



## CONCEPT OF VISHA AND ITS PHARMACOLOGICAL BASIS IN AYURVEDA

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### ABSTRACT

Visha dravyas (poisonous drugs) are used in various Ayurvedic formulations, in spite of their reported side effects due to their quick effectiveness and in relatively smaller dose. Ayurveda describes many visha dravyas of herbomineral or animal origin. A vivid but scattered description of this can be traced in different texts of Ayurveda and particularly Agadatantra. Visha has been described in terms of its utpatti (origin), types, gunas (properties and pharmacological actions), its effects and management. Guna is the basis to understand the various actions of any dravya. Ten gunas attributed to Visha are just opposite to that of oja. Hence, visha dravya produces its effect by its action on oja. Various shodhana (purification) procedures for the safe internal use of these poisonous drugs are also mentioned. In the present article, an attempt has been made to understand visha, its history, types and properties in Ayurvedic parlance by presenting them in a single place.

**Key words:** Visha, Oja, guna, Agadatantra

### INTRODUCTION

Classical texts of Ayurveda describe the management of various disease conditions either of nija (endogenous) or agantuja (induced/exogenous) origin. Disease conditions raised due to visha (poison), shastra (weapons) agni (fire) etc. come under agantuja category. The word Visha is derived from the root 'vis' (vyapta) having 'kt' proportion which means to encompass or to get fully pervaded or to get occupied. Thus the one which pervades the whole body immediately after ingestion is called as visha<sup>1</sup>. A substance which causes sadness to the world is also called as visha<sup>2</sup>. Hence visha dravya may be defined as a substance which is life threatening or produces many other complications and brings about sadness. In Ayurvedic classics, after proper processing, many visha dravyas are used as aushadha dravya because, dose differentiates a drug from poison, a medicine at one dose, can serve as visha or poison at the other. Hence, a substance which is fatal at relatively smaller dose can be considered as visha. Visha dravyas are attributed with certain properties which are responsible for its fatality in smaller dose. Action of visha i.e. poison in context of its gunas, vega lakshanas and dhatugata lakshanas is very elaborately explained<sup>3</sup> in Ayurvedic texts. Visha when used by proper yukti (justification) can be converted to bhesaja<sup>4</sup>. The treatment of visha vegas, in a very systematic manner, according to twenty four upakramas are also explained in different texts. These vega lakshanas and upakramas too depend on the gunas and gati of visha<sup>5</sup>. So to understand Ayurvedic concept of visha it is necessary to understand its gunas. Authors of different classical texts of Ayurveda described their view regarding the types, properties, actions of visha dravya and their management, in a scattered manner. In the present article an attempt has been made to understand visha, its history, types and properties in Ayurvedic parlance by presenting them in a single place.

### Brief History

The history of visha (poison) and its treatment ways back to centuries. The mythological concept regarding origin of visha states that it was created at the time of creation of

universe by lord Brahma<sup>6</sup> and some opine that it was obtained during samudra manthana<sup>7</sup>. References regarding visha or poison and poisoning can also be traced in Vedas<sup>8</sup>. In Atharvaveda (1500 B.C.<sup>9</sup>), description of two types of visha i.e. sthavara and jangama and their management through mantrachikitsa is narrated<sup>10</sup>. In Ramayana (500 B.C.<sup>11</sup>), Rama and Lakshmana were treated for poisoning by Vaidya Sushena with the help of Sanjeevani vidyaa along with four types of herbs from Himalaya<sup>12</sup>. In Mahabharata (400 B.C.<sup>13</sup>), poisoned Bhima was treated by the sarpavisha<sup>14</sup>. Further, a conversation between Kashyapa and Takshaka regarding treatment of poisoning (vishachikitsa) is also reported in Mahabharata<sup>15</sup>. Brahmavaivarta Purana (3/51) (600 B.C. to 700 A.D.<sup>16</sup>) also narrates the conversation between Dhanvantari and Nagadevi which gives information about condition of Vishachikitsa at that time<sup>17</sup>. In Kautiliya Arthashastra (363 B.C.<sup>18</sup>), a book not related to toxicology, many references regarding visha particularly description regarding kalakuta, vatsanabha, halahala, meshasringa, musta, kushtha, mahavisha, vellitaka, gaurardra, balaka, markata, haimavata, kalingaka, daradaka, kolasaraka, ushtraka, are mentioned<sup>19</sup>.

Ayurveda dedicated one of its branches as Danshrachikitsa<sup>20</sup>, Agadatantra<sup>21</sup> or Vishatantra<sup>22</sup>, Vishagaravairodhikaprashamana<sup>23</sup> which is dedicated solely to the concept and treatment of visha. These references provide ample evidence to prove that toxicology was a well developed branch in ancient India.

