

CRITICAL REVIEW ON SCOPE OF AYURVEDA IN CANCER

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Abstract: For every individuals cancer is the one word which is very scary and it is the second largest cause of death. In India there are nearly about 8,00,000 new cancer patients get registered with the national cancer registry program every year. Although heredity plays its role in causing cancer but that includes only 5% of cancer cases, non -heredity factors such as life style, level of physical activity, food, personal hygiene, environmental pollution are the major causing factors. Because of these factors toxins get deposited in body day by day called as cumulative toxins, in Ayurveda it is termed as dushi visha. As Ayurveda is divided into eight branches Agadatantra is one of the eight branches. Agadatantra is a branch in which treatment of poison is explained and it is done by panchakarma by means of Shodhana (purification) method followed by various agada kalpas which are mentioned in samhitas for the treatment vishas(poison).

Keywords: Cancer, dushi visha, panchakarma, agada kalpas, cumulative toxins

Introduction

Cancer is a disease where cells grow out of control and destroy normal tissue. The population of the whole world is expected to be 7.5 billion by 2020 and it is predicted that approximately 15.0 million new cancer cases will be diagnosed, with deaths of about 12.0 million cancer patients. Factors such as life style, level of physical activity, personal hygiene, and environmental pollution food are the major causing factors of cancer. Now a days due to modern lifestyle each & every individual is frequently exposed to many toxic substances which are mostly carcinogenic. In Ayurveda for the treatment of toxicity panchakarma procedure by means of shodhana and shaman methods are described. In shodhana (purification) method like enema, emetic, head evacuation, blood letting therapy is done whereas in shaman various agada kalpas (formulations) are used for the treatment of this toxicity.

Material and Method

Carcinogen

- Any substance that promotes the formation of cancer is termed as carcinogen. This may cause because of the ability to damage the genome or due to the disturbance of cellular metabolic processes.
- There are two types of carcinogenic mechanisms that have been identified. One is genotoxic that alter genes through interaction with DNA and other is epigenetics.^[1]

Genotoxic

Toxic agent that damages DNA molecules in genes causing tumors

- Direct or primary carcinogens: The chemicals that actually act without any bioactivation; for example, bis(chloromethyl) ether, ethylene dibromide, and dimethyl sulfate.
- Procarcinogens: Chemicals that require biotransformation to activate them to a carcinogen; for example, vinyl chloride and 2-naphthylamine.
- Inorganic carcinogen: Some of these are preliminarily categorized as genotoxic due to potential for DNA damage. Other compounds in the group may operate through epigenetic mechanisms^[2]

Epigenetic

The carcinogens that actually do not act directly with genetic material is epigenetic. They are of several types:

Cocarcinogen: Increases the overall response of a carcinogen when they are administered together; for example, sulfur dioxide, ethanol, and catechol.

Promoter: Increases the response of a carcinogen when it applied after the carcinogen but will not actually induce cancer by itself; for example, phenol and dithranol

Solid-state: Works by mechanism which is not known, but physical form vital to effect; for example metal foils and asbestos

- Hormone: Usually is not genotoxic, but it alters endocrine balance; often it acts as promoter (e.g. DES and estrogens).
- Immunosuppressor: Mainly stimulates virally induced, transplanted, or metastatic neoplasms by weakening host's immune system (e.g., antilymphocytic serum, used in organ transplants^[3]

Table No. 1 Biological, biochemical and biophysical association with human cancers^[4]

Carcinogens	Cancer sites	Occupational Sources
Arsenic	Skin, Lungs	Medications, Smelters, Electricians
Cadmium	Prostate	Painting, battery and coating
Asbestos	Lungs, Mesothelioma	Floor tiles, roof
Benzene	Lymph nodes, Blood	detergents, petroleum Painting, battery
Beryllium	Lungs	Nuclear reactor, Missile fuel
Smoke	Colon, Lungs	Air pollution, car smoke, Cigar
Nickel	Lungs, Nose	Ceramics, ferrous alloys, Battery
Hair dyes	Bladder	Barber, hairdresser
Soot	Skin	Chimney cleaners
Ionizing radiation	Bone marrow	Radiology technicians
Burkitt's virus	Lymph node	Black people in south Africa
Radon	Lung	Mines, cellars, uranium decay
Chromium	Lung	Pigments, paints, preservatives
Formaldehyde	Pharynx, Nose	Laboratory / Hospital workers
Gasoline	blood, Lung	Oil petroleum
Hepatic virus- B, C	Liver	Drug users, hospital workers

