



CONCEPTUAL STUDY OF DUSHI VISHA WITH SPECIAL REFERENCE TO INANIMATE, ANIMATE & ARTIFICIAL POISONS

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ABSTRACT :

Dushi Visha is one of the unique concept explained in Ayurveda. It is a type of toxin which remains inside the body for long & then produces various ill effects on the body.

In present era, people are exposing to various toxins in day to day life which is causing various health problems. There are many such illnesses where treatment does not work, as it is not eliminating the root cause. The ancient concept of *dushi visha* seems to be more relevant in this context.

So this topic is selected to study the concept comprehensively with the object of highlighting it with modern approach.

Key words: *Dushi Visha*, inanimate poison, animate poison, artificial poison , cumulative toxicity

INTRODUCTION: *Agadtantra* deals with study of various toxins & *Dushi Visha* is one of the very important concept explained. *Dushi Visha* term indicates something which gets accumulated inside the body & causing ill health effects after sometime. Ancient literature suggests that it may be due to inanimate, animate or artificial poisons ^[1].

Now a day's human are constantly exposed to thousands of potentially toxic chemicals such as, metals, pesticides, environmental pollutants, social poisons like tobacco, alcohol etc . Human body cannot get rid of them may be due to fat solubility & limited excretory capacity. This results in accumulation of toxins causing serious health problems. Many times aetiology is also not known in various diseases. So here the concept of *dushi visha* can be incorporated.

This paper aims to highlight the concept of *dushi visha* with respect to inanimate, animate & artificial poisons for its

practical applicability in the practice of Ayurveda.

MATERIALS & METHODS:

1. Literature has been reviewed from both Ayurveda & Contemporary Sciences.
2. Related websites have been searched.

LITERATURE REVIEW:

Definition of *dushi visha* / concept of *dushi vish*: “*Sthavar, Jangam* or *Kritirima visha* which cannot be eliminated from the body completely but it is destroyed or denatured due to use of anti poisonous remedies in past , fire, air, sun exposure or due to its low potency it does not kill the human instantly. But as it is encapsulated by *kapha doshsa* it remains accumulated in the body for several years producing various ill effects.” ^[1]

Different factors like, *Dushta desha* (wet lands), *Dushta Kaal* (cloudy days), *Dushta anna* (e.g. alcohol), *Diwaswapna* (day sleep) , *Pragwat* (air fm eastern region), *Ajirna* (Indigestion), *Ativyayam* (over exertion), *Ativyavay* (excessive

sexual intercourse), *Krodha* (anger) [2-4] aggravates this condition, producing Pre existing Symptoms such as, *Nidra* (Sleepiness), *Gurutva* (Heaviness),

Jrumbha (Yawning), *Vishlesh* (Sense of looseness in joints), *Romancha* (Horripilation), *Angamarda* (Bodyache) [5]

Symptoms [6-10] **Table No: 1**

S.N	Symptom	Description
1	<i>Bhinnavarna</i>	Altered complexion
2	<i>Bhinnapurisha</i>	Loose motions
3	<i>Arochak</i>	Anorexia
4	<i>Dushtastrarogi</i>	Diseases related with <i>rakta dushti</i>
5	<i>Trushna,</i>	Thirst
6	<i>Murcha,</i>	Syncope
7	<i>Vaman</i>	Vomiting
8	<i>Gadgadvak</i>	Slurring of speech
9	<i>Moha,</i>	Unconsciousness
10	<i>Vishannata,</i>	Depression
11	<i>Vicheshta,</i>	Abnormal body movements
12	<i>Dushyodara</i>	Chronic ascitis
13	<i>Vigandha</i>	Impaired olfactory senses
14	<i>Avipaka,</i>	Indigestion
15	<i>Annamada</i>	Intoxication
16	<i>Dhatukshaya</i>	Deterioration of <i>dhatu</i>
17	<i>Panipadashotha</i>	Oedema of extremities
18	<i>Mukhashotha</i>	Oedema of face
19	<i>Akshishotha</i>	Swelling of eyes
20	<i>Unmada</i>	Insanity
21	<i>Aanaha</i>	Flatulence
22	<i>Keshanasha</i>	Alopecia
23	<i>Vishamjwara</i>	Irregular fever
24	<i>Shukranasha</i>	Impaired function of reproductive tissue
25	<i>Bhrama</i>	Giddiness
26	<i>Kushtha</i>	Skin disorders
27	<i>Mandala/ Kotha</i>	Urticarial rashes
28	<i>Kitibha / Aru</i>	Skin diseases
29	<i>Mansakshaya</i>	Emaciation
30	<i>Shwasa</i>	Dyspnoea

PATHOGENESIS [11]: *Dushi visha* situated in *amashaya* vitiates *Kapha* & *Vata*, situated in *pakvashaya* vitiates *pitta* & *vata*. The patient's hairs fall off, body emaciated & he appears like a bird clipped off from feathers & wings.

