

ROLE OF CHATURVINSHATI UPKRAMA IN THE MANAGEMENT OF VISHA: A REVIEW

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ABSTRACT

Ayurveda has its own way of approach towards the management of *Visha* (Poison), *Agadtantra* is a special branch of *Ashtang* Ayurveda having its own importance in *Visha Chikitsa*. A general principle of treatment of poisoning is explained in Ayurvedic Samhitas (Treatises) like *Charaka*, *Sushruta* and *Vagbhata*. *Acharya Charak* has explained Twenty four modalities in the treatment of poisoning irrespective of animate or inanimate poisoning. Other scholars have stated specific treatment in the poisoning cases but still 24 modalities retains its importance. Toxicology also explains general treatment protocol for management of poisoning. The Protocol consists of vital establishment, removal of poison, use of antidote, general and psychiatric care of

patient. But due to complexity of poisoning cases; General Treatment protocol becomes the guideline for the further management. When we compare both Ayurveda and modern medicine with respect to this aspect, we find that all these principles which are suggested by modern medicine are already described in Ayurvedic Samhitas before thousands of years. *Chaturvimshati Upakrama* (24 modalities) are like the treatment principle which directs the actual treatment regime in individual cases. General treatment protocol of poisoning is the modern replica of *Acharya Charak's Chaturvimshati Upakarama*.

KEYWORDS: *Chaturvinshati upkrama, Visha, Ayurveda, Agadatantra.*

INTRODUCTION

The name *Agada Tantra* is formed by combination of two words, *Agada* and *Tantra*. *Agada* means the medicine which removes the effect of poison and *Tantra* means the science. A substance which produces vitiation of *Dhaatu* (body tissue) can be called *Visha*. *Visha* causes

concern to all living being by making the organism grievous ill and leading to death in certain cases.^[1] Ayurvedic classics have broadly classified the *Visha chikista* into two categories first one *Samanaya chikitsa* (general line of treatment) and *Visesha chikista* (specific measures of treatment).^[2]

Charaka samhita has explained *Chaturvimshati Upakrama* (Twenty four modalities) of treatment of poisoning which is also used in different *Visha vega* (poisoning impulses) and its treatment. So these twenty four modalities of treatment of poisoning described in *Charaka* can be used as unique immortal principles of Ayurveda.^[3] *Acharya Charak* and *Acharya Vagbhat* had specified that poison cannot damage tissue without entering into the blood stream. So the purpose of *Chaturvimshati Upakrama* was to restrict, disintegrate, neutralize and excrete the poison from the body.^[4] Twenty four modalities is the exclusive contribution of *Acharya Charak* in the field of *Agadtantra*.

Acharya Charak spared only one chapter for whole toxicology curriculum; i.e. chapter 23 of *Chikitsasthana* of *Charak Samhita* (Ayurved Treatise). The verse says,

मन्त्रारिष्टोत्कर्तननिष्पीडनचूषणाग्निपरिषेकाः|

अवगाहरक्तमोक्षणवमनविरेकोपधानानि||३५||

हृदयावरणाञ्जननस्यधूमलेहौषधप्रशमनानि^[१] |

प्रतिसारणं प्रतिविषं सञ्ज्ञासंस्थानपनं लेपः||३६||

मृतसञ्जीवनमेव च विंशतिरेते चतुर्भिरधिकाः|

स्युरूपक्रमा यथा ये यत्र योज्याः शृणु तथा तान्||३७|| (Ch.Chi.23/35-37)

The *Chaturvinshati upakramas* are *Mantra* (Chanting hymns), *Arishta bandhana* (Tourniquet application), *Uthkarthana* (Incision), *Nishpeedana* (Squeezing), *Chushana* (sucking), *Agni* (Cauterization), *Parisheka* (Sprinkling), *Avagaha* (Immersionbath), *Rakthamoshana* (Bloodletting), *Vamana* (Emesis), *Virechana* (Purgation), *Upadhana* (Applying medicine over incised scalp), *Hridayavarana* (protection of hridaya), *Anjana* (Collyrium), *Nasya* (Nasal instillation), *Dhoopa* (Fumigation), *Leha* (linctus), *Aushadha* (medicine), *Prashamana* (pacifying measure), *Prathisarana* (rubbing), *Prathivisha* (antidote), *Sanjastapanam* (regaining consciousness), *Lepa* (ointments), *Mrthasanjivani* (revival).