Ayurveda Concept

- Agadathantra, is one of the branch of Ashtanga Ayurveda which deals with management of toxicity. The study about the principles of Agadathantra and the etiology of cancer like diseases deduce that the diseases are mostly due to toxic substances which enter through food, air, water or medicine etc.
- Some of the toxin produces acute symptoms and some produces chronic symptoms. If we consider Gara, Dooshivisha and Viruddhahara concepts of Agadathantra most of the etiological factors and pathology of cancer come under these three headings.

Dushivisha

- The poison originating from inanimate or animate sources or any artificial poison (Kritrima visha) which retained in the body after partial expulsion or which has undergone detoxification, by the anti-poisonous drugs, forest fire, the wind or the sun is known as Dooshivisha. As it is having low potency it usually doesn't causes sudden death. It is enveloped by Kapha, so because of its low potency poisons is retained in the body for long period without producing fatal symptoms^[5]
- Firstly it slowly vitiates the dosha & then vitiates rasraktadi dhatu (tissue). The same pathology is seen in cancer. After long term exposure to carcinogenic substances, Rasraktadi Dhatu (tissue) get vitiated which causes the mutation of cells.^[6]

viruddha and gara

- Substances causing 'utkleshya' of the doshas and are unable to remove from the body forms Viruddha and it is antagonistic to the dhatus. Those dravyas which are incompatible with the dhatu of the body are viruddha. Some act adversely due to their mutually contradictory properties, some by combinations, some by method of preparations, some by virtue of the place, time and dose and some by their nature.^[7]
- According to Vagbhata, viruddha is related to 'Amavisha' that leads to symptoms of poison^[8] Ahara having nature of viruddha is like visha and gara. Considering these we can conclude that frequent exposure to carcinogens and unwholesome food habits are causative factors of cancer. Hence we can treat this type of diseases effectively by the principles of Agadathantra.

AYURVEDA AND CANCER^[9]

Ayurveda	Modern medicine
Padminikantaka	Papilloma of skin
Yakrutodara	Hepatomegaly due to liver metastasis
Raktagulma	Tumours of uterus/ovary
Pleehodara	Splenomegaly due to infiltration in spleen
Raktapitta, Pandu	Various type of leukemia
Rakta, Mamsaja, Medoja, Oshta Roga	Carcinoma of lips
Agantuja Stanaroga	Cancer of the breast
Charmakeel	Keloid
Medoja Galganda	Hodgkin's disease
Nasarbuda	Rhinoscleroma

General concept of management^[10]

- In all type of cancer visha is present in the form of Ama. So the initial or first line management of all type of cancer is 'Ama nirharana'. Langhanam, Langhanapachanam, Sodhanam, are the treatment for alpa, madhyama and prabhutha dosha respectively.
- But if cancer patient is very weak due to the disease sodhanam and langhanam should not be advisable. In that case midulanghana and pachanashould be done, for that 'Sasundilajapeya' is given along with mild pachana aushadhas like Drakshadi Kashyam. After getting some 'bala' to the patient strong amapachana drugs like, Sapthasaram Kashayam pachanamrutham Kashayam, etc can be given
- Pathyakrama that stated in Visha chikithsa should be followed. As non-veg food, Oily foods, Guru Ahara etc. will increase the Ama and thereby help the progression of disease. Peyadi is only advisable. Specific Agada preparations are given along with this treatment protocol
- In radiation therapy, it produces toxins which produces toxic effects on body and also there is pitta vitiation. The radiation and chemotherapy produces the acute symptoms such as anorexia, fatigue, drowsiness.
- After some days along with the above symptoms there will be purpura, haemorrhage, mouth infection, ulceration of mouth and GI tract, diarrhoea, hair loss etc occurs
- These all symptoms resemble the lakshanas of Ama, Dooshivisha and Gara. In such conditions we will have to resort treatment of dooshivisha, gara and Ama. Purification therapy followed by administration of Agada formulations and Rasayana therapy are useful.

