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CHARACTERISTICS OF POISONER (VISADAATA) AND METHOD OF ADMINISTRATIONS OF POISON—A CRITICAL REVIEW

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Abstract: Ayurveda is the science of life and it is a wide-spreading system of health care, based on experimental information, which passed from family to family or from teacher to student. Agada tantra is the branch of Ayurveda which deals with diagnosis and treatment of the effect of poisoning through snake bites, insects, spiders etc. or consumption of natural, artificial and mixed poison.

Knowledge of poison is important but routes of poisoning and treatment are also essential, in safety and awareness aspect. Acharya Sushruta has mentioned different routes of administration of poison. The purpose was safety of the king from the poison. He has also described about identification of Visadaata (The person who administer the poison), Visakta anna pariksha (determination of poisoned food), Visakanya (poisoned girl), effects of poison in different body parts and their treatment. How to select the route of administration, what concerns govern the development and execution of techniques for administration of various materials by different routes are essential component of knowledge for the working toxicologist. More than 26 routes are described by modern toxicologists, knowledge of these routes will support the selection of personal protective equipment and the development of safety plans. In modern science, there are many advanced techniques for detection of lie.

Keywords: Ayurveda, Agada Tantra, Visadaata, Visakanya, Visakta Anna, administration of poison, lie detection.

Introduction: A route of administration is the path by which any drug, poison fluid or any other substances is introduced into the body. These are mainly classified by the location at which the substance is applied. Now a day, oral and intravenous paths are the common routes for administration. A substance is considered toxic if it contains a poison or induces poisoning. The word “toxic” comes from “toxikon”, which means “poison arrow” in ancient Greek^[1]. A toxin, in a scientific context is a biologically produced substance that causes injury to the health of a living organism.

Features of Visa Daata: According to Acharya Sushruta, Visa data is person who administer the poison. According to him a vishadatta does not reply when questioned, becomes disillusioned while talking, speaks irrelevantly, makes sounds

from his fingers, scratches the ground, trembles with fear, discolored in the face, behaves in all opposite manners and becomes unconscious^[2]. Talks too much or less, devoid of luster & having derangement of his normal behavior, sweats profusely, suffers from dryness of mouth, appears fearful and always tells a lie.

Modern Methods for Detection of a Liar: in ancient time detection of a liar or visadaata was quite easy as compared to the modern era, due to presence of professional criminal today. At present time there are some techniques for detection of a liar like polygraph test, brain mapping, finger printing and narco analysis etc.

Polygraph Test: It is popularly known as a lie detector. it measures and records several physiological changes like blood pressure, pulse,

respiration and skin conductivity while the subject is asked a series of questions^[3].

Brain Mapping: It is a set of neuroscience techniques predicted on the mapping of biological quantities or properties onto spatial representations of the human brain resulting in maps^[4]. It uses machines like an EEG, MRI or PET to map and understand the brain.

Narco Analysis Test: In this test, the subject's imagination is neutralized by making him semi-conscious^[5]. In this state, it becomes difficult for him to lie and his answers would be restricted to facts he is already aware of it. Experts inject the subject with sodium pentothal or sodium amytal.

Fingerprinting: It is the method of identification using the impressions made by the minute ridge formation or patterns found on the finger tips^[6]. It is a 100% accurate method for establishing the identity. No fingerprints of two individuals, even in case of monozygus identical twins are similar.

Features of Visa Kanya: Acharya Sushruta introduced the name of *Visakanya* but *Vruddha Vagbhatta* has broadly described about *Visa kanya*^[7]. In ancient time, intelligent and wicked men invent many plans to kill others by administering small quantities of poison daily even from the day of birth of a baby. They make the body of such a lady poisonous. Person dies by touching her, by her breath and by other contacts. The flowers and flower buds held in hands of such a lady or worn in her hairs fade away, the bugs in the bed, the lice in the cloth and insects in the bathing water used by her will be found dead. By noting this, such a woman should be kept away^[8].

Features of Visakta Anna: Our Acharyas has described various properties of poisoned food. The main features are:

Poisoned rice becomes thick and unable to run out of the vessels.

Takes more time in cooking as compared to normal rice.

Color of the flames look like the peacock's neck (blue)^[9].

It produces delusion, fainting and salivation.

It changes its color & taste very soon.

