

GLORY OF SYNONYMS OF PLANTS IN AYURVEDA WITH SPECIAL REFERENCE TO NAMARUPA VIJANAM- A REVIEW

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ABSTRACT

Synonyms are the important tools in the field of *Dravyaguna vijnana* (Materia medica of *Ayurveda*) which aid in the classification, identification and usage of medicinal plants. Synonyms of plants are coined based on various considerations including morphology, utility in treatment, historical background and place of origin of the drug and others. This article is an attempt to discuss about synonyms and the glory it offers to the scholars of Ayurveda particularly in the field identification and medicinal aspects.

KEYWORDS: Synonyms, Basonym, *Dravyaguna vijnana* and *Namarupa Vijnana*

INTRODUCTION

People had a close association with nature and were dependent on plants for their basic needs such as food, medicine and shelter since ages. This relationship exists even today as 65% of the Indian population especially in rural areas uses medicinal plants to help meet their primary health care needs¹. Ancient physicians recorded the names and usage of the plants by assigning the names pertaining to their morphology, habitat, mythology, indication for a particular disease, commercial importance and many more. As there was no proper system of nomenclature of plants, they used to give different names to them which might be one of the tools for passing the knowledge to their disciples. *Namarupa vijnana* is a special branch of *Dravyaguna vijnana* which exclusively deals with the study of *Nama* i.e. names of the plants and *Rupa*, (the forms) i.e. appearance or

morphology. Names, forms and indications of medicinal plants used in Ayurveda come under the scope of this branch.

Concept of Basonym – Synonym:

The Basonym is defined as the earliest validly published name of a taxon² whereas the word synonyms is defined as one or more words or expressions of the same language that have the same meaning in some or all senses³. In *Namarupa vijnana*, Basonym is the original name of the plant which is termed as *Nirukta* or *Moolanama* and the synonym is termed as *Paryaya*.

Evolution of plant nomenclature and usage of synonyms:

There are no references and documentation of plant nomenclature during Pre-Vedic and Vedic periods. But there some reference regarding the names of plants which are the names of Gods such as *Mahabala* and *Muchakunda* which support the opinion that

plants were named based on their mythological background⁴. There are references regarding the usage of synonyms during this period. There were 2 kinds of synonyms used i.e. *Naighantuka* and *Ekapadika*. '*Naighantuka*' refers to the number of synonyms to a single plant whereas *Ekapadika* refers to the single synonym used for many plants⁵.

Later, during *Samhita* period there emerged *Bruhatrayee* – the 3 important treatises of Ayurveda i.e. *Charaka Samhitha*, *Sushruta Samhitha* and *Ashtanga Hridaya* which marked the revolution in the field of Ayurveda. These treatises also used the synonyms for describing the plants. *Charakacharya* used a single synonym strictly for every plant he described in his treatise, but *Sushruta acharya* and *Vagbhatacharya* coined newer synonyms⁶.

Acharya Priyavat Sharma states that each of *Bruhatrayee* has a separate glossary of names and synonyms of plants⁷ named as *Nighantu*. The ancient *Nighantus* like *Saushruta nighantu*, *Ashtanga nighantu* and *Chamatkara nighantu* contained only names and synonyms of the plants whereas further down the time *Nighantus* like *Dhanwantari nighantu*, *Madanapala nighantu* and *Raja Nighantu* started mentioning even the actions, indications and contra-indications of the plants. This *nighantu* period marked the revolutionary development in the field of *Dravyaguna vijnana* as these works coined plenty of newer synonyms which aided in the identification of plants.

Raja Nighantu, written by *Raja Narahari Pandit* described the basis plant nomenclature⁸ based on 7 factors namely,

1. Rudhi: Some plants were simply named, which had no specific meaning. The names are just practiced traditionally. Examples include: *Guduchi* (Basonym of *Tinospora cardifolia*) and *Pacham-pacha* (Synonym for *Berberis aristata*).

2. Swabhava or Prabhava: Some plants were named based on their properties, Examples include: *Kushtaghni*- which is considered as a remedy for skin diseases (*Acacia catechu*) and *Dadrughni*-which is the best remedy for ringworm (*Cassia tora*).

3. Deshokta: Some plants were named based on their place of origin or habitat. Examples include: *Dravidi*- which belongs to *Dravida desha* (South India) and *Kampillaka*- which is native to *Kampilla desha* (*Mallotus phillipinensis*).

4. Lanchana: plants were also named based on the morphological signs like color of the flower, shape of the leaf, special characteristics of the plant and the odour. Examples include: *Deerghaphala* - having long fruits (*Cassia fistula* and *Sesbenia grandiflora*) and *Raktapushpa*-Red colored flowers (*Saraca asoka* and *Butea monosperma*) (Table number 1)

5. Upama: Some plants were named based on the simile i.e. the visual similarity between few objects/animals. Examples include: *Shrunghi*- Horn shaped roots of *Aconitum heterophyllum* and *Kimshuka* - Flowers resembling the parrot's nose (*Butea monosperma*) (Table number 1)

6. Veerya: Some plants were named after their respective *Veerya* like *ushna* and *sheeta*. Examples include: *Ushana* (pepper – *Piper nigrum*), *sheeta* (*Sida cordifolia*) and *Sheetavalkala* (*Udumbara-Ficus racemosa*).