TREATMENT: Acharya Sushrut advised to give *swedan* followed by *vaman* & *virechan*. After such *shodhankarma* (detoxification) *Dushivishari Agad* should be given orally with honey daily [12]. In addition to this Charakacharya proposed *Raktamokshana* along with *purvakarma*

i.e. *snehan* & *swedan*, which is helpful to eliminate *dushi visha* scattered in all over body. For this purpose, two veins from both upper extremities & single main vein from trunk should be chosen ^[13]. In Yogratnakar the *agad* used is named as '*Pippalyadi agad*'. ^[14]

STUDY OF DUSHI VISHA WITH RESPECT TO INANIMATE POISONS: Herbs & Minerals which are naturally occurring in nature are taken in this category & their cumulative toxicity is studied.

Cumulative toxicity of herbs ^[15] - herbs may get toxic due to extrinsic factors like pesticides, adulteration etc or due to intrinsic factors like, alkaloids, toxalbumins, glycosides etc. Thus, these factors play an important role in the accumulation of toxins inside the body. Cumulative toxicity of few herbs is explained below.

1. *Sarpagandha*- Parkinsonism, Impotency, Infertility, Depression
2. *Bhallatak*- Hepatitis, Urticaria, Albuminuria
3. *Ishwarmoolee*-Nephrotoxicity, Carcinomatous changes
4. *Kaarpaasa*- Azospermia, Dysmenorrhoea, Sterility
5. *Tamakhu*- Cough, Bronchitis, Pulmonary emphysema, Cancer etc.

Cumulative toxicity of minerals ^[16] - Workers in the industries of paints, dyes etc where minerals (metals) are used abundantly, the patients consuming herbo mineral combinations for long time may suffer from their chronic cumulative toxic effects. Ill effects of some minerals are explained,

1. Lead- anaemia, weakness, anorexia, foul breath, dyspepsia, discoloration of gums, delirium, alopecia, paralysis, sterility etc

2. Mercury- excessive salivation, metallic taste, skin eruptions, erethism, discoloration of gums, GIT disturbances etc.
3. Arsenic- Alopecia, pigmentation of skin, hoarseness of voice, loss of appetite, weakness etc.
4. Copper- Purple lines on gums, nausea, vomiting, giddiness, diarrhea, laryngitis, bronchitis, anemia, dermatitis etc.

STUDY OF DUSHI VISH WITH RESPECT TO ANIMATE POISONS:

In Ayurvedic literature, the references of *dushi visha* related with *Jangam visha* are traced in the following creatures.

1. **Mooshaka visha (Rat bite)** ^[17-18] - The poison of rat even though eliminated from the system, may sometimes still aggravated in cloudy days. In such case, the treatment stated for *dushi visha* can be incorporated here.
2. **Keeta Visha (Insect bite)**- Aacharya Charak classify *keeta visha* as, *dushi visha keeta* & *Pranahara keeta* & the symptoms of its poisoning are explained^[19]. While describing the symptoms of *teekshna keeta visha*, aacharya Sushrut spell out *dushi visha* as one of the complication of *teekshna keeta visha*.^[20]
3. **Luta Visha (Spider poison)**- Aacharya Charak classified *luta* as, *Pranahara luta* & *Dushivisha luta* & the symptoms of its poisoning are explained.^[21]
4. **Shwaana Damshttra (Dog bite)**- here the term *dushi visha* is not mentioned but its chronic toxicological nature is explained as- though during the management of dog bite, anti poisonous remedies are used previously, one should not avoid strong *sanshodhan* in this case. Because even if there is suppression of

acute lesion there is possibility of its aggravation after some specific time.^[22]

