

ROLE OF DUSHIVISHARI AGAD IN CHEMICAL TOXICITY OF COSMETIC W.S.R DUSHIVISHA: A REVIEW

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ABSTRACT

These days, cosmetic products are very popular in market like sun skin cream, skin lightning cream, facial cream, nail paint, hair dyes etc. in females. External application of cosmetics improves the beauty and appearance of a person. Most of these cosmetic products contain hazardous chemicals like Talcum, parabens, coal tar, phthalates, propylene glycol, Triclosan, Resorcinol, butylated hydroxyanisole, fragrance, Triethanolamine and some heavy metals like lead, Arsenic, Cadmium and Mercury. Peoples are not aware of adverse effects of these chemicals. Long term use of these chemicals accumulates in the body and cause skin disease, allergies, cancer, damage to lungs, reproductive and developmental disorders. Cosmetics can be included under cumulative type of toxicity. This cumulative type of toxicity is similar to *Dushi visha* concept described in *Ayurveda*. The aim and objectives of this study was to study the toxic effects of cosmetics on human body, to correlate the *Dushi visha* w.s.r. cumulative toxicity of cosmetics and to establish the role of *Dushivishari agad* in chemical toxicity of cosmetics. *Dushivishari agad* is one of the *vishaghna* (neutralize toxins) formulation mentioned in *Ashtang Hruday Uttarsthan* in *adhyay 35 Vishapratishedh vyakhyasyam*. These *agad* contains *Pipalli, Ela, Jatamansi, Lodhra, Suvarchika, Yastimadhu, Dhyamakam, Musta, Chandan, Gairik*. All these *dravyas* (herbal drugs) are *pitta kaphaghna, Vishaghna* (neutralize toxicity) and *raktaprasadak*(blood purifier). As, the chemicals present in cosmetics accumulates in the body, it acts as *Dushi visha*. Due to all of above properties of the drug *Dushivishari agad* is effective in this.

Keywords: Cosmetics, Cumulative poison, *Dushi visha, Dushivishari agad*

INTRODUCTION

Cosmetics are the products proposed to be applied to human body for cleansing, improving, promoting attractiveness or altering the appearance without affecting structure or function of the body. Everybody not born with desired appearances, people tend to achieve that by the use of various kinds of cosmetics

in their life. These chemicals accumulate over a period of time resulting in harsh effects in the body; these are called as cumulative toxicity. This cumulative toxicity is similar to the *Dushi visha* concept defined by *Acharya Sushruta*. As per *Acharya Vagbhat Dushivishari Agad* is effective in *Dushi*

visha & all the *dravyas*(herbal drugs) in *Dushivishari Agad* are *pittakaphaghna*, *Vishaghna*(neutralize toxicity), *Raktaprasadak*(blood purifier). It mostly acts on skin disorders due to its properties and also other systemic disorders.

Dushi visha Definition ^[1]

Poisonous substances which are very old, killed (made ineffective) by other antipoisonous drugs,

ravaged (partially destroyed) by forest fire, breeze, sunlight, not endowed fully with all the qualities of poison by nature itself- all these derive the name *Dushi visha*.

Because of its mild potency it need not be feared much (though present inside the body), it becomes enveloped with *kapha* and remains in the body for many years.

Samprapti (Pathogenesis) ^[2,3]

Samprapti of chemical toxicity of cosmetics has not mentioned in text but it can be correlated with *Dushi visha samprapti* which is explained in below figure.1