Agada formulations

- Vilwadi: hepato protective, radiotoxicity protection
- Kalyanaka: radio toxicity protection
- Ajithagadam: nephro toxicity protection
- Malatyadi agada: hemotoxicity protection
- Dhvaswakarnadi, patala paribhadradi, kataka beeja: promising water pollution controller
- Vilwadi: vibrio cholerae- ciprofloxacin
- Dushi vishari agada- lichen planus
- Bhunimbadi agada, dushivishari agada: ecoli, staphylococcus aureus, shigella sonnei, salmonella enterica
- Dhatakyadi agada: : ecoli, staphylococcus aureus, strepto coccus mutans
- Sirisha punarnva, tulasi: reproductive and developmental toxicity

Upkramas in management

- Snehan
- Swedan
- Raktamokshan
- Vaman
- Virechan
- Basti
- Nasya
- Pizhichil
- Shirodhara

Discussion

- Now a days there are various environmental factors causing cancer such as pollution, foods, foundation, perfume, hairspray, products such as shampoo lipstick, hair dye. These factors leads to deposition of toxins called as dushi visha (cumulative toxins).
- Chemotherapy and Radiotherapy are the therapy that are used in cancer treatment will produce harmful toxic effects along with their beneficial effects. In case of cancer fresh cases do not report to Ayurvedic physicians (exceptions are there) for treatment. Mostly those people who try modern treatment procedures such as Surgery, Chemotherapy and Radiotherapy come for Ayurvedic treatment.
- The first few doses In chemotherapy will act as therapeutic doses and it destroys the neoplastic cells and usually don't cause much damage to healthy tissues. But later the doses will cause serious damage to healthy tissues. The tendency of the Body fails to eliminate the excess drugs which deposits chemicals in the body and causes health problems for a long duration.
- These chemicals are indigestible and inexcetable by the body which lead to production of Ama. The Ama which is produced in the body shows the lakshanas of visha.
- In radiation therapy there is vitiation of 'pitha', and the ionization of the water content of the cells will produce peroxide and other toxins which produces toxic effects on the body.
- In Ayurveda for the removal of such accumulated toxins various panchakarma procedure (purification) are described followed by various agada kalpas (formulation) that are useful to reduce or to remove toxicity.

Conclusion

In modern era due to the advanced lifestyle individual is frequently exposed to many toxic substances which are mostly carcinogenic in nature. Environmental factors such as life style, environmental pollution, level of physical activity personal hygiene, food are the major causative factors of cancer. In Radiation and Chemotherapy the first few doses will act as therapeutic doses but further doses will cause damage to healthy tissues. The body fails to eliminate the excess drugs which gets deposited in the body and causes health issues for a long duration. In Ayurveda Panchakarma procedure (purification) methods are explained along with agada kalpas (formulations) which helps to the toxic substances produced in the body. Thus ayurved has tremendous scope in treatment of cancer.

References

- [1] www.sciencedirect.com
- [2] <https://www.ncbi.nlm.nih.gov>
- [3] <https://en.m.wikipedia.org>
- [4] <https://www.ncbi.nlm.nih.gov>
- [5] PV Sharma, Charaka samhita, Edition chaukhamba Orientalia , Varanasi- 2008, 4, Chikitsa sthanam (23/31)
- [6] PV Sharma, English commentary, Sushrut samhita, Edition chaukhamba Visvabharti Oriental publisher, Varanasi- 2010, 3 ,Kalp sthan (2/25-26)
- [7] PV Sharma, Charaka samhita, Edition chaukhamba Orientalia , Varanasi- 2008, 4, sutra sthanam (26/86-87)
- [8] Dr. Bramhanand Tripathi Editor, Ashtanghrudayam of Shrimadvagbhata edited with 'Nirmala Hindi Commentary, sutrasthan; chapter 7, verse 29, Chaukhamba Sanskrit pratishthan, Delhi, Reprint 2014
- [9] <https://www.slideshare.net>
- [10] jyothsnika.blogspot.com