5. Sarpa Visha (Snake bite)- Designating the treatment of *Sarpavisha*, aacharya Vaagbhat advised to expel out the remaining poison from the lesion by using suitable *lepa*, otherwise it may get vitiated resembling *dushi visha*.^[23]

Animal Bites are most common source of acute poisoning. If the patient is cured from this acute condition, he may suffer from its post management complications in later life. This criteria is clearly mentioned in Sushrut Samhita while describing symptoms of *teeksna keeta visha*.^[20]

STUDY OF DUSHI VISH WITH RESPECT TO ARTIFICIAL POISONS: Combination of poisonous or nonpoisonous substances is known as artificial poisons. So in these category Agricultural poisons, Medicinal preparations, Alcoholism & Incompatible diet are included.

1. Agricultural poisons- Symptoms related to chronic exposure of fertilizers are explained.^[24] – Carcinogenicity, Mutagenicity, Teratogenicity, Oncogenicity, Liver damage, Reproductive disorders, Nerve damage, Allergenic sensitization.

The effects of chronic toxicity, as with acute toxicity, are dose-related. In other words, low-level exposure to chemicals that have potential to cause long-term effects may not cause immediate injury, but repeated exposures through careless handling or misuse can greatly increase the risk of chronic adverse effects.

2. Medicinal preparations- Long term use of medicines in injudicious way, chemotherapy drugs results in many complications after particular time. This can be correlated with *dushi visha*.

Chemotherapy can produce many side effects, such as:^[25]

Anaemia, low red blood cell count, Low white blood cell count (this increases risk for infection), Hair loss, or thinning hair, Bleeding or bruising (due to low platelet count), Dry skin, or rashes, Fatigue, Diarrhoea, constipation, Nausea or vomiting, Muscle and nerve problems, Lung problems and difficulty breathing, coughing excessively, Fertility and sexuality problems

3. Alcoholism- Symptoms of chronic alcoholism i.e. *Madatyaya* shows gross similarity with the symptoms of *dushi visha*.

Pramoha, *Hrudvyatha*, *Vibheda*, *Pratatam Trushna*, *Saumyaagneya Jwara*, *Aruchi*, *Shirah-Parshvasthiruk*, *Kampa*, *Marmabheda*, *Trikgraha*, *Uravibandha*, *Timira*, *Kasa*, *Shwasa*, *Prajagara*, *Atisweda*, *Vishtambha*, *Shwayathu*, *Chittavibhrama*, *Pralapa*, *Chhardi*, *Utklesha*, *Bhrama*, *Duhswapna*^[26]

4. Incompatible diet- The diet which vitiates *doshas* from their places but does not eliminate it out of body & becomes harmful is said to be incompatible. 18 types of incompatibilities & diseases caused by them are mentioned in Charak Samhita. These diseases are also similar to that of *dushi visha*. as mention below,

Shandhya, *Andhyata*, *Visarpa*, *Dakodara*, *Visphotak*, *Unmada*, *Bhagandara*, *Murchha*, *Mada*, *Aadhman*, *Galagraha*, *Pandu*, *Kilas*, *Kushtha*, *Grahani*, *Shotha*, *Amlapitta*, *Jwara*, *Peenasa*, *Santandosha*, *Mrutyu*^[27]

DISCUSSION: The definition of *Dushi visha* indicates that it is a part of Inanimate, Animate or Artificial poisons which is accumulating inside the body & having chronic cumulative nature. It is a

kind of low potency poison causing delayed action on body^[1].

Inanimate poisons include herbs & minerals. While studying the literature it is noted that herbs like Tobacco, *Bhallataka*, *Karpas*, *Ishwarmool*, *Sarpagandha*^[15] etc as well as minerals like Lead, Mercury, Arsenic, Copper^[16] etc shows its cumulative toxicity effects after specific time. Such toxicity effects are considered under *dushi visha* with respect to inanimate poisons.

Acharya Charak classified *Luta & Keeta* visha as *dushi visha* & *pranahara* which clearly indicates its slow toxicity nature^[21] & ^[19]. *Dushi visha* is mentioned as complication of *teekshna keeta visha*^[20] In dog bite it is advised to give patient strong *sanshodhan chikitsa* to avoid its further aggravation^[22]. It means, there are certain toxins which need to be washed off from body with appropriate detoxification measures. In snake bite treatment acharya Vagbhat advised to expel out remaining poison from lesion by suitable *lepa*, otherwise it may get vitiated like *dushi visha*

From all these references it can be concluded that *dushi visha* resulting due to animate toxicity is a kind of residual poison showing health hazards in future. In general practice also, patients having health problems such as sterility, skin diseases, pyrexia of unknown origin etc generally have significant past history of animal bites.