AIM AND OBJECTIVES

- To study about *Chathurvinshathi upakrama*, there indication and mode of action.

MATERIAL AND METHODS

- The whole article is based on literary review collected from classical *Ayurvedic* text and their respective commentaries is Sanskrit as well as Hindi have been referred for this literary work.

MANTRA (Chanting of Hymns)

Mantra are nature of truth and penance delivered by Devarshi and Brahmarshi³. For the removal of *visha*. mantra chikitsa is said to be the best treatment⁴. So it is the first line of treatment in Chathurvimshathi Upakrama. According to Vagbhata, mantra is said as *vishapaharani*, Mantra has the capacity to destroy *visha* and it is said to be *Daiva sampat*.^[5]

Method of chanting mantra

One who chant the Mantras should stay away from women, meat, wine; limited food should be taken, should be clean, sleep in a bed prepared by *Kusha* (a type of grass) and worship of Gods should be done by garlands, aroma sticks, sacrifices, etc.^[6]

ARISHTA BANDHANA (Binding or Ligature)^[7,8,9]. *Arishta* means unfavourable or which gives the indication of death. When the poison enters in the circulation, spread to all the remote areas of the body combining with blood. The poison invades all the systems and organs, resulting in fatal consequences. To prevent this, the physician has to make every attempt to arrest the spread of poison which can achieve from ligature / *bandhana*.

Types: 1. *Aristha* with *mantra*

2. *Aristha* with *rajju* (rope)

Bandhana should be done 4 *angula* (4 inches) above the bite site. Cloth, rope, thread, fiber and any soft material can be used for the *bandhana*. Acharya Vagbhata has mentioned that the *bandhana* should be tied in such way, that is neither too tight not too loose. In modern medicine this procedure is similar to application of tourniquet.

Indication- When the intensity of poison increases it signifies the *Arishta*.

The *bandhana* should prevent the poison from entering the circulation. It prevents spreading of the poison. This efforts can be made to slow down the lymphatic & venous drainage & not

to obstruct the arterial supply as result of this spreading of poison to all over the body is stopped.

UTHKARTHANA (Incision)

It is the method of incision of the site of bite. According to Vagbhata, *Visha* will remain 100 *matra kaala* (blinking of the eye is considered as one *matra kala*) in the bite site. Then it spreads into circulation. One should go for *utkartana karma* during this time period.^[10] A simile is mentioned in Charaka samhita, that if the tree is cut from the root, it causes death of the tree. In the same way if *utkartana* is done at the site of bite, there will not be the spread of poison in the body.^[11] Incision should not be too deep as it will cause injury to vessels nerves, tendons, etc.^[12]

NISHPEEDANA (Squeezing)

It is the method of expelling the poison by squeezing the area of bite. It is contra indicated in *Marma* (vital parts) and *Sandhi* (joints). If it is done in *marma* sthana it will cause death, in joints it will cause deformity of joints.^[13]

The concept of pressure embolism is given in contemporary science for the management of poisoning. Researches have shown that very little snake venom reaches the blood stream if pressure is applied to bitten area. It is mainly for taking out stings from bite site.^[14]

CHUSHANA (Sucking)

It is the method of sucking the poison from the site of bite. According to acharya Charaka, the mouth should be filled with *yava curna* (*Hordeum vulgare*), before sucking.^[15] It removes blood mixed with *visha* from the bite site. Acharya Sushruta explained to suck the *visha* by filling the mouth with cloth.^[16] Sangrahakaara adds- *chushana karma* of *visha* to be done by filling the mouth with mud, ash, cowdung. It is mainly done on the fleshy part (*mamsala region*). It is contraindicated if the physician is suffering from *mukha vrana* (mouth ulcer) as the poison will enter to the circulation and will also suffer from the same effect as snake bite.^[17]

