

NOMENCLATURE OF ANUKTA DRAVYA

ABSTRACT

Field survey was conducted in rural areas of Varanasi district of Uttar Pradesh including Ramnagar, Manduadih and surrounding areas to identify and collect information on undocumented medicinal plants (*Anukta Dravya*) by direct interaction with folklore people through field survey and indirect means by means of comprehensive survey of available literature. Local names of undocumented medicinal plants along with other relevant information were collected, after recording local names of medicinal plants, their botanical identification was done by comprehensive survey of literature, and the plants were identified according to Bentham & Hooker's system of classification using local floristic works. Expert opinion of plant taxonomists was also sought for cross checking and confirmation on identity. The freshly collected specimens were photographed for visual identification of the species. After identification, nomenclature of 10 *Anukta Dravya* was done as per the criteria of nomenclature mentioned in Nighantus.

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Key words: Undocumented medicinal plants, *Anukta Dravya*, Botanical identification, nomenclature

INTRODUCTION

The knowledge about medicinally useful plants in the early age is scientifically documented, and systematically organized in Ayurveda Samhitas, Nighantus and other texts. Codified information regarding plants of folklore origin is not documented in the classical texts of Ayurveda. Multiple exotic plants are existent in India which are not referred to either in classical literature of Ayurveda i.e. Samhitas or in Nighantus and are commonly referred to as *Anukta Dravya* (undocumented) in Ayurveda. A good number of such medicinal plants have been discretely mentioned at numerous instances. The complete description of such medicinal plants in terms of their pharmacodynamic properties i.e. name, identification, morphology, rasa, guna, virya, vipaka, etc. may not be available in the Ayurvedic texts. Therefore, there is an urgent need to first demarcate, identify, name these plants and then analyse them scientifically in terms of rasa, guna, virya, vipaka etc. Simultaneously, the plants should be described botanically and evaluated for their chemical composition so that they can be successfully utilised in therapeutics and documented by incorporating into Ayurvedic Materia Medica (nighantus) for future reference. The present study is a preliminary attempt and 10 *Anukta Dravya* (undocumented medicinal plants) were collected and identified by referring to Medicinal flora of certain districts in Uttar Pradesh & by seeking expert opinion of plant taxonomist.

Nomenclature of a substance is very essential for proper identification and to distinguish a particular substance from others. Regarding nomenclature, different scholars have put their views in respective period as follows:

'Nama' (Name) is defined by the learned as the word, which on being pronounced suggests some entity, and is used in alphabets.

*Sabdenocchaaritenaha yena dravyam