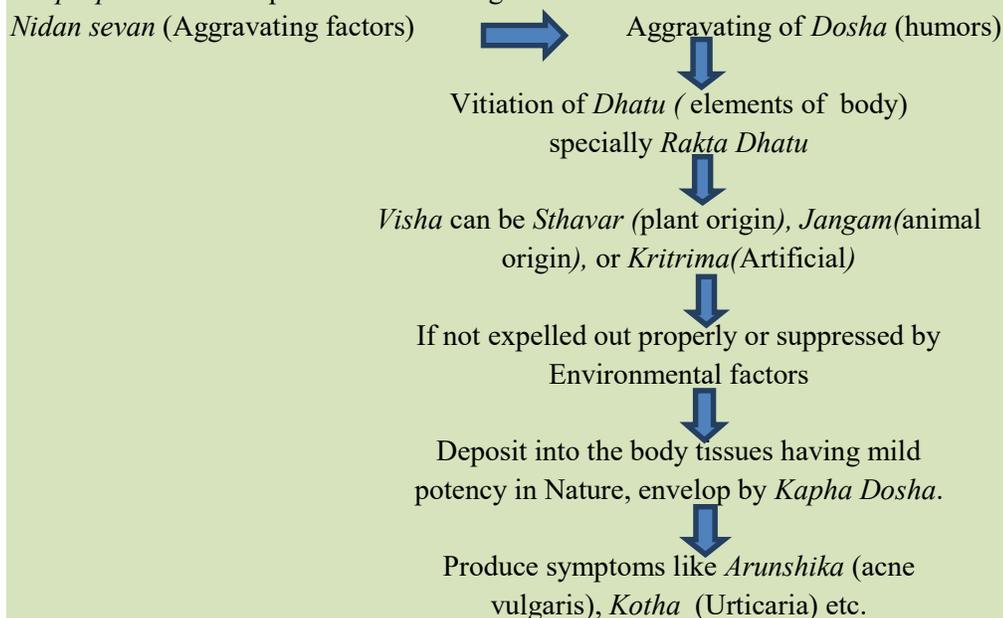


FIGURE-1

Table 1: Adverse Effects of chemical toxicity of cosmetics^[4,5]

	Chemicals	Sources	Adverse effects
1	Coal Tar	Makeup products & hair dyes	Pigmented cosmetic dermatitis, folliculitis, causes phototoxicity associated with skin, liver & lung cancer
2	Diethanolamine / Triethanolamine	Shampoos, soaps. Moisturisers & sunscreen	Precancerous changes in skin & thyroid, skin & eye irritation
3	Formaldehyde	Hair smoothing products	Contact dermatitis Irritation in skin, eyes, nose, throat
4	Mercury	Skin lightening creams	Skin rashes, Scarring, Skin discolouration Increase risk of neurotoxicity & nephrotic syndromes

5	Lead	Kajal, Kohl, Kumkum, Hair dyes	Carcinogenic, affects Nervous system
6	Chromium & Nickel	Lipsticks, Antiaging creams	Allergic dermatitis
7	Sulphates	Skin & hair care products	Skin irritants, hormones endocrine disruptors
8	Glycerin	Used in soap as an antidrying agent	Harmful to skin & can cause dehydration, blister formation & some fungal infections
9	Parabens	Creams, moisturizers, haircare, shaving products	Skin irritation, rashes, eczema
10	Paraphenylenediamine	Hairdyes, ink of tattoos	Dermatitis, allergies, hypersensitivity
11	Imidazolidinyl & Diazolidinyl Urea	Used as preservatives to activate the formaldehyde content in creams & cosmetics	Skin sensitivity, Allergies, Contact dermatitis
12	Sodium Laural Sulphate	Bodywash, Soaps, Shampoos, Shaving creams	Eye & skin irritation, dryness, scaly skin.
13	Polyvinylpyrrolilone	Lipsticks	Allergies & dermatitis
14	Lanolin	Eye care products, lotions & creams	Skin rashes, redness, nausea, vomiting
15	Benzyldimethylsteary lammonium chloride	Lipstick, lotions, hair coloring & conditioners	Irritation of skin & eyes. May contribute to allergic contact dermatitis
16	Phthalates	Perfumes, nail polish, soaps, shampoos, moisturizers	Skin rashes, liver cancer, affect CNS
17	Fragrance	Artificial fragrances	Allergies, dermatitis, skin irritation
18	Mineral oil	Often used in the production of cosmetics	Allergies, skin irritation, arthritis
19	Glucocorticoids	Bleaching products for skin	Induce various skin diseases
20	Glycol ethers	Used as an ingredients in certain preparation of cosmetics	Irritated skin, low fertility in men & hazardous for pregnant women
21	Cocamidopropyl Betaine	Skin care products cleansers, shampoos	Mild skin irritation, High skin sensitivity
22	Propylene glycol	Skin care creams & lotions	They speed up the signs of aging on the skin like wrinkles & age blemishes. It can also cause dermatitis & irritation.

Dushi visha chikitsa^[6]

According to *Ashtang Hrudaya Uttarsthan* the patient suffering from *dushi visha* (cumulative toxins) is firstly given *swedana* (Sudation) as a *purvakarma* (Pre procedure) then *vaman* (emesis), *virechana* (purgatives) as *pradhan karma* (Main procedure) then *dushivishari agada* is given with *madhu* (honey).