Disease Caused by Visakta Anna: *Visakta anna* can produce Itching & burning sensation, fever, pain, eruption, swelling, falling of hairs & nails etc.

Effects of Poison on Animals: In ancient time poisoned food was tested on the animal and birds before serving to the king^[10]. There are

different-different effects on the particular animal and bird these are as follows:

Flies and crow: die immediately on eating such a food.

Eyes of the *chakora* bird soon becomes discolored.

Jivajivaka bird dies.

The voice of the *koyal* becomes disordered.

Krauncha bird gets intoxicated.

Suka & Sarika birds cry loudly with fear.

Swan makes more sound.

Bhrangaraja bird hoots.

Prasat (spotted deer) sheds tears.

Monkey eliminates stool.

Effects of Poison on Different Organs: Our Acharyas has described various effects of poison in different body parts^[11]. These are as follows:

Effect on hands: Poisonous food creates burning sensation of the palm & falling of the nails on coming in contact of hands.

Effect on mouth: When poisonous food enters into the mouth, following symptoms are to be noted- tongue becomes hard, incapable to recognize tastes, produce pricking pain and excessive salivation on coming in contact of oral cavity.

Poison in the stomach: When poisonous food reaches in the stomach, then patient feels fainting, vomiting, diarrhea, flatulence and burning sensation.

Poison in large intestine: After reaching in the large intestine, poisonous food creates burning sensation, fainting, diarrhea, thirst, disorder of sense organs, gurgling of the abdomen, anemia and emaciation.

Historical Events: There are many historical events about poison which were applied on the kings. Some of them are as follows:

In ancient time, the Masai tribe of Kenya used poison in darts & arrows heads for the purposes of hunting and warfare^[12].

The murder of Napoleon Bonaparte was also ensued due to chronically poisoning given by his British Jailers.

Murder of the king *Jai Singh's* son was happened due to wearing of poisoned dress (*siropanv*), which was gifted by the King *Aurangjeb*. When he wore that dress, entire poison entered in his body & he died.

Chanakya murdered the King *Pravateshwar* by using *Visakanya*, for securing of the King *Chandragupt*.

Route Administration of Poison in Ayurveda: Acharya Sushruta has mentioned lots of route of

administration of poison ^[13]. These are as follows:

Anna (Food): Poisoned food when put on fire, the fumes rising from it produce pain in the region of the heart, unsteady movement of eyes and headache, after consumption it produces fainting, diarrhea, thirst & hardening of the tongue. Vegetable, soups, cooked rice and meat which are poisoned will be very moist, tasteless, devoid of smell, all snacks and fruits will be devoid of odor, color and tastes. Unripe ones undergo ripening quickly and even putrefy soon.

Paan (Drinks): Poison if present in the liquid substances such as milk, wine, water etc. shows different kinds of lines, froth and bubbles on their surface, images of the other objects will not be seen, and if seen, it will be either double, broken, thin or may be one-sided.

Dantakastha (Tooth stick\brush): Poisoned tooth stick loses its bristles, produces swelling of the tongue, teeth, gums and lips.

Abhyang & Utsadan (Anointing & Massaging): Oil for anointing, if poisoned, will be slimy, thick and of different color. It produces eruption, pain, exudation, ulcer of the skin, sweating, fever & tearing of muscles.

Parisheka Kasaya (Bathing Decoction): If bathing decoction is poisoned, it will be foul smelling, frothy and produces skin disease.

Anulepana (Cosmetics): Use of poisoned cosmetics gives rise to black color of the face, face becomes covered with thorny eruption like those found in the lotus flower.

Shayya (Bed): Use of poisoned bed gives rise to itching, vesicles, ulcer of the skin etc.

Vastra (Clothing): Wearing of poisoned clothes causes burning & itching sensation, sweating, pain, discoloration and stickiness.

Avlekhan (Comb): If the comb is poisoned, symptoms produced are shedding of hairs, headache, bleeding from minute channels and development of tumor in the head.

Kavach (Armor): If the armor is poisoned, following symptoms are produced- tightening of muscles, fever, discomfort, breathlessness, circulatory disorder etc.

Puspamala (Garland): If the garland has been poisoned than the flower is devoid of its odor, changed in color & dull withered. The person inhaling their smell will develop headache & eyes full of tears.