Diseases like malaria, tuberculosis, allergic bronchitis, tick born fever, rat bite fever, leptospirosis etc are related with animate poisoning. Microbial or chemical agents through these creatures may stagnant inside the body for several years. Hence these conditions can be included under *dushi visha*.

Literature review of health hazard due to persistent exposure of artificial poisons like, agrichemical poisons, alcohol, drugs of chemotherapy & incompatible food habits shows gross similarity with the symptoms of *dushi visha*.

The symptoms of *dushi visha* can be explored as follows,

1. **Bhinnavarna** – Here altered colour of skin, mucous membrane, nails or hairs can be considered. For example- Facial pallor in chronic lead/arsenic poisoning, blue lines on gums in chronic lead/mercury poisoning, greenish discolouration of hairs in chronic copper poisoning, nutritional deficiencies leading to alteration in complexion occurs in alcoholism, Mee's lines are seen on nails in chronic arsenic poisoning, Anaemia & Jaundice is observed in chronic phosphorous poisoning.

2. **Bhinnapurisha**- Altered nature of stools can be stated as *bhinnapurisha*, so diarrhoea as well as constipation can also be included under this term. Diarrhoea is seen in alcoholism, chronic phosphorous poisoning & constipation is observed in chronic lead / arsenic / tobacco poisoning.

3. **Trushna**- i.e. thirst. Dehydration due to diarrhoea as seen in chronic arsenic poisoning or alcoholism can leads to excessive thirst.

4. **Arochak**- i.e. anorexia. It is one of the symptom of chronic poisoning of lead, arsenic, copper, mercury, agrochemical poisons, alcoholism etc

5. **Vaman**- i.e. vomiting. It is observed in chronic lead, phosphorous & tobacco poisoning.

6. **Avipak & Aanaha**- *Avipak* i.e. indigestion & *Aanaha* i.e. flatulence, these GIT manifestations are observed in chronic poisoning of lead, arsenic,

mercury, alcoholism & incompatible eating habits

7. **Vigandha**- i.e. foul smell of breath. Halitosis is present in chronic mercury poisoning & Fetor hepaticus is present in alcoholism.

8. **Dushyodara** – i.e. ascitis. It is commonly observed in alcoholism.

9. **Vishamjwara**- i.e. irregular fever. It occurs in metallic poisoning & incompatible eating habits

10. **Gadgadvak Vishannata & Unmad** - Gadgadvak i.e. slurring of speech, Vishannata i.e. depression & Unmad i.e. insanity. These signs are observed in chronic mercury poisoning, alcoholism, Post management complications of snake bite, in rabies, incompatible eating habits & chronic health hazards of agrochemical poisons.

11. **Bhrama, Moha & Murcha** – Bhrama i.e. giddiness, Moha i.e. unconsciousness, Murcha i.e. syncope. These are the CNS manifestations observed in Chronic poisoning of Arsenic, Lead, Mercury, Alcoholism & Incompatible eating habits

12. **Dhatukshaya**– It can be considered as weight loss, which is commonly seen in chronic metallic poisoning, agrochemical poisons & alcoholism.

13. **Vicheshta**- i.e. ataxia or dysarthria. It is seen in chronic mercury poisoning, agrochemical poisons & alcoholism

14. **Kushtha, Mandala, Kotha, Kitibha, Aruh**– All these comes under skin disorders which are commonly seen in Chronic mercury poisoning (pink disease), Chronic arsenic poisoning (Rain drop pigmentation), Alcoholism (erythema, spider nevi), incompatible eating habits, as a complication of snake bite, insect bite etc

15. **Shwasa**- i.e. Dyspnoea. It is seen in chronic poisoning of Arsenic, Tobacco, Copper (Vineyard Sprayer's lung disease), Alcoholism. Chemotherapy drugs can also produce this symptom.