Dushivishari Agada contents,^[7]

Dushivishari Agada contains *Pipalli* (*Piper longum*), *Dhyamak* (*Vitiveria Zizanoidis*), *Jatamansi* (*Nardostachys jatamansi*), *Lodhra* (*symplocos racemosa*), *Ela* (*Elettaria cardamomum*), *Suvarchika* (*Gynandropis pentaphylla*), *Musta* (*Cyperus rotundus*), *Tagar* (*Tabernaemontana divaricata*), *Kushtha* (*Saussurea lappa*), *Yashtimadhu* (*Glycyrrhiza glabra*), *Chandan* (*Santalum album*), *Gairik* (*Ferrous Oxide*)

Table 2: *Gunas, Karmas of Dushivishari agada contents*

Sr. No.	Drug	Rasa (Taste)	Virya (potency)	Vipaka	Karma(Action)
1	<i>Pipalli (Piper longum)</i>	<i>Katu</i>	<i>Anushnashita</i>	<i>Madhur</i>	<i>Raktashodhak</i> ^[8]
2	<i>Dhyamakam (Vitiveria Zizanoidis)</i>	<i>Madhur</i>	<i>Shit</i>	<i>Madhur</i>	<i>Raktajvikarhar</i> ^[9]
3	<i>Jatamansi (Nardostachys jatamansi)</i>	<i>Tikta, Kashay, Madhur</i>	<i>Shit</i>	<i>Katu</i>	<i>Kushthaghna</i> ^[10]
4	<i>Lodhra (symplocos racemosa)</i>	<i>Kashay</i>	<i>Shit</i>	<i>Katu</i>	<i>Raktashodhak, Kushthaghna</i> ^[11]
5	<i>Ela (Elettaria cardamomum)</i>	<i>Katu, Madhur</i>	<i>Shit</i>	<i>Madhur</i>	<i>Kushthaghna, Kandughna (Kaphpradhan)</i> ^[12]
6	<i>Suvarchika(Gynandropis pentaphylla)</i>	<i>Katu</i>	<i>Shit</i>	<i>Katu</i>	<i>Vishaghna</i> ^[13]
7	<i>Mustak (Cyperus rotundus)</i>	<i>Tikta, Katu, Kashay</i>	<i>Shit</i>	<i>Katu</i>	<i>Raktaprasadak, Twakdoshar, Vishaghna</i> ^[14]
8	<i>Tagar(Tabernaemontana divaricata)</i>	<i>Tikta, Katu, Kashay</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vishaghna, Kushthaghna</i> ^[15]
9	<i>Kushtha (Saussurea lappa)</i>	<i>Tikta</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vishaghna, Kandughna, Twakrog</i> ^[16]
10	<i>Yastimadhu (Glycyrrhiza glabra)</i>	<i>Madhur</i>	<i>Shit</i>	<i>Madhur</i>	<i>Raktajvikar, Twakrog, Kandughna</i> ^[17]
11	<i>Chandan (Santalum album)</i>	<i>Tikta, Madhur</i>	<i>Shit</i>	<i>Katu</i>	<i>Kushthaghna, Raktashodhak</i> ^[18]
12	<i>Gairik (Ferrous Oxide)</i>	<i>Madhur, Kashay</i>	<i>Shit</i>	<i>Katu</i>	<i>Vishaghna</i> ^[19]

Resultant Properties – All drugs are *pittakaphaghna, Vishaghna, Raktaprasadak*

DISCUSSION

The toxicity is nothing but the degree which a substance can harm human beings or animals. After exposure to the body some of the ingredient of this cosmetic substance does not get completely eliminated from the body and in due course of time, this repeated accumulation lead to cumulative toxicity and this cumulative toxicity is nothing but the *dushi visha* according to *Ayurveda*. This chemical toxicity of cosmetics leads to many skin disorders such as skin irritation, skin dryness, scaly skin, contact dermatitis, eczema and is treated as *dushi vish chikitsa*. According to *Ashtanghrudaya Uttarsthan* patient suffering from *dushi visha* is given *swedan, vaman, virechan* as a *shodhan chikitsa* and *dushivishari agada* is given with *madhu* as a *shaman chikitsa*. In all *twak rogas* mostly *raktadushti* is the major factor. All the contents in *dushivishari agada* have *pittakaphaghna, vishaghna* and *raktaprasadak* properties and also some of the *dravyas* in these *agada* like *Jatamansi, Lodhra, Ela, Mustak, Tagar, Kushtha, Yastimadhu, Chandan* are *kushthaghna, kandughna* mostly act on *twakroga*. So, *dushivishari agad* are useful to treat skin disorders caused by

chemical toxicity of cosmetics. Also clinical study is done where *Dushivishariagada* is proved to be effective in the management of *Dushivishajanya Vicharchika*.

CONCLUSION

From above discussion we can conclude that as per *Ayurveda Dushi visha* can be correlated with cumulative toxicity. *Dushi visha* is not acute condition its effect seen gradually on the body if it is accumulated in the body frequently, It definitely produce the toxic effect in the body. *Dushi visha* shows various types of toxic symptoms and disorders in different systems of body which mainly includes skin, GI tract, Nervous system and many more. For is very useful. As chemical toxicity of cosmetics is nothing but cumulative toxicity which can be correlated with *dushi visha* in *Ayurved*. So, the treatment for these will be same.

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