, or *Agadtantra*, can be used to identify various poisons, define their types, and differentiate between poisons that are found in plants, minerals, and animals, as well as how to treat them.^[19-21]

Modern drug toxicity appears to be another area where *Ayurvedic* toxicology can be very helpful. Anecdotal reports suggest that adjuvant *Ayurvedic* treatment may lessen the toxicity of chemotherapy and radiation therapy. More research and development is required in this area.

CONCLUSION

Agadtantra was described by *Ayurveda* as a branch of poison and the management of pathological conditions associated with poisons. *Agadtantra* described various types of poison, both natural and man-made. Poisonous sources include animals, plants, minerals, metals, environmental poison, and *Viruddha Ahara*, among others. The general therapeutic principles of *Agadtantra* include poison removal through feces, urine, sweat, and breath, poison delaying and reversal, poison prevention and adsorption to limit poison movement in the body, and so on. *Ayurvedic* approaches such as *Mantra Chikitsa*, *Arishta/Venikabandhana*, *Utkartana*, *Nishpeedanam*, and *Agnikarma*, among others, can help treat poisoning conditions.

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