### Classification

Visha, basing upon its origin, has been classified into two categories viz. Jangamavisha (animal poison) and Sthavaravisha (plant and mineral poisons)<sup>24</sup>, where the sites of Sthavaravisha and jangamavisha are narrated as ten and sixteen respectively<sup>25</sup>. Further it is also classified as Akritravisha (natural poison) and kritravisha/Garavisha (unnatural or chemically prepared poison) where Akritravisha is again sub divided into two i.e. sthavara and jangama<sup>26</sup>. Certain texts

of Rasashastra and Dravyaguna classified visha in various manners like mahavisha-upavisha etc.<sup>27</sup>

#### **Visha Dravya (Poisonous Substances)**

In spite of their fatal effect many visha dravyas are used as medicines e.g. many of the of the poisonous plants as well as rasaushadhis which are reported for their toxic nature but they are used, after proper processing, widely in the treatment without any adverse effects as they are effective in small doses to cure the diseases<sup>28</sup>.

Visha dravyas, along with their undesirable properties, are also incorporated with certain desirable properties, by which they act faster than other medicines or plants. Further, to make these properties therapeutically effective certain shodhana (purificatory) procedures are explained in the classical texts, which may be helpful for diminution of toxic properties of the poisonous substances.

#### **Gunas (Properties) of Visha**

Acharya Charaka and Sushruta have enumerated ten similar gunas of visha with an exception of apaaki (Sushruta) being replaced by anirdeshya rasa (Charaka). A visha dravya, having all these ten gunas to its maximum extent, is called as mahavisha, while those having these gunas to a smaller extent or less than ten gunas are termed as upavishas<sup>29</sup>. Acharya Vagbhata has attributed eleven gunas to a visha dravya by including apaki and Avyaktarasa (instead of anirdeshya rasa)<sup>30</sup>. Sharngadhara (13<sup>th</sup> century A.D.<sup>31</sup>) has stated certain extra gunas of visha dravya like chhedhi, madavaha, jivtahara and yogavahi<sup>32</sup>. The gunas of visha, as described by different authorities, with their probable equivalent english terms<sup>33</sup> are presented in Table 1.

#### **Visha Dravya and its Action**

On the basis of the actions on various components of body, the probable mode of action of a visha dravya has been described in classical texts of Ayurveda. Table 2.

### **DISCUSSION**

Every guna, attributed to a visha, has got some action on dosha, dhatu and mala. Due to Laghu guna visha does not remain constant in a particular place (anavasthitatva). Hence, does not allow the interaction between the visha and the administered bhesaja, which is necessary in order to treat the guna. Sukshma guna of a visha dravya helps to penetrate the sukshma srotas of the body, resulting vitiation of rakta dhatu. Ruksha guna, one of the gunas attributed to vata, vitiates the vata dosha<sup>34</sup>. Avyaktarasa of visha, an equivalent guna attributed to Kapha and jala<sup>35</sup>, leads to vitiation of kapha which is due to the principle being known as samanya-vishesha siddhanta<sup>36</sup>. Further due to this guna, visha becomes yogavahi, and just like water, which takes the gandha of the substance it contains, visha also binds with the annarasa due to its avyaktarasa and thus the food gets contaminated.

Ashu and vyavayi gunas, as a drop of oil spreads over water as soon as it touches its surface, lead to quick dispersion of visha all over the body. While describing vyavayi guna Dalhana says that although visha spreads quickly all over the body it does not come out by any of the way either from urdhvamarga or from adhomarga.

Tikshna guna being an attribute of agnimahabhuta affects marma. Marmas are saumya and mrudu in nature. It also

produces distress of the body constituents, burning sensation and putrefaction.

Vishada guna, does not contain any mucous nature and doesn't stop anywhere in the body, passes through all the doshas resulting in their vitiation. In this way, visha leads to vitiation of all the three doshas<sup>37</sup> and becomes very complicated to treat.

Vikasi guna breaks the bonding between various dhatus and brings about looseness in the dhatus (dhatushaithilya) and resulting in their improper function<sup>38</sup>.

Activity of a visha dravya depends on the dominancy of its possessing guna. For instance the domination of ruksha guna will lead to the vitiation of vata, domination of sukshma guna lead to vitiation of rakta dhatu as compared to others, while domination of tikshna guna will lead to the impairment three marmas of the body i.e. shira, hridaya and basti and may lead to murchha, sanyasa and other symptoms of marmaghata.

#### **Visha vis a vis Madya**

Classical text of Ayurveda attributed ten common gunas to both Madya and visha, where the intensity of the Guna of visha is more than that of madya<sup>39</sup>.

As stated earlier, study of visha gunas is necessary for its treatment. Since the basis of treatment is samanya-vishesha siddhanta a drug or diet which is opposite in the properties as that of the disease should be used for its treatment<sup>41</sup>.

Treatment of any ailment is divided in three types i.e. daivavyapashraya, yuktivyapashraya and satvavajaya<sup>42</sup>. Vishachikitsa consists of all the above factors or is successful when it has got all the three factors. Daivavyapashraya chikitsa has got the first position while treating poisoning in the form of mantra. Along with this it also consists of manaschikitsa i.e. ashvasana which is very important while treating snake bite. After that it comes the turn of yuktivyapashraya chikitsa.

