

EXPLORING CANCER THROUGH THE LENS OF AGADA TANTRA: A REVIEW

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ABSTRACT

Agada Tantra, a branch of *Astanga Ayurveda*, describes the many causes of lifestyle disorders brought on by urbanization and industrialization. Like cancer, several lifestyle diseases have a lengthy history and usually progress slowly. Cells that develop abnormally or uncontrollably and have the potential to infiltrate or spread to different parts of the body are the hallmark of a class of diseases known as cancers. While genetics plays a role in cancer development, it only accounts for 5 percent of cases; non-hereditary factors such as nutrition, lifestyle, degree of physical activity, cleanliness of the individual, and environmental toxins cause most cancer cases. These factors cause the body to progressively accumulate toxins, which *Ayurveda* refers to as cumulative toxins, or *Dushi Visha*. The *Agada Tantra* describes the treatment of *Visha* (poison) by use of the *Shodhana* (purification) procedure and several *Agada Kalpas* that are described in detail in the *Samhitas*. The poison known as "*Dushi Visha*" has been denatured or attenuated. Denatured or attenuated poisons function in the body as

latent toxins. The weak poison *Dushi Visha* remains in the body beneath the *Kapha* layer for years without killing its victim due to its poor potency. A bad lifestyle that includes smoking, being overweight, eating poorly, polluting the environment, being sedentary, and drinking too

much alcohol can lead to cancer. One can prevent through altering their lifestyle, karma from *Samshodhana*, etc.

KEYWORDS: *Dushi Visha, Gara Visha, Agada*, Cancer, Toxins.

INTRODUCTION

The World Health Organization declares that cancer is the most dangerous killer in the world, despite it being one of the worst diseases that has been spreading quickly in the twenty-first century. Unquestionably, cancer is linked to a sophisticated, unpredictable, stressful lifestyle that has been controlled by Western medicine, as well as a resistance to modernization. Scientists are putting a lot of effort into fighting this condition, but a long-term cure is still sought. The oldest system of traditional Indian medicine, *Ayurveda*, has long employed plant-based therapies to prevent or treat a wide range of malignancies. Furthermore, there has been an increase in interest in complementary and alternative medicine among researchers looking into cancer treatment.

Cancer is either non-inflammatory swelling or inflammatory swelling, according to Ayurvedic theory. According to the "*Charaka*" and "*Sushruta Samhitas*," it is called either a "minor neoplasm" (*Granthi*) or a "major neoplasm" (*Arbuda*).^[1] An estimated 14,61,427 incident cases of cancer, or around 100.4 incidences per 100,000 people, are expected to occur in India in 2022. One in nine Indians will develop cancer at some point in their lives, according to predictions. The most common cancer locations in men and women, respectively, were the breast and lung. Leukemia (29.2% in males and 24.2% in girls) was the most prevalent kind of juvenile cancer in those aged 0–14 years. By 2025, there would be a 12.8% increase in the incidence of cancer incidents compared with 2020.^[2] Smoking tobacco products is identified by the World Health Organization as a contributing factor to cancer, in addition to unhealthy eating habits, obesity, lack of physical activity, exposure to toxins, and unprotected sun exposure. Exposure to carcinogens in the environment is possible in various settings such as the home, workplace, through consumer products, medical treatments, and in daily choices.^[3] Just 5–10% of cancer cases are caused by genetic diseases or defects; the remaining 90–95% are brought on by environmental and lifestyle factors, such as smoking cigarettes, consuming a diet high in fried food and red meat, drinking alcohol, being outside in the sun, being contaminated by pollutants in the environment, being obese, and not exercising. Tobacco use is linked to 25–30% of cancer-related fatalities, and nutrition is linked to another 30–35% of cases. Fifteen to twenty percent of cancer-related deaths are

caused by infections; the remaining causes are associated with an inadequate lifestyle, which includes a diet high in fruits and vegetables, excessive use of pesticides in agriculture, and pollution, all of which change our body's metabolism and increase our risk of chronic illnesses like cancer, heart disease, and other diseases. Chronic ailments are also a result of our material's prolonged use of preservatives. Two factors that can result in long-term illnesses or anomalies are avoiding direct sunlight exposure and maintaining a balanced diet.^[4]

AIM

The aim of the study is to explore the understanding the concepts and treatment of cancer from the perspective of *Agada Tantra*.

MATERIALS AND METHODS

Reviewed from various *Ayurvedic* literature, websites, and relevant journals.

