

**CANCER CAUSED BY DUSHIVISHA AS A LIFE STYLE DISORDER**

**Dr. Garima^{1*}, Ramesh Chandra Tiwari², Manisha Dikshit³, Anoop Kumar Singh⁴ and
Ved Bhushana Sharma⁵**

M.D. Scholar¹, Head of Department², Associate Professor^{3,4}, Assistant Professor⁵,
P.G. Department of Agadtantra Evum Vidhivaidhyaka, Rishikul Campus Haridwar, U.A.U.

Article Received on
23 Nov. 2018,

Revised on 13 Dec. 2018,
Accepted on 02 Jan. 2019,

DOI: 10.20959/wjpps20192-12969

Corresponding Author*Dr. Garima**

M.D. Scholar, P.G.

Department of Agadtantra

Evum Vidhivaidhyaka,

Rishikul Campus Haridwar,

U.A.U.

ABSTRACT

Ayurveda, the science of healthful living, is the most rational and scientific among the ancient systems of medicine. *Ayurveda* has immense potential to tackle many medical problems. *Agadtantra* is the branch of *Astangaayurveda*, which describes the different causes of life style disorders due to urbanization & Industrialization. Life style disorder are of long duration and generally slow progression such as Cancer. According to *Ayurveda* any diseases caused by the *pragyaparadha*, which is one of the three basic causes of any disease. There are continue improper actions as an impact of *Pragyaparadha* which are root causes of various diseases, e.g., habit of suppression of any natural urge is a result of *Pragyaparadha* and

enlisted as a cause of nearly 50% of the diseases. *Dushivisha* means denatured poison or attenuated poison. Attenuated or denatured poisons function as latent toxin in the body. *Dushivisha*(mild poison)because of its poor potency does not kill the person quickly and remain in the body for many years covered by *kapha*. Cancer is a group of disease involving abnormal cell growth with the potential to invade or spread to other parts of the body with slow progression. Continue use of tobacco, other factors such as obesity, poor diet, environmental pollution, lack of physical activities and over use of alcohol substances are due to poor life style causes development of cancer. Prevention is through *Samshodhana karma*, life style modification etc.

KEYWORDS: *Ayurveda*, *Agadtantra*, Pollution, Industrialization, Urbanization, *Dushivisha*, Cancer, *Pragyaparadh*, Diseases.

INTRODUCTION

In Ayurveda cancer is correlated with the “*Arbuda*”. It is believed that equilibrium of *vata*, *pitta* and *kapha* are the three *doshas* they ensured good health. If any of the *tridohsa* is vitiated due to the changed dietary habit and life style, body become diseased.

गात्रप्रदेशे क्वचिदेव दोषाः सम्मूर्च्छिता मांसमभिप्रदूयन् । वृत्तं स्थिरं मन्दरुजं महान्तमनल्पमूलं चिरवृद्धयपाकम् ॥
कुर्वन्ति मांसोपचयं तु शोफं तदूर्ध्वं वास्त्रविदो वदन्ति । वातेन पित्तेन कफेन चापि रक्तेन मांसेन च ।।;नण्दप
11६13.14द्ध

It is based mainly on *Dosic* theory i.e. *Vata*, *Pitta* and *Kapha*. Further *Mithya Ahara* and *Vihara* vitiate the different humors involving different *Dhatus* (*Mamsa*, *Meda*, *Rakta*). *Vata dosha* is responsible for cell division, Aggravated *vata dosha* and suppression of *kapha dosha* or both the *doshas* interacting with one another may result in proliferation of cells.^[1]

Acharya Sushruta described excessive use of meat is considered to precipitated the formation of *Mamsarbuda* and *Musthi prahar*(any type of trauma) is another important factor for development of *Arbuda*(cancer) and other pathological conditions.^[2] Unhealthy diet and regimen(*Mithya Ahara* and *vihar*) play a important role to development of *Arbuda*(Cancer). The main active factors in the development of a disease are due to *Ama* and disturbance of *Doshas* present in the body. Ayurveda does not consider cancer as a distinct disease or set of diseases. Rather, Ayurveda states that all diseases result from gross, systemic imbalances and malfunctions of the three *Doshas*. *Arbuda* (Cancer) originate due to interactions between abnormal bio-factors and weakened body tissues.^[3]