7. Itarahwaya: includes other factors.

There are numerous other factors considered while naming and giving synonyms for a plant. Vaidya V M Gogte has states factors like shape, habitat, morphology, taste, smell, appearance, touch, sound, leaf, flower, fruits, historical names, therapeutic description, and disease producing, resembling body parts and resembling animals⁹. Examples are,

-Shape *Shrungi* - horn shaped root (*Aconitum heterophyllum*) and *Chakralakshanika*- transverse section of stem resembling wheel (*Tinospora cordifolia*)

-Habitat: *Upakulya*- grows near water bodies, *Magadhi* and *Kutaja* – Grows in *kuta* i.e. in hilly regions (*Holarrhena antidysentrica*).

-Taste: *Rasona* – deficient of one *rasa* (*Allium sativum*) and *Swadu phala*- fruit with sweet taste (*Vitis vinifera*).

-Smell: *Uragandha*- intense smell (rhizome of *Acorus calamus*) and *Madagandha* – smell, which is so intense that it causes intoxication (flowers of *Alstonia scholaris*).

-Appearance: *Raktachandana* (*Pterocarpus santalinus*) and *Chitrabeeja* seeds with mottled surface (*Ricinus communis*).

-Touch: *Lajjalu* – which is sensitive to touch (*Mimosa pudica*) and *Kharapatra*- rough leaves (*Nyctanthus arborstris*).

-Leaf: *Saptaparna*- pinnate leaf with 7 leaflets (*Alstonia scholaris*) and *Tarmapallava* –young leaves are coppery (*Saraca asoka*)

-Flower: *Shankapushpi* – Conch shell shaped flowers (*Convulvulus pluricaulis*) and *Raktapushpi* – red colored flowers

Saraca asoka, *Butea monosperma*). (Table number 1)

-Fruits: *Kathinaphala* – hard fruit (*Feronia limonia*) and *Brihatphala*- big fruit (*Benincasa hispida*).

Historical background: *Bodhidruma*- tree under which Gautama Buddha was enlightened (*Ficus religiosa*) and *Devadhupa*– used as an incense to worship God (*Commiphoramukul*).

Therapeutic usage: *Ashmantaka* – and *Kushtavairi* – fights against skin diseases (*Hydnocarpus laurifolia*).

Disease causing: *Kesha hantri* – causes hair fall (*Prosopis cineraria*) and *Arushkara* and *Shophakrit* – which causes blisters and edema over skin (*Semecarpus anacardium*).

Health promotion: *Arogyashimbi* - pod that safeguards health (*Sesbania grandiflora*) and *Abhaya*– which eliminates fear of diseases (*Terminalia chebula*).

Resembling body parts: *Amashayaphala* – fruits resembling the stomach (*Artocarpus heterophylla*) and *Hritpatree* – leaf resembling the heart (*Digitalis purpurea*).

Resembling animals: *Vyaghrapuccha*-resembling the tail of lion (inflorescence of *Ricinis communis*) and *Matsyashakala* resembling the scales of fish (*Picrorhiza kurroa*).

Dr K Nishteshwar states few more factors namely- Weight, nodes, latex, spines, and action on animals¹⁰. Examples:

-Weight: *Akshaphala* (*Terminalia bellerica*)

-Granthi (Nodes): *Shadgranthi*- 6 nodes rhizome of *Acorus calamus*) (Table number 1) and *Shatagranthi*- with hundreds of nodes (*Cynodon dactylon*).

-Latex: *Hemadugdha*- with golden colored latex (*Ficus racemosa*) and *Payasaya*- milky latex (*Ipomea digitata*)

-Spines: *Teekshnakantaka*- sharp spines (*Balanites egyptica*) (Table number 1) and *Deerghakantaka*- long thorns (*Acacia arabica*).

DISCUSSION

As plants were the only sources of medicine during earlier days, it was very necessary for them to identify the plants and differentiate them from the non-medicinal and poisonous ones. There was no standard protocol to study, name and classify a plant. To overcome this issue, ancient physicians used synonyms to describe, remember and to document the usage of medicinal plants. Synonyms of plants provide knowledge of a plant's place of origin, morphological signs including shape, color, size, description of flowers, fruits, seeds and all other parts responsible for the action. Many synonyms included by Acharyas helped in plant identification from garden to kitchen.

