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**Conceptual Study on Examination of Poison****Dr. Rajesh Kumar S. Upadhyay**Professor & Hod Agad Tantra Avum Vidhi Vaidyak,  
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CSMSS Ayurved Mahavidyalaya Kanchanwadi  
Aurangabad Maharashtra, India**Corresponding Author** : Email I.D. rajesh1968u@gmail.com**Abstract**

*Vish Parikshan is one of the important part of the detection of poison According to Ayurveda whole world has taken place from the panchamahabhutas .All matter is constituted of five mahsbhutas. All the gross and fine elements in the universe, differ in their ratio of panchamahabhautic compositions and are named after the pre dominant bhuta. Similarly vish dravyas are also made up of panchmahabhutas. The specific composition and pre dominance of each bhuta for vish dravyas was not described Samhitas.Their bhautic composition is guesseed and assessed basing on the symptoms.They produce in the body.Panchbhautic Pareeksha Dalhana in his commentary on Sushruta Samhita has explained the teristic features of vish basing on the bhautic charecters in the context of vishaanna pareeksha (EXAMINATION OF POISONOUS FOOD ) ,similarly analytical procedure is also important for detection of poison and clinical symptoms of poisoning also indicates features of poison and help to differential diagnosis.*

*Shabdha Pareeksha:- When the poisoned food is placed on fire it burns with cracking sound .*

*Roop pareeksha ; when the poisonous food is placed on fire it emanates as flames in the colours of peacock neck*

*Ras Pareeksha :- the flies die after flying over the poisonous food*

*Gandha pareeksha ; when poisonous food is placed on fire it emits irritating , pungent and strong fumes which cannot be extinguished easily.*

*Sparsha pareeksha ; poisonous food comes in contact with skin and causes burning sensation , severe itching.*

**Aim and Objectives**

*To detail study on examination of poison according contemporary and Ayurvedic methods*

- 1)To detail study about Vish according Ayurveda. .*
- 2) To details study about poison according Modern Science .*
- 3) To detail study about examination of poison according Ayurveda*
- 4)To detail study about examination of poison according Modern Science*
- 5)To detail study about methods of examination of poison*
- 6)To study about different instruments and equipments used in the examination of poison .*
- 7)To create awareness about examination of poison and different methods of examination of poison .*

**Key words:** Visha,Poison, Examination,Parikshan,Ayurved,Methods,

**Introduction:-**

According to modern science, it is a substance (solid, liquid, gases)which if introduced in the living body or brought in to the contact which any part there of will be produce ill health or death by its constitutional or local effects or both ,thus almost anything is a poison. Poison may be suicidal, homicidal or accidental and a definite history of ingestion or contact with a known poisonous substance may are or may not be available, therefore the possibility of poisoning should always be considered in a puzzling situation, when differential diagnosis presents a difficult problem. According it is essential that one should be familiar without standing symptoms and sign of poisoning in the living persons together with its effect as found in examination of dead.

**Visha pareeksha according to source:** Utpati-based on the sources of origin examination was classified as sthavara and jangama visha. They can be detected and diagnosed based on the following features.

**Sthavara visha :-** Moves upwards in GIT. vomiting, hiccough, tingling sensation in teeth, anorexia.

**Jangama visha:-** Moves downwards in GIT. diarrhea, oedema, drowsiness, somnolence.

**Visha parikshan based on properties(guna):-** Classification of visha basing on their properties was not described in Ayurveda, they have also not described the examination or diagnosis of poison based on their qualities, visha by virtue of its ten qualities on entering the body vitiable different doshas and destroying ojas. There by resulting number of complication and some time even death, but the action of vish and its nature assessed based on the symptoms its produces and also the dosha it vitiates.

**Animal Experimentation For Detection Of Visha:-** In sushrut samhita kalpasthana has described the means detection of vish with the help of animals and birds. It was mentioned that the presence of poison in the food can be suspected and guessed with the help of abnormal behavioral attitude of animal or birds on sight of poisonous food.

**According To Ashtang Sangrah-Vish Pareeksha Method Of Detection:-** On some occasions certain weak minded people who are guilty of some other crime also suffer from the stated behavior because of constant fear of police etc. Therefore the food suspected to have been poisoned should be subjected to test by agni (fire) and other methods when poisoned food is thrown over the burning fire it burns with single point flame not in the form of spreading flame interrupted and slow emits flame of different colours like rainbow and gives out cracking sound. The smoke that comes out is like that of dead body causes fainting, watering of eyes, nose and mouth, excitement, headache, running nose and vision disturbance. Physician should observe the animal and birds behavior for diagnosis of poison.

**Materials And Methods:-** For the present review detailed literary study is performed. The details content of and references are analyzed from available principal text offered are Charak, Sushrut, Ashtang sangraha and some books also relevant references are taken from modern text book of toxicology and forensic medicine and other research articles available from internet.

**Methods:** Descriptive and conceptual.

#### **Literary Review :-**

According to modern science –Poison is a substance which, when administered, inhaled or ingested is capable of acting deleteriously on the human body. Thus almost anything is a poison. There is really no boundary between medicine and a poison, for a medicine in a toxic dose is a poison and a poison in a small dose may be medicine. In law the real difference between a medicine and a poison is the intent with which is given. It is substance is poison given with the intention to save life, it is a medicine but it is given with the intention to cause bodily harm, it is poison.

To diagnose poisoning it is essential that one should be familiar with the outstanding symptoms and signs of poisoning in the living person together with its effects as found in the examination of the dead.