Only 5-10% of all cancer cases can be attributed to genetic diseases or defects, whereas the remaining 90-95% have their roots in the environment and lifestyle such as cigarette smoking, diet (fried food and red meat), alcohol, sun exposure, environmental pollutant infection, obesity and lack of physical exercises. Cancer related death are 25-30 %, due to tobacco or 30-35% are linked to diet, 15-20% is infections caused and rest is due to inadequate life style it includes polluted diet, over use of pesticide in crop, more percentage in vegetables and fruits which affects our body metabolism and produces chronic illnesses like cancer, heart diseases etc. Continue use of preservatives in our material also precipitate the long-term illnesses. Avoidance of direct exposure to sun light, use of whole diet, these factors causes long term defects or diseases.^[4]

Some people said that genes are responsible for the chronic illness but recent study shows that genes are 20% responsible for the cancer like chronic diseases such as breast cancer. Instead of genes our life style and environmental factors amount for 90-95% of our most long-term illnesses. Cancer caused by both internal factors such as inherited and hormonal and external factors like environment or acquired factors like tobacco, diet, exposure to sunlight causes radiation effects etc.

CUMULATIVE POISON OR DUSHI VISHA

Toxins producing chronic effects are generally out shadowed under the acute. The term *dushi visha* covers all the toxins which when low in its potency remains dormant within the body for years together. But when its accumulation reaches up to a certain toxic level, it produces deleterious effect on the body.

CAUSES OF CANCER

TOBACCO

Tobacco contains metabolite, benzopyrenediol hypoxide has a direct etiologic association lung cancer. Some studies showed that tobacco smoke can induce activation of NF-kB an inflammatory marker. Thus, anti-inflammatory agents can suppress NF-kB activation may have potential application against Cigarette smoke. Tobacco contains at least 50 carcinogens.^[5]

ALCOHOL

Over consumption of alcohol beverages causes oesophageal cancer as a chronic effect also include increases the risk of cancer like oral cancer, pharynx, as well as liver, pancreas cancers etc. in addition to its being a risk factors for breast cancer, use of heavy intake of alcohol more than 50-70%gm/dose is established well risk factor for liver and colorectal cancers. Alcohol affecting different parts of body such as breast 93%, oesophagus 14%in males and 9.4%in females are affected due continue and over use of alcohol. Smoking is another most precipitating factor for the development of the cancer cells. It affects 24% pancreas, cervix 19%, oropharynx 57% lungs 84% etc.

Alcohol also have synergistic effects with the hepatitis virus or hepatitis B and C virus which increases hepatocellular carcinoma and also causes cirrhosis of liver. Ethanol is not a carcinogen but when it is metabolised acetaldehyde and produces free radicles.

Predominantly free radicle responsible for the alcohol associated carcinogenesis through their binding to DNA and protein which destroys folate and results in hyperproliferation.^[6]

DIET

A study by Dosil-Diaz *et al.* showed that red meat consumption reduced the risk of lung cancer, such consumption is commonly regarded as a risk for cancer for the following reasons. The heterocyclic amines produced during the cooking of meat are carcinogens. Charcoal cooking and/or smoke curing of meat produces harmful carbon compounds such as pyrolysates and amino acids, which have a strong cancerous effect.^[7]

Nitrites and nitrates are used in meat because they bind to myoglobin, inhibiting botulinum exotoxin production; however, they are powerful carcinogens. Long-term exposure to food additives such as nitrite preservatives and azo dyes has been associated with the induction of carcinogenesis.^[8]

OBESITY

Increased modernization and a Westernized diet and lifestyle have been associated with an increased prevalence of overweight people in many developing countries. For instance, hyperglycaemia, has been shown to activate NF- κ B, which could link obesity with cancer. Also known to activate NF- κ B are several cytokines produced by adipocytes, such as leptin, tumour necrosis factor (TNF), and interleukin-1 (IL-1). Energy balance and carcinogenesis has been closely linked.^[9] However, whether inhibitors of these signalling cascades can reduce obesity-related cancer risk. Obesity are involving the different part of the like oesophageal cancer, colon cancer, liver cancer, ovarian cancer, breast cancer etc.