'Oleandrin' – is a metabolite from oleander responsible for toxicity in animals causes heart arrhythmias that lead to cardiac arrest and death. Death is caused due to ventricular fibrillation¹¹. This toxicity is not only recorded in humans but also the animals like horses which were well documented with the use of synonym: *Hayamara*- the plant which is poisonous to horse (Yellow Oleander). Plants which cause ill effects and are poisonous not just for humans but also for the animals were recorded by means of synonyms. Though there was no sophisticated instrumentation and facilities for animal studies then, they recorded the

toxicity of plants in animals which is merely by consistent and persistent observations.

Plants belonging to a particular habitat were also recorded by means of synonyms, which provide direct references for the source of collection of certain plants. Plants have synonyms like *Nadeya* and *Nadisarja* mean that they alongside the rivers which provides us information about the habitat and availability.

As the days passed, the availability of plant declined due to over-exploitation which might have caused the need for substitution and adulteration in the field of pharmaceuticals in Ayurveda. That is when the *Nighantukaaras* like *Bhavamishra* mentioned about *Pratinidhi dravyas* (Substitutions) in case of non-availability of plants.¹² But calling many plant by same name has undoubtedly given rise to many controversies, which needs to be addressed.

Nighantukaras started using numerous synonyms for one particular plant and started using the vernacular names, names of varieties of the plants as synonyms, which created huge confusion among the people regarding the identity of plants. Initially during *samhitha* period, synonyms used were very few whereas the number was increased during *Nighantu* period which was very much beneficial to the students of Ayurveda in order to identify and to use the plants using those synonyms. Need for plant identification tools were hardly felt in those days as people lived in close vicinity with nature.

Synonyms not only provide the basis for plant identification, but also other details related to the plant. In case of confusion regarding the identity, one can consider the

context and then refer the original authentic materia medica and flora of that particular area to confirm the identity of a plant.

CONCLUSION

Naming a plant provides a means of communication and a reference system. One must note that, in modern era synonyms alone are not reliable tools of plant identification. Apart from synonyms provided by earlier scholars, botanical classification should also be considered before confirming identity of a particular plant.

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REFERENCES

1. WHO. Traditional medicine Report by the Secretariat. http://apps.who.int/gb/archive/pdf_files/WHA56/ea5618.pdf (Accessed 10 July 2018)
2. Merriam-Webster Dictionary. Basonym – Definition. <https://www.merriamwebster.com/dictionary/basonym> (Accessed 10 July 2018)
3. Merriam-Webster Dictionary. Basonym – Definition. <https://www.merriamwebster.com/dictionary/synonym> (Accessed 10 July 2018)
4. Sastry J L N. Dravyaguna Vijnana, Part - 1. Varanasi: Chaukambha orientalia. 2009 Reprint.
5. Sastry J L N. Dravyaguna Vijnana, Part - 1. Varanasi: Chaukambha orientalia. 2009 Reprint.
6. Sharma Priyavat. Namarupa vijnanam- Introduction, Varanasi: Chuakambha vishwabharati. 2011.

7. Lucas Shantakumar. An introduction to nighantus of Ayurveda. Chaukambha sanskrit sansthan. Varanasi.

8. Raja Nighantu, Pandit Narahari, Dravyaguna prakashika Hindi commentary, Indradeo T, Preface (written by Vishwanath Dwivedi) P. 5, Chaukhamba Krishnadas Academy, Varanasi, 2010.

9. VaidyaVM Gogte. Ayurvedic pharmacology and therapeutic uses of medicinal plants, New Delhi: Chaukambha publications. 2009. p 216-218

10. K Nishteshwara. Dravyaguna vijnanam Part -1. Varanasi: Chaukambha publications. 2007.

11. Galey FD, Holstege DM, Johnson BJ et al.: 1998, Toxicity and diagnosis of oleander (Nerium oleander) poisoning in livestock. In: Toxic Plants and other Natural Toxicants. Garland T, Barr AC (eds), pp. 215-219. CAB International, New York, NY.

12. Bhavmishra, Bhavprakash, Vidyotini Hindi Commentary, Poorvakhandha Mishrak Prakaran, Choukhamba Sanskrit Samsthan, Varanasi, 2002; 1 part; 6/138-168, 959.

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Table Showing Photographs of illustrations, Pictures Courtesy Google images

	
<p>Beak of Parrot- Flower of <i>Butea monosperma</i></p>	<p>Horn of animals and Roots of <i>Ativisha</i></p>
	
<p>Scales of Fish- Rhizomes of <i>Picrorhiza</i></p>	<p>Raktapushpa- Flowers of <i>Asoka</i> and <i>Palasha</i></p>
	
<p><i>Deorghopala</i>-Fruits of <i>Aragwadha</i> and <i>Agastya</i></p>	<p><i>Shad granthi</i> – <i>Vacha</i></p>
	
<p>7 leaflets- <i>Saptaparna</i></p>	<p>Mottled seeds- <i>Eranda beeja</i></p>
	
<p><i>Tamrapallava</i>- Tender leaves of <i>Ashoka</i></p>	<p><i>Teekshna kantaka</i>- Spines of <i>Balanites</i></p>