Vaahana (Riding on Animals): If equipment used for riding on animals is poisoned, animals like elephant etc. will become ill, have more salivation and redness of eyes, the rider will

develop eruptions on his buttocks, anus, penis & scrotum.

Nasya-dhuma (Snuff & Smoke): Poisoned *nasya* can produce- bleeding from the orifices, headache, more flow of *kapha*, disorder of *kapha*, disease of sense organs.

Karna Taila (Oil for Ears): When the oil to be filled into the ears is poisoned, the person will have disorders of hearing, swelling, pain & exudation of the ears.

Anjana (Collyrium): If the collyrium is poisoned, it will produce more accumulation of waste in the eyes, burning sensation, pain, disorder of vision and even blindness.

Paduka (Footwear): When the footwear is poisoned, the wearer will have swelling, exudation, loss of sensation, eruption etc.

Abharana (Ornaments): If the ornaments are poisoned, then they lose their brightness, do not shine as before & damage their places by causing burning sensation, ulceration and bruises.

Management

Ailments created by poisons beginning from poisoned smoke and ending with ornaments should be prudently examined and thereafter suitable treatment should be given. The physician should administer “*Mahasugandhi Agada*” ^[14], for drinking, external application, nasal drops and collyrium. Powerful purgatives & emetics should be administered.

Venipuncture should be done quickly if bloodletting is necessary.

Taking a bath with processed water of anti-poisonous drugs.

Apply a paste of *Usir*, *Chandan* and *Padmaka* etc.

Ointment prepared by *Shireesha*, *Rajnee* and *Chandana* should be applied.

Herbs such as *Musika* or *Ajaruha* tied to the hands of the king, it detoxifies all foods mixed with poison.

Protection of heart is must ^[15].

Modern View about the Route of Administration of the Poison: Poisons may be administered by following different routes ^[16]:

1. Enteral-e.g. by mouth or by rectum.
2. Parenteral-e.g. by injection S\C, I\M, I\V, etc.
3. Inhalation-Through air passages.
4. External application-On wounds or even unbroken skin.
5. Introduction into natural orifices-eyes, rectum, vagina.
6. Sublingual

Treatment

Stabilization and Evaluation of Airway, Breathing and Circulation.

Removal of unabsorbed poison by– Decontamination, Emesis, Gastric lavage, Use of activated charcoal, Cathartics and Whole bowel irrigation etc.

Administration of Antidotes-Mechanical antidotes, Chemical antidotes, Physiological antidotes and Universal antidotes

Use of Chelating agents–for heavy metal poisoning like, BAL, EDTA, Penicillamine, Desferrioxamine etc.

Removal of absorbed poison-by Hemodialysis, Hemoperfusion, Peritoneal dialysis, Plasma perfusion, Diuresis and Diaphoresis etc.

Symptomatic Treatment

- Morphine for pain
- Oxygen for respiratory failure
- Diuretics for pulmonary edema
- Diazepam for convulsion
- Saline infusion

Conclusion: *Agada tantra* is a branch of *Ayurveda* which deals with diagnosis and treatment of the effect of poison through snake bites, insects, spiders etc. or consumption of natural, artificial and mixed poison. It is a very useful branch of *Astang Ayurveda*. It gives a lot of knowledge about all types of poison, *visa data*, *vishkanya*, administration of poison and their treatment. Anger is the greatest poison. Poison is usually introduced to end life in anger, to defeat or to take revenge. By close observation of nature ancient seer of *Ayurveda* detected a lot of way of introduction of poison into the human body. The belief that taking life of either a human being or an animal by blood-shed is a greater sin, has led to the use of poisons for the purpose and it is a sad fact that cases of poisoning are increasing day by day. It is an observed fact that the suicide victim prefers to terminate life as quickly as possible with least pain, while for an act of homicide, the criminal would like to kill his enemy, without creating any doubt in the mind of the victim or people around. The criminal mind also prefers to use such detection of a poison, which would allow him sufficient time to escape. Ancient method of detection of poison and poisoner are quiet simple, easy and important in comparison to modern method of detection by analytical toxicology, polygraph test, brain mapping,

fingerprinting and narco analysis. It is an effort of author to highlight the salient features of poisoner, method of administration, detection of poison in food and drink, *vishkanya*, sign and symptoms and treatment of poison on different body organ.

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