INFECTIOUS AGENT

Human papillomavirus, Epstein Barr virus, Kaposi's sarcoma-associated herpes virus, human T-lymphotropic virus 1, HIV, HBV, and HCV are associated with risks for cervical cancer, anogenital cancer, skin cancer, nasopharyngeal cancer, Burkitt's lymphoma, Hodgkin's lymphoma, Kaposi's sarcoma, adult T-cell leukaemia, B-cell lymphoma, and liver cancer.

REUSED OIL

The problem with reusing oil is that it can create free radicals which are causing ailments in the long run of life. These free radicals attach themselves to healthy cells and lead to

diseases/cell destruction. These free radicals can cause Acidity, Alzheimer's, Parkinson's disease, Irritable throat, cancer, atherosclerosis, cardiac arrest etc.

REFINED OIL

In the process of making and refining these types of oils, it leads to PUFAs (rancid polyunsaturated fatty acids) which are unstable at high temperatures. In the process of being extracted from the seed these oils are oxidized which turns them into trans-fats. These Trans-fat increases the chances of stroke, DM-II etc.^[10]

ENVIRONMENTAL POLLUTION

Environmental pollution has been linked to various cancers. It includes outdoor air pollution by carbon particles associated with polycyclic aromatic hydrocarbons (PAHs), indoor air pollution by environmental tobacco smoke, formaldehyde, and volatile organic compounds such as benzene and 1,3-butadiene (which may particularly affect children); food pollution by food additives and by carcinogenic contaminants such as nitrates, pesticides, dioxins, and other organochlorines; carcinogenic metals and metalloids; pharmaceutical medicines; and cosmetics. Long-term exposure to PAH-containing air in polluted cities was found to increase the risk of lung cancer deaths.^[11]

COSMETICS

Skin care creams & lotions: In these group products like foundations, moisturizers, hand lotions & lotions are included.

LOTIONS: These are basically a mixture of water & oils, mineral oils & petrolatum, both petroleum products are widely used as oils in lotions to keep the skin moist & smooth by locking moisture in both can be contaminated with potentially carcinogenic polycyclic aromatic hydrocarbons (PAHS). Propylene glycol & lanolin are used for the same purpose. It can produce free radicals & damage skin DNA.

SUNSCREEN: Is a cream or lotion used to protect the skin from sun rays. These sun- screen creams or lotions contains toxic principles like cinnamates, salicylates, zinc oxide which may cause skin rashes as an allergic reactions & irritation of eyes is seen if the product comes in contact with eyes.

BODY POWDER: Body dusting powders are used to absorb sweat odours & to soothe irritate skin. Conventional body powder often contains talc or amorphous silica both of which

can cause lung irritation when inhaled. Talcum powder is made from purified mineral called talc. Inhalation of this produces inflammatory lung disorders including lung cancer.

LIPSTICKS & LIP GLOSS: The colours usually come from coal tar dyes, which can cause skin irritation & allergies & some may cause malignancy. Traces of lead, arsenic, cadmium & other heavy metals are found in lip tints & glosses. Petrochemicals are also used in manufacturing of lipsticks. In addition to this lipstick may contain formaldehyde which is a preservative & known as cancer-causing agent.

NAIL POLISH: Nail polish contains three most harmful ingredients. They are toluene, formaldehyde & dibutyl phthalate. Toluene may contain up to 50% of the volume of nail polishes which is known as neurotoxin & may put pregnant women at risk of having a baby with birth faults or late growth.

NAIL POLISH REMOVER: Orthodox nail polish removers contain acetone. Long term dealings to acetone may harm the liver, kidneys & nervous system & may increase the danger of birth shortcomings.