AGNI KARMA (Cauterization)

It is indicated in *Twak-Mamsagatha visha* (Poison in skin & muscles).^[18] Dalhana opines that in viper bite *agnikarma* is contraindicated, it causes pitta aggravation and leads quick spread of poison. Material used for *agnikarma* are metals and cloth.^[19]

In modern it is known as Cauterization. It destroys affected tissues and minimizes infection.^[20]

PARISHEKA

It is the method of sprinkling medicated decoction over the site of bite. Decoction prepared by *Chandana (Santalum album)* and *Usheera (Vetivera zizanoides)* is used for *parisheka*. *Visha vega* is prevented by using cold decoction.^[21] After *raktamokshana (bloodletting)* the remaining *rakta* will attain *leenata* because of the *ushna guna* of *visha*. For this cold *lepa (Cold pack)* and *parisheka (Sprinkling)* should be done.^[22]

In Viper bite, the commonly practiced *dhara* is *Panchavalkala kwatha dhara*. In Cobra bite *Grtha saindhava dhara* is used.^[23]

Condensation of blood helps to pacify the intensity of poison. Appropriate irrigation of the bite will decrease the rate of absorption of poison. Cold character of drug helps in reduction of further infection in the wound; contraction of blood vessels, prevent further spread of poison.

AVAGAHANA (Immersion bath)^[24]- *Avagahana* means immersion or dipping of the affected part or whole body in a medicated decoction. In modern science, it is known as immersion Bath. *Avagahana* is done in the presence of severe pain. This procedure neutralizes the effect of poison. They help in proper blood circulation & eliminate toxic matter from the body. The speed of absorption can be reduced by this procedure.

RAKTAMOKSHANA (bloodletting)^[25,26] - Blood is the major media through which the poison spread. It blows up the poison in the body just as air blows up the fire. It should be performed by puncturing the vein scraping, application of horn, *alabu*, leech or venesection. Blood-letting is contraindicated in pregnancy, children, old age person & painful condition. If the blood which is coming out is normal, then the bloodletting should be stopped. If poison is not removed from blood, it spread throughout body and causes death.

Raktamokshana should be done immediately in case where poisoned area becomes discoloured, rigid, swollen. *Raktamokshana* is beneficial in condition where the poison has spread to distant parts of the body. *Raktamokshana* is one of the important procedure to control the intensity of the poison.

VAMANA (Emesis)

It is the method of inducing vomiting. In *visha* chikitsa, mainly *sadhyo vamana* should be done. It is indicated in *Kaphaja* bites, associated with excessive salivation. According to Sangraha, *vamana* should be done, if snake bite is above the umbilical region.^[27]

VIRECHANA (Purgation)

It is the method of inducing purgation. It is indicated in burning sensation, pain and obstruction of urine in *pitta* prakrithi person.^[28] According to Ashtanga sangraha if a *pitta prakrithi* person is bitten by snake of *pitta* predominance, if the bite is below the umbilical region, and is localized in *pakvasaya*, then *Virechana* is to be done. Purgation is induced by giving *Neelini choorna*(*Indigofera tinctoria*) with milk, *Trivrit choorna*(*Operculina turpethum*) along with *Triphala kwatha*.^[29]

UPADHANA (Application of medicine on the incised scalp area)

Upadhana is a special procedure in which medicine is applied over the incised scalp. This treatment is to be done if the patient is not having *asadhya lakshana*. After making incision like cow's feet, bilwa pramana of *mamsa* made out of *Chagha* (goat), *Gavya* (cow), *Mahisha* (buffalo), *Kukkuta* (cock) should be applied on the incised area. According to Vagbhata, if the snake bite is in lower part of the body incision is to be made on scalp. Similarly if it is in the upper parts then incision is to be made in the feet.^[30]