**Poisoning in the Living-** The evidence of poisoning depends upon whether the poisoning is acute or chronic.

#### **Poisoning in the dead :-**

Postmortem examination, chemical analysis, experiment on suitable animal and moral and circumstantial evidence. Poison retard the action of putrefactive organisms to some extent. In a number of cases therefore the bodies are comparatively well preserved.

**Chemical analysis:-** The most important proof of poisoning is the analytical detection of poison in

parenchyma of the organs of the body . The finding of poison in food, medicine, fluid, alleged to have been taken is corroborative.

**Experiment on suitable animals:-** The suspected food ,medicine or fluid or the poison extracted from viscera can be fed to domestic animals such as dog and cat, these animal affected by poison in the same way as human beings, such procedure is not acceptable in some countries. In India prevention of cruelty to animals act enunciates the guidelines and punishment.

**Moral and circumstantial evidence:-**Clues regarding the recent purchase of poison by the victim or accused his behavior the contact of those looking after the victim suicide note and history of quarrel or financial problems may also provide valuable information.

**Analytical Toxicology:-** Scientific methods of analysis for poisons have only recently been developed. Until 19th century doctors and scientists harboured faulty notions about the effect of poisons on the human body .It was believed that if a dead body was black, blue or spotted in places or smelled bad ,the cause of death was poison. Other fallacious ideas were that heart of poisoned person could not be destroyed by fire. The body of a person dying from Arsenic poisoning would not decay. The attending Physician must be judicious in calling for necessary investigations and exercise discretion in the choice of test to be done.

The potential indication for seeking the assistance of Toxicology laboratory are as follows:-

- 1)Prognosis-To assess the outcome of a case of poison.
- 2)Research –In Toxic kinetics and mechanisms of Toxicity.
- 3) Order-From court or law enforcement officer.
- 4) Monitoring-Treatment measures and their efficacy.
- 5)Identification-Nature of the poison.
- 6)Severity-to assess the seriousness of given case.

7)Exclusion-confirmation of toxic exposure Mahoney and associates have categorized treatment of a poison case into four groups with respect to evaluation.

Toxicity correlates very well with serum levels and specific drug therapy can be instituted, for example digoxin ,ethylene, glycol, lithium, methanol, paracetamol, salicylates, theophylline.

**The Analytic Procedure:-**For Toxicological analysis poison can be divided into five groups.

**Analysis-** Toxicological analysis of biological tissues involves.

**Separation of the drugs** -From the biological tissue for this the contents of stomach are diluted in water and the solid viscera are cut into small pieces and macerated in water. Then a solvent is used to extract the poison.

**Purification of the drug-**This is done by additional extraction procedures using alkaline and acid solutions.

**Analytical detection and quantitation-** This is done by thin layer chromatography(TLC) gas chromatography mass spectrometry and rarely UV spectrometry. Except for gas chromatography mass spectrometry ,none of the methods is totally specific . If the method analysis other than GC.MS is used for initial identification ,then often it is easier to make positive identification and even quantitation .

**Group I** Gases are separated from blood or lungs by simple aeration procedures and specific test applied. Air samples collected at scene of exposure give better results.

**Group II** Steam volatile poisons-They include both organic and inorganic substance which are separated from biological materials by steam distillation from an acidic or basic medium e.g. ethyl and methyl alcohol ,phenol ,chlorinated hydrocarbons benzene amphetamines, nicotine, yellow phosphorus etc. Steam distillation of a sample of finely minced tissue containing tartaric acid

separates volatile acid and neutral substance. The residue is made alkaline and redistilled which separates volatile basic substance. Individual qualitative tests are carried out on suitable portions of the distillate. If some volatile compound is identified in distillate a fresh weighed sample of tissue is used for quantitative analysis.

**Group III-1) Metallic poison** –In dry Ashing procedure the weigh and minced tissue is dried in an oven and then placed in muffled ring /furnace at 4500C until all the organic matter is destroyed. The remaining ash is leached with mineral acid and resulting solutions subjected to qualitative and quantitative analysis for individual metals. Arsenic, Antimony, and Mercury are volatile at 4500c and would be lost in such procedure.

2)The wet Ashing procedure- It employs a mixture of nitric, sulfuric acid and per chloric acid to oxidize the organic matter. The remaining solution is the ash which is used for analysis of various metals.

**Group IV-Non volatile organic poison**-This group includes all compound that are alcohol and water soluble.

1)Compounds which may be extracted from an acidic aqueous medium by chloroform or other include organic acid and organic neutral compounds such as barbiturates acetanilid, phenacetin etc.

2)Compounds which may be extracted from a basic aqueous medium by chloroform or ether include organic bases such as cocaine, quinine, strychnine, phenothiazines, Imipramine, nicotine, Demerol etc.

3) Compounds which may be extracted from aqueous solution which is faintly alkaline which ammonia or sodium bicarbonate by chloroform with 10% ethanol include morphine, dionin, dilaudid etc.

**Group V- miscellaneous** –This includes all substances which are not classified in any of the above four group such as non metallic inorganic substances and water and alcohol insoluble organic compounds for identification special individual procedures for each substance must be employed.

**Conclusion:-** After studying all the aspect we came to conclusion that –

- 1)For detection of poison on physical properties are panchbhautik.
- 2)It is clear that visha pariksha on the basis of Ayurveda panchbhautik parikshan is essential like shabda, sparsh, gandha, roop examination.
- 3)Based on the sources origin the examination of poison.
- 4)Visha parikshan is possible on the basic of guna.
- 5)Animal experimentation is also necessary for detection of visha.
- 6)Analytical procedure is also important for detection of poison.
- 7) Clinical symptoms of poisoning also indicate feature of poison and help to differential diagnosis.

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