16. **Mansakshaya**- Emaciation as well as muscle atrophy are seen in chronic poisoning of Arsenic (wrist drop, Foot drop) and phosphorous (wasting of muscles)

17. **Shukranasha**- Amenorrhoea, sterility in chronic lead poisoning and alcoholism. Impotency in Chronic poisoning of arsenic and incompatible eating habits. Oligospermia in chronic poisoning of agrochemical poisons. Fertility & sexuality problems due to chemotherapy drugs can be included here.

18. **Keshanasha**- i.e. alopecia is occurring in chronic arsenic poisoning as well as in chemotherapy.

19. **Vishamjwara** – i.e. irregular fever is seen in Chronic poisoning of metals and incompatible eating habits.

20. **Panipadashotha, Mukhashotha, Akshishotha**- i.e. oedema of extremities, face & periorbital region respectively. These are commonly seen in Chronic poisoning of metals due to their nephrotoxic effect and incompatible eating habits

21. **Dushtastra rogi**- i.e. diseases related to rakta dushti like Raktapitta, Kushtha, Angamarda, Visarpa, Indralupta etc are included here. These clinical manifestations are generally observed in chronic poisoning of metallic poisons & alcoholism

22. **Annamada** – i.e. intoxication is seen in alcoholism and incompatible eating habits.

Thus the symptoms of *dushi visha* are observed in various health hazards due to metallic poisons, alcoholism, incompatible

eating habits, drug therapy etc reflecting its cumulative & denatured nature.

CONCLUSION:

1. *Sthavar, Jangam & Krutrim visha* are different modes of *dushi visha*
2. Preventive measures should be taken to avoid *dushivishaktata*. For that people who are more prone to develop such toxicity such as industrial workers should be encouraged for periodic detoxification methods.
3. *Panchakarma* therapy & counselling regarding *pathyapthya* should be adopted after recovery from acute attack of poisoning.
4. Physician must prescribe the drugs in proper doses & in judicious way.
5. Common people must be educated regarding incompatible habits, diet & alcoholism.

Limitations of present study: This is just a literature study. Further prospective clinical trials can be conducted.

REFERENCES:

- [1] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/ verse no 25-26 page no 25
- [2] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/verse no 33, page no 26
- [3] Sartha Vagbhat , by Dr Ganesh Krushna Garde, Anmol Prakashan Pune, Reprint- 2006. Uttarsthana, chapter no 35/ verse no 37, page no 460
- [4] Sushrut Samhita of Sushruta with Niandhasangraha commentary of Shri

Dalhanacharya edited by Vaidya Jadavji Trikamji Acharya & Narayan Ram Acharya Kavyatirtha. Chaukhaba Sanskrit sansthan, Edition :Reprint 2010, Kalpasthan chapter no 3/ verse no 33, Page no 566

[5] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/verse no 30, page no 26

[6] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/ verse no 30-32, page no 26

[7] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/verse no 27, page no 25

[8] Charak Samhita of Agnivesha revised by Charak & Drudhabala with Ayurved-Dipika Commentary of Chakrapanidatta & with Vidyotini Hindi Commentary by pt. Kashinath Shastri edited by Dr. Gangasahaya Pandey forwarded by Vaidya Yadavji Trikamji Acharya introduction by Acharya Priyavrata Sharma Part-II Chaukhaba Sanskrit sansthan, Edition : Reprint 2012, Chikitsasthan chapter no 23/ verse no 31, page no 555

[9] Sartha Vagbhat, by Dr Ganesh Krushna Garde, Anmol Prakashan Pune, Reprint-2006. Uttarsthana, chapter no 35/ verse no 34 , page no 459