HRIDAYAVARANA (Protection of heart)

Hridayavarana is the method of protection of *hridaya* by using certain medicines. *Teekshnata* of *visha* causes the *karshana* of *hridaya*. So for the protection of Heart *Hridayavarana* is to be done.^[31]

ANJANA (Collyrium)

It is indicated in *Shoonakshikuta* (Swelling in the orbital margin), *Nidrarta* (Excessive sleep), *Vivarna avila lochana* (Discoloured and turbid eyes), *Vivarnam pasyathi* (perception of various colours).^[32] If there is any obstruction in *netra* then *Anjana* should be done using *Devadaaru* (*Cedrus deodara*), *Shunthi* (*Zingiber officinale*), *Maricha*, (*Piper nigrum*) *Pippali* (*Piper longum*), *Haridra* (*Curcuma longa*), *Karaveera*, (*Nerium indicum*) *Karanja* (*Pongamia pinnata*) *Nimba flowers* (*Azadirachta indica*) and *Tulasi* (*Ocimum santum*) are made into *pishti* using goat's urine.^[33] Commonly practiced yoga are *Bilvadi gulika* with *Tulasi pathra swarasa* in all types of poison.^[34]

NASYA (Nasal Therapy)

It is the instillation of medicine in the nose. If poison enters the head, nasya is said to be the main line of treatment. According to Charaka if there is obstruction in nose, eyes, ear, tongue, throat, nasya should be done. Different combinations are used for Nasya karma like *Bharngi mula* (*Clerodendrum serratum*), *Tulasi* (*Ocimum santum*).^[35]

DHOOPANA (Fumigation)

It is the procedure, wherein medicated smoke is used for the purpose of fumigation and this helps to nullify the adverse effect of the poison.

Ex. *Nrikeshadhi dhoopana* for Keeta visha (insect poisoning)^[36]

Anti-toxic material that is emitted from the smoke enters the body and clears the channels of circulation and nullify the toxic effects of poison.^[37]

LEHA (Confectionary/ Linctus)

It is the preparation of medicine in linctus form. *Lehyas* are used, to prevent the drying of throat, palate by *visha*. *Sharkara* (Jaggery) and *Madhu* (Honey) should be given with *Swarna bhasma* and is used as sarva visha prashamana leha.^[38]

AUSHADA (Medicine)

Internal medicine for the treatment of visha are explained. Some examples for aushadha yogas are mrthasanjivani agada, gandhahasthi agada, dhumagada, kshara agada, pancha sirisha agada, etc.

Commonly practiced aushada yogas.

In cobra bite 15 ml of Maha kalyanaka grtha, 10 ml honey, Vilvadi gutika can be given. 3-5 minute, later Jeevaraksha gutika along with milk is given. In viper bite decoction of Patoladhi gana and Vilvadi gutika are given as primary medication. In case of haematuria, Taruna bhaskara gutika and tender coconut is useful. In insect bite, Dasanga agada is usually prescribed.^[39]

PRASHAMANA (Pacifying measures)

After elimination therapy some doshas will remain in the body. To remove this prashamana is to be done.

PRATISARANA (Rubbing)^[40]- *Pratisarana* means local instillation of drugs. In poisoning during the process of *Raktamokshana*, if the blood doesn't come out, certain medicated

powders like *Sunthi*, *Maricha*, *Pippalli*, *Grahadhuma*, *Haridra*, *Panchlavana*, *Brihati*, *Kantkari* are placed on the wound.

During the process of *Raktamokshana*, if the blood doesn't come out. This procedure promotes the blood flow.

PRATIVISHA (Antidote)^[41]- When the spread of poison becomes uncontrollable by *Mantra* & other procedures, then this is the last measure in the treatment of poison. Proper selection of *Prativisha* is very important and all the precautions are to be taken while administering them. The patient should be administered antidote only after taking *ghee*. It is taken after sun rise in winter and spring. In summer, it is only administered in emergencies. This treatment procedure is almost similar to the modern day concept of physiological antidotes.