Agada Tantra and Cancer

The human body is composed of millions of cells that work together to form tissues, organs, and organ systems. All these cells proliferate, expand, and eventually are replaced by newer cells in order to keep the body healthy. A tumor develops when a cell becomes aberrant and begins to grow out of control. In general, there are two types of tumors: benign and malignant. Benign tumors usually don't threaten life and aren't categorized as cancer. Malignant tumors have the ability to travel through the bloodstream and lymphatic system to distant parts of the body, where they can infiltrate nearby tissues and organs. We call this process metastasis.^[5]

Carcinogens

Carcinogens are substances or causes that cause cancer to occur. The way the body processes or metabolizes carcinogens varies depending on their interaction with the body. This places them in the following categories:

- 1) Direct acting carcinogens
- 2) Genotoxic carcinogens that act indirectly
- 3) Co-carcinogens

Chemicals like nitrogen mustard that cause cancer upon exposure are known as direct acting carcinogens. Benzo(a) pyrene, aflatoxin B1, NNK, and other compounds that cause cancer

when they are metabolized in the body are examples of indirect acting genotoxic carcinogens. Additionally, compounds like sodium arsenite and cigarette smoking that act in concert with other chemicals to produce cancer are known as co-carcinogens; they do not cause cancer on their own.^[6]

India's traditional Ayurvedic medicine features a sophisticated and successful antitoxic therapy protocol. One of *Ayurveda's* eight classical disciplines, or *Ashtanga*, the *Agada Tantra*, addresses toxin control. A thorough examination of the *Agada Tantra's* principles and the etiology of diseases like cancer will lead us to conclude that toxic substances, whether ingested through food, water, air, or medicine, are mostly responsible for the ailments. While some toxins cause symptoms right once, others take a while to manifest symptoms. The majority of cancer's etiological elements and pathophysiology fall within the *Dushi Visha*, *Gara*, and *Viruddhahara* ideas of the *Agada Tantra*.

Dushi visha

Any type of poison, whether from living or dead sources, or artificial (*Kritrima Visha*) and kept in the body after being partially expelled or temporarily detoxified by anti-poisonous medications, a forest fire, the wind, or the sun, is referred to as *Dushi Visha* (a poison inactive) Since this poison is not very potent, it usually doesn't result in immediate death. Furthermore, because of *Kapha's* enveloping (*Avarana*) function, these low-potency poisons remain in the body for extended periods of time without causing any serious or lethal symptoms.^[7] It first *Vitiates* the *Rasa Raktadi Dhatu* (Tissue) before gradually vitiating the *Dosha*. The pathology of cancer is the same. Long-term exposure to carcinogenic substances vitiates *Rasa-Raktadi Dhatu* (Tissue), which leads to cell mutation.^[8]

Virudhaahara and Gara visha

Viruddha is made up of substances that induce "*Utkleshya*" of the *Doshas* but are unable to eliminate it from the body. Additionally, it opposes the *Dhatu*s. *Viruddha Dravyas* are those that are incompatible with the body's *Dhatu*. Some have deleterious effects because of their incompatible qualities, while others are harmful because of mixtures, preparation techniques, dosage, location, and nature.^[9] *Vagbhata* claims that *Viruddha* and "*Amavisha*" are so closely linked that it causes poisonous symptoms.^[10]

Similar to *Visha* and *Gara*, *Ahara* is a *Viruddha* in nature. Based on them, we can deduce that unhealthy eating habits and repeated exposure to carcinogens are cancer's etiological

determinants. Therefore, we may efficiently heal these kinds of ailments using the *Agada Tantra* principles.

Table 1: Biophysical, biological, and biochemical association with human cancers.

Cancer sites	Carcinogens	Occupational Sources
Skin, Lungs	Arsenic	Medications, Electricians
Lymph nodes, Blood	Benzene	Painting, detergents, petroleum
Lungs, Mesothelioma	Asbestos	Floor tiles, roof
Prostate	Cadmium	Painting, battery
Lungs	Beryllium	Nuclear reactor, Missile fuel
Lungs, Nose	Nickel	Ceramics, ferrous alloys,
Colon, Lungs	Smoke	Air pollution, car smoke
Bladder	Hair dyes	Barber, hairdresser
Skin	Soot	Chimney cleaners
Bone marrow	Ionizing radiation	Radiology technicians
Lung	Chromium	Pigments, paints, preservatives
Lung	Radon	Mines, cellars
Pharynx, Nose	Formaldehyde	Laboratory / Hospital workers
blood, Lung	Gasoline	Oil petroleum

General concept of management

The overall treatment of cancer, because general management combined with *Agadas* administration produces better results than *Agadas* alone. There is *Visha* in the form of *Ama* in all forms of cancer. Therefore, "*Ama Nirharana*" refers to the beginning or first-line treatment of any kind of cancer. The remedies for *Prabhutha*, *Madhyama*, and *Alpa* dosha are respectively, *Sodhanam*, *Langhanapachana*, and *Langhana*.