For the management of visha, the drug or formulation used must be of the opposite guna as that of visha or similar to the guna of oja. So it can be inferred that all the dravyas of jivaniya gana can be used for the treatment of visha. Oja which gets vitiated due to vishaprayoga should be brought back to its normalcy by these drugs. Ghruta is the substance which has similar gunas as that of oja is useful in treating such conditions. Ghruta, yogavahi in nature, can acquire the gunas of the substance with which it is mixed without losing its own gunas and is attributed with the vishahara property. So it can be used as the best media for treating visha conditions. Ghruta by its madhura, snigdha, shita, mrudu, shlakshna, ojasya, jivaniya etc. gunas act to pacify visha<sup>43,44</sup> and amongst ghrutas, goghruta is considered as superior<sup>45</sup>.

Certain materials like suvarna and tamra are also attributed by the vishahara property. It is mentioned that these substances help to protect hridaya which is the sthana of oja and act against visha<sup>46</sup>. So these substances can also be used for treating such condition.

Acharyas have also explained various formulations in toxic conditions. These formulations are called as agada. This is also a reason to name this branch of Ayurveda as Agadatantra. These agadas could be divided according to various gunas or doshas or dhatus e.g. Ksharagada explained by Acharya Charaka can be considered to be

acting on kaphadosha as its indications are mentioned as shotha, mandagnitva, kasa etc. which are basically produced due to kapha dosha, Mrutasanjivana agada which can be considered to be acting on pitta dosha as its indication has been mentioned as jvarahanta and Gandhahasti agada which can be considered to be acting on shirasthita visha or marma<sup>47</sup>. In this way all the agadas could be divided on the basis of guna, dosha, dhatu and marma.

Other than Agadatantra, Ayurveda has advocated to use toxic substances in minute quantity for treating various ailments like udara. In the latter period various texts of Ayurveda had been using toxic substances by classifying them into visha and upavisha categories, amongst which

upavishas are considered to be having less toxicity than that of vishas. For using these substances in the treatment they were treated with various media, the process being called as shodhana<sup>48</sup>. This shodhana procedure was carried out in order to detoxify the toxic substance along with the incorporation of certain other properties to it. It may be considered that the ten gunas which are attributed to these visha dravyas may be getting reduced due to these procedures which allow the toxic substance to be used internally without many complications e.g. vatsanabha shodhana is performed in gomutra and godugdha and after this procedure only it is used in preparing various formulations<sup>49</sup>.

**Table 1: Showing gunas (properties) of visha**

S.N.	Guna (properties)	Charaka	Sushruta	Vagbhata	Sharngadhara
1.	Laghu (lightness)	+	+	+	-
2.	Ruksha (dryness)	+	+	+	-
3.	Ashu (fast acting)	+	+	+	-
4.	Vishada (clearness)	+	+	+	-
5.	Vyavayi (spreading)	+	+	+	+
6.	Tikshna (sharpness)	+	+	+	-
7.	Vikasi (opening channels)	+	+	+	+
8.	Sukshma (fineness)	+	+	+	+
9.	Ushna (hotness)	+	+	+	+ (Agneya)
10.	Anirdeshya rasa (unidentifiable taste)	+	-	+	-
11.	Apaki (not digesting)	-	+	+	-
12.	Chhedi (cutting nature)	-	-	-	+
13.	Madavaha (producing narcotic effect)	-	-	-	+
14.	Jivitahara (life threatening)	-	-	-	+
15.	Yogavahi (catalyzing action)	-	-	-	+
16.	Avyaktarasa (unidentifiable taste)	-	-	+	-

**Table 2: Mode of action of visha dravya**

S.N.	Guna	Effect	
		Charaka	Sushruta
1.	Laghu	Durupakrama	Dushchikitsya
2.	Ruksha	Vataprakopa	Vataprakopa
3.	Ashu	Shighra	Ashu hanta
4.	Vishada	Asaktatidoshha	Kvachit api na sajjeta
5.	Vyavayi	Vyapnoti kevalam deham	Akhila deha vyaptim bhajet
6.	Tikshna	Marmaghna	Matim mohayet, marmachheda
7.	Vikasi	Pranaghna	Dosha-dhatu-mala vinasha
8.	Sukshma	Raktaprakopa	Shariravayava pravesha
9.	Ushna	Pittaprakopa	Pitta-rakta prakopa
10.	Anirdeshya rasa	Kaphaprakopa, annarasanuvartana	-
11.	Apaki	-	Durhara
12.	Chhedi *		
13.	Madavaha*		
14.	Jivitahara*		
15.	Yogavahi *		

\* Sharngadhara

**Table 3: Visha vis a vis Ojas**

S.N.	Guna of visha	Guna of ojas <sup>40</sup>
1.	Laghu	Guru
2.	Ruksha	Snigdha
3.	Ashu	Prasanna
4.	Vishada	Pichchhila
5.	Vyavayi	Sthira
6.	Tikshna	Mrudu
7.	Vikasi	Shlakshna
8.	Sukshma	Bahala
9.	Ushna	Shita
10.	Anirdeshya rasa	Madhura rasa

## CONCLUSION

Ayurveda advocates uses of certain visha dravyas (poisonous substances) as medicament. Guna and action of these visha dravyas are well documented in classical texts of Ayurveda. The concept of visha can be understood in the context of its gunas and by understanding them in a scientific way, it is also possible to use them as a fast acting drug.

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