- [10] Yogaratnakar with Vidyotini commentary by Vaidya Lakshmipati Shastri edited by Bhishagratna Brahmashankar Shastri, Chaukhamba Prakashan. Edition : Reprint 2012. Uttarardha, Page no 463, verse no1 & 2
- [11] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhamba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/ verse no 28, page no 25
- [12] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhamba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 2/ verse no 50-52, page no 26
- [13] Charak Samhita of Agnivesha revised by Charak & Drudhabala with Ayurved-Dipika Commentary of Chakrapanidatta & with Vidyotini Hindi Commentary by pt. Kashinath Shastri edited by Dr. Gangasahaya Pandey forwarded by Vaidya Yadavji Trikamji Acharya introduction by Acharya Priyavrata Sharma Part-II Chaukhamba Sanskrit sansthan, Edition : Reprint 2012, Chikitsasthan chapter no 23/ verse no 63-64, page no 560
- [14]Yogaratnakar with Vidyotini commentary by Vaidya Lakshmipati Shastri edited by Bhishagratna Brahmashankar Shastri, Chaukhamba Prakashan. Edition: Reprint 2012. Uttarardha, Page no 470-471, verse no1 & 2
- [15] Toxicology an Ayurvedic Perspective, Chief editor Dr.C.R.Agnivesh, editors- Dr.P.Unnikrishnan , Dr.George M.J. Dept of Agad Tantra, Vaidyaratnam P.S.Varier Ayurved College, Kottakkal. Page no 200-205
- [16] Principles of Forensic Medicine & Toxicology by Rajesh Bardale, Jaypee Brothers Medical publishers, edition 2011, chapter 36, page no 449-461
- [17] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhamba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 7/verse no 41, page no 60
- [18] Sartha Vagbhat, by Dr Ganesh Krushna Garde, Anmol Prakashan Pune, Reprint- 2006. Uttarsthana, chapter no 38/ verse no 32-33 , page no 474
- [19] Charak Samhita of Agnivesha revised by Charak & Drudhabala with Ayurved-Dipika Commentary of Chakrapanidatta & with Vidyotini Hindi Commentary by pt. Kashinath Shastri edited by Dr. Gangasahaya Pandey forwarded by Vaidya Yadavji Trikamji Acharya introduction by Acharya Priyavrata Sharma Part-II Chaukhamba Sanskrit sansthan, Edition : Reprint 2012, Chikitsasthan chapter no 23/ verse no 140-141, page no 571
- [20] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhamba Sanskrit sansthan, Fourteenth edition : 2003, Kalpasthan chapter no 8/verse no 19-22, page no 65
- [21] Charak Samhita of Agnivesha revised by Charak & Drudhabala with Ayurved-Dipika Commentary of Chakrapanidatta & with Vidyotini Hindi Commentary by pt. Kashinath Shastri edited by Dr.

Gangasahaya Pandey forwarded by Vaidya Yadavji Trikamji Acharya introduction by Acharya Priyavrata Sharma Part-II Chaukhaba Sanskrit sansthan, Edition : Reprint 2012, Chikitsasthan chapter no 23/ verse no 144, page no 572

[22] Sushrut Samhita of Maharshi-Sushruta edited with Ayurved Tattva Sandipika by Kaviraj Abikadutta Shastri Forwarded by Dr.Pranajivana Manekchanda Mehta Part I Chaukhaba Sanskrit sansthan, Fourteenth edition:2003, Kalpasthan chapter no 7 / verse no 62, page no 62

[23] Sartha Vagbhat , by Dr Ganesh Krushna Garde, Anmol Prakashan Pune, Reprint- 2006. Uttarsthana, chapter no 37/ verse no 86, page no 467

[24]<http://www.headlice.org/faq/treatment/s/signs-symptoms.htm> accessed on 18-6-16

[25]https://www.verywell.com/chemotherapy-side-effects-a2513867?utm_term=side+effects+of+chemotherapy&utm_content=p1-main-2-title&utm_medium=sem&utm_source=google_s&utm_campaign=adid-76dfe534-a252-4575-ada2-f0d055208c13-0-ab_gsb_ocode4347&ad=semD&an=google_s&am=broad&q=side+effects+of+chemotherapy&o=4347&qsrc=999&l=sem&askid=76dfe534-a252-4575-ada2-f0d055208c13-0-ab_gsb accessed on 18-6-16

[26] Sartha Vagbhat , by Dr Ganesh Krushna Garde, Anmol Prakashan Pune, Reprint- 2006. Nidansthan, chapter no 6/ verse no 15-17 , page no 181

[27] Charak Samhita of Agnivesha revised by Charak & Drudhabala with Ayurved-Dipika Commentary of Chakrapanidatta & with Vidyotini Hindi Commentary by pt. Kashinath Shastri edited by Dr. Gangasahaya Pandey forwarded by

Vaidya Yadavji Trikamji Acharya introduction by Acharya Priyavrata Sharma Part-II Chaukhaba Sanskrit sansthan, Edition : Reprint 2012, Chikitsasthan chapter no 23/ verse no 144, page no 572

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