However, the condition makes a cancer patient extremely weak. Therefore, it is not suggested to use *Sodhana* and *Langhana*, *Drakshadi Kashya* and other mild *Pachana Oushadhas* are given along with *Laja*, *Peya*" so that we can perform both *Mridulanghana* and *Pachana*. After some "*Bala*" is gain by the patient, strong *Amapachana* medications like *Pachanamrutham Kashayam*, *Sapthasaram Kashayam* can be given.

The *Visha Chikithsa's Pathyakrama* should be adhered to. Due to the fact that foods high in fat, oil, or *Guru Ahara*, among others, raise *Ama* and aid in the spread of sickness. Since amino acids are essential for both neovascularization (Angiogenesis) and the growth and multiplication of tumor cells, a diet high in protein should be avoided. Only use *Peyadi* if advised. This therapy program is administered with certain *Agada* formulations.

After a few days, in addition to the symptoms listed above, there will be purpura, bleeding, oral infection, GI tract and mouth ulceration, diarrhea, hair loss, etc. These symptoms are all similar to *Ama*, *Gara*, and *Dushivisha's Lakshanas*. In such cases, we will need to apply *Dushi Visha*, *Gara*, and *Ama* treatment. Purifying therapy and *Rasayana* therapy work well after *Agada* formulations are infused.

Some special *agad* formulations

- *Vilwadi Agada*: hepato protective, radiotoxicity protection
- *Kalyanaka Agada*: radio toxicity protection
- *Ajithagadam*: nephro toxicity protection
- *Malatyadi Agada*: hemotoxicity protection
- *Dhvaswakarnadi*, *Patala Paribhadradi*, *Kataka Beeja*: promising water pollution controller
- *Dushivishari Agada*- lichen planus
- *Bhunimbadi Agada*, *Dushivishari Agada*: e-coli, staphylococcus aureus, shigella Sonnei, salmonella enterica
- *Dhatakyadi Agada*: e-coli, staphylococcus oreus, strepto coccus mutans

Numerous *Upkrams*, including *Snehan*, *Swedan*, *Raktamokshan*, *Vaman*, *Virechan*, *Basti*, *Nasya*, *Pizhichil*, and *Shirodhara*, can be employed in management.^[11]

DISCUSSION

These days, pollution, meals, makeup, hairspray, perfume, shampoo, lipstick, and hair dye are just a few of the environmental elements that might cause cancer. Cumulative poisons, or *Dushi Visha*, are deposited as a result of these circumstances. Both the destructive and therapeutic effects of chemotherapy and radiation therapy, which are used to treat cancer, are produced. With few circumstances, new cancer cases do not present to Ayurvedic doctors for treatment. Ayurvedic treatment is typically sought by patients who attempt contemporary medical methods including radiation, chemotherapy, and surgery. Chemotherapy's initial doses are known as therapeutic doses because they kill cancerous cells while typically causing little harm to healthy tissues. However, over time, the dosages will seriously harm healthy tissues. The body's propensity to retain extra medication, which leaves chemical deposits in the body and results in long-term health issues. The body cannot metabolize or excrete these substances, which causes the synthesis of *Ama*. *Ama* is what the body produces and it stands for the *Lakshanas* of *Visha*. When the water content of the cells is ionized

during radiation therapy, peroxide and other toxins are produced, which have harmful effects on the body. This process is known as "*Pitta Vitiation*." *Ayurveda* describes several *Panchakarma* procedures (purifications) and *Agada Kalpas* (Formulations) that can eliminate or lessen toxicity in order to get rid of such accumulated toxins.

CONCLUSION

Due to the advanced lifestyle of the present period, people are regularly exposed to numerous hazardous compounds, the most of which are carcinogenic in nature. The main environmental factors that cause cancer are lifestyle choices, pollutants in the environment, amount of physical activity, personal cleanliness, and food. The first few doses of radiation and chemotherapy are beneficial, but subsequent doses will harm healthy tissues. The body is unable to get rid of extra medication, which builds up inside the body and results in long-term health problems. In *Ayurveda*, the process of *Panchakarma* involves the explanation of several procedures and *Agada Kalpas*, or formulations, that aid in the removal of harmful chemicals produced within the body. As a result, *Ayurveda* offers enormous potential for cancer treatment.

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