HAIR COLOURS & HAIR SPRAYS: Hair colours & hair sprays are often used for colouring hairs & also for setting a hair style. But these products contain many harmful toxic components. A study by Harvard school of Public Health suggested that women who use hair dyes five or more times a year have twice the risk of developing ovarian cancer. Use of permanent hair dyes could be linked to 20 % of all cases of non- Hodgkin's lymphoma in women. Also, women using hair dyes at least once a month doubled their risk of bladder cancer.^[12]

RADIATION

Up to 10% of total cancer cases may be induced by radiation, both ionizing and nonionizing, typically from radioactive substances and ultraviolet (UV), pulsed electromagnetic fields. Cancers induced by radiation include some types of leukaemia, lymphoma, thyroid cancers, skin cancers, sarcomas, lung and breast carcinomas. skin cancer is on the rise in the United States.^[13]

PREVENTION

Acrylamide is a chemical that can form in some foods mainly plant-based foods, during high-temperature cooking processes like frying and baking. These include potatoes, cereals,

coffee, crackers or breads, dried fruits and many other foods. According to the Grocery Manufacturers Association, acrylamide is found in 40 percent of the calories consumed in the average diet. Acrylamide cut down in your diet though these factors such as.

- Frying causes acrylamide formation. If frying frozen fries, follow manufacturers' recommendations on time and temperature and avoid overcooking, heavy crisping or burning.
- Toast bread to a light brown colour rather than a dark brown colour. Avoid very brown areas.
- Cook cut potato products such as frozen French fries to a golden yellow colour rather than a brown colour. Brown areas tend to contain more acrylamide.
- Do not store potatoes in the refrigerator, which can increase acrylamide during cooking. Keep potatoes outside the refrigerator in a dark, cool place, such as a closet or a pantry.^[14]

USE OF LYCOPENE

The major contributing foods of dietary lycopene, consumption of tomatoes and tomato ketchup was inversely associated with GC risk in the overall subjects, men, and women. Based on our findings, a higher intake of dietary lycopene and contributing foods of lycopene (tomatoes and tomato ketchup) may be inversely associated with the risk of GC.^[15]

USE OF CAROTENOID OR RETINOL

Intakes of the carotenoids beta-carotene, alpha-carotene, lutein, and beta-cryptoxanthin were not associated with risk of non-stage prostate cancer; only lycopene intake was related to lower risk of 46 vegetables and fruits or related products, four were significantly associated with lower prostate cancer risk; of the four--tomato sauce, tomatoes, and pizza but not strawberries were primary sources of lycopene. Combined intake of tomatoes, tomato sauce, tomato juice, and pizza (which accounted for 82% of lycopene intake) was inversely associated with risk of prostate cancer, for consumption frequency greater than 10 versus less than 1.5 servings per week and advanced prostate cancers.^[16]

USE OF CAPSICUM TO TREAT CANCER

Capsaicin has been shown to target several proteins involved in the mitochondrial death pathway to initiate apoptosis in different cancer cell lines. For example, treatment of capsaicin activated the cluster of differentiation 95 (CD95)-mediated intrinsic and extrinsic apoptotic pathways and suppressed expression of anti-apoptotic protein, B-cell lymphoma 2

which led to caspase-9 and -3 activation, loss of mitochondrial membrane potential, and subsequent increases of cytochrome c release.^[17]

Capsaicinoids are plant secondary metabolites, capsaicin being the principal responsible for the pungency of chili peppers. It is biosynthesized through two pathways involved in phenylpropanoid and fatty acid metabolism.

CONCLUSION

Ayurveda, the science of healthful living, is the most rational and scientific among the ancient systems of medicine. *Ayurveda* has immense potential to tackle many medical problems. *Agadtantra* is the branch of *Astangaayurveda*, which describes the different causes of life style disorders due to urbanization & Industrialization. Life style disorder are of long duration and generally slow progression such as Cancer. The term *dushi visha* covers all the toxins which when low in its potency remains dormant within the body for years together. But when its accumulation reaches up to a certain toxic level, it produces deleterious effect on the body. In form of different cosmetics, environmental pollution, radiation, fried food, repetitive use of fried oil, over use of deep fried substances, smoking and tobacco chewing are the main factors to causes different cancer. For the prevention we should cut down fried food, use of capsicum in food because this contain capsaicinoid alkaloid they prevent to development of cancer.

REFERANCES

1. Ambika Dutta Shastri, Sushruta Samhita Nidana Sthana, Chaukhamba Sanskrit Samsthana, Varanasi, Edition- reprint, 2010; 352.
2. Ambika Dutta Shastri, Sushruta Samhita Kalap Sthana, Chaukhamba Sanskrit Samsthana, Varanasi, Edition- reprint, 2010; 354.
3. Ambika Dutta Shastri, Sushruta Samhita Kalap Sthana, Chaukhamba Sanskrit samsthana,Varanasi, Edition- reprint, 2010; 355.
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2515569/2008>, Sep; 25(9): 2097–2116, Published online, Cancer is a Preventable Disease that Requires Major Lifestyle Changes, Preetha Anand, Ajaikumar B. Kunnumakara, Chitra Sundaram, Kuzhuvellil B. Harikumar, Sheeja T. Tharakan,Oiki S. Lai, Bokyoung Sung, and Bharat B. Aggarwal.
5. <http://www.fao.org/DOCREP/006/Y4956E/Y4956E00.HTM> accessed on 01/11/08.
6. F. Donato, U. Gelatti, R. M. Limina, and G. Fattovich. Southern Europe as an example of interaction between various environmental factors: a systematic review of the

- epidemiologic evidence. *Oncogene*, 2006; 25: 3756–70. doi:10.1038/sj.onc.1209557. [PubMed].
7. S. N. Lauber, and N. J. Gooderham. The cooked meat derived genotoxic carcinogen 2-amino-3-methylimidazo[4,5-b]pyridine has potent hormone-like activity: mechanistic support for a role in breast cancer. *Cancer Res*, 2007; 67: 9597–0602. doi:10.1158/0008–5472.CAN-07-1661. [PubMed]
 8. Y. F. Sasaki, S. Kawaguchi, A. Kamaya, M. Ohshita, K. Kabasawa, K. Iwama, K. Taniguchi, and S. Tsuda. The comet assay with 8 mouse organs: results with 39 currently used food additives. *Mutat. Res*, 2002; 519: 103–119. [PubMed]
 9. S. D. Hursting, L. M. Lashinger, L. H. Colbert, C. J. Rogers, K. W. Wheatley, N. P. Nunez, S. Mahabir, J. C. Barrett, M. R. Forman, and S. N. Perkins. Energy balance and carcinogenesis: underlying pathways and targets for intervention. *Curr. Cancer Drug Targets*, 2007; 7: 484–491. doi:10.2174/156800907781386623. [PubMed]
 10. <http://www.happilyunprocessed.com/the-basics/refined-oils-and-why-you-should-never-eat-them/>
 11. D. Belpomme, P. Irigaray, L. Hardell, R. Clapp, L. Montagnier, S. Epstein, and A. J. Sasco. The multitude and diversity of environmental carcinogens. *Environ. Res*, 2007; 105: 414–429. doi:10.1016/j.envres.2007.07.002. [PubMed]
 12. Review Article International Ayurvedic Medical Journal ISSN: 2320 5091, CRITICAL REVIEW OF COSMETIC TOXICITY W.S.R. DUSHI VISHA * Usturage Revenshidh R. ** Pawade Uday V. ***Supugade Vikram V.
 13. <https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm049090.htm>.
 14. <https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm374855.htm>.
 15. https://www.ncbi.nlm.nih.gov/pubmed/?term=Kim%20J%5BAuthor%5D&cauthor=true&cauthor_uid=30087311, Dietary Carotenoids Intake and the Risk of Gastric Cancer: A Case-Control Study in Korea, Kim JH, Lee J, Choi IJ, Kim YI, Kwon O, Kim H, Kim J.
 16. (<https://www.ncbi.nlm.nih.gov/pubmed/7473833>, *J Natl Cancer Inst*, 1995 Dec 6; 87(23): 1767-76, Intake of carotenoids and retinol in relation to risk of prostate cancer, Giovannucci E¹, Ascherio A, Rimm EB, Stampfer MJ, Colditz GA, Willett WC.
 17. Capsaicin-induced apoptosis of glioma cells is mediated by TRPV1 vanilloid receptor and requires p38 MAPK activation. *J. Neurochem*, 2007; 102: 977-990, Cross Ref Medline Google Scholar Amantini C, Mosca M, Nabissi M, Lucciarini R, Caprodossi S, Arcella A, Giangaspero F, Santoni G.