It is also indicated, if the *Visha vega* in between 5th and 7th *vega*.

Contraindication- It should not be administered during cloudy day or rainy season. It should not be administered to patients who are anger, suffering from hunger, thirst, diseases of *pitta*, pregnant women, children, old age.

Sthavara visha is similar to *kaphaja guna*, so the direction of *visha* is upward. *Jangama visha* is similar to *pittaja guna*, so the direction of *visha* is downward. The *guna* of *Sthavara* and *Jangama visha* are opposite to each other. Hence, the patient bitten by snake is treated with poisonous roots and the person who has consumed vegetable poison should be got bitten by snakes.

Dose- Snake bite – 4,6,8, *yava* as minimum, moderate and maximum dose

Insect bite- 2 *yava*

Scorpion bite- 1 *tila*.

SANGYASTHAPANA (Regaining the consciousness)^[42] - If the patient is unconscious, the physician has to take all the steps to revive the patient from that condition. If symptoms like un-consciousness, upturned eyes balls and dropping of neck, vene-section should be carried out in the veins of forehead or extremities. If the desire blood does not come out, incision should be made superficially on the scalp of the patient.

LEPA (Paste)^[43] - It is an external application of the medicated paste over the affected parts. The poison which comes in contact with skin may produce ill effects which may cause narcosis, fainting, palpitation, these should be controlled by the application of cold paste. It is used when the poison comes in contact with skin. This procedure pacify the poison just as water pacify the fire.

MRITASANJIVANI (Resuscitation)^[44] - It is one of the ancient classical therapies through which life of an individual is restore or regained . Just as *Amrita* gives life even to the dead person, in the same way *Mritasanjivani* can be used in all cases of *Visha*. Acharya Charaka explains a formulation named as *Mritasanjivani Agada*, which is in the form of *gutika*. This cures all types of *Visha*. This *Agada* is used for resuscitation, when the patient is apparently dead, but life energy remains hidden in the body. But, now a day this therapy has vanished. In modern science, this therapy could be compared with the usage of broad spectrum drugs or ventilator support. When the patient condition becomes worse and all the vital activities are diminished. This procedure can nullify the effect of poison.

DISCUSSION

The chaturvimshathi upakrama explained in classics have all the measures needed in the management of poisons. In chaturvimshathi upakrama, the pacifying measures are *Anjana*, *Lepa*, *Dhupana*, *Leha*, *Upadhana*, *Prashamana*, *Prathisarana*. The measure that restrict entry of poison into systemic circulation are *Arishta*, *Uthkarthana*, *Nishpidana*, *Chushana*, *Agni*, *Parisheka*, *Avagaha*. The Elimination therapy are *Rakthamokshana*, *Vamana*, *Virechana*, *Nasya*. The Supportive symptomatic treatment are *Hrdhayavarana*, *Sanjasthapana*, *Mrthasanjivani*. The counteracting medication are *Mantra*, *Aushadha*, *Prathivisha*. The *Upakrama* has to be selected according to condition of patient as per the yukti of the physician.

CONCLUSION

Though Acharya Charak have contributed only one Chapter for whole toxicology section, *Chaturvimshati Upakarama* is the major portion which covers the whole toxicology. In other *Samhitas* we find whole section is dedicated to Toxicology. So we may say that, after Charak period there is detailed revelation of the poisons and their counter acting measures. But still *Chaturvimshati Upakrama* holds their importance as it is by becoming the guiding light in such cases. *Chaturvimshati Upakrama* is like the treatment principle which directs the actual treatment regime in individual cases. Toxicologists also says that, now days poisoning cases

are becoming so much complex. As there is combination of poison consumed by the patient, it gets difficult to administer the specific treatment. Hence in that case the general treatment protocol in the management of poisoning becomes the guideline. With such comparison we can conclude that, General Treatment Protocol of poisoning is the modern replica of *Acharya Charak's Chaturvimshati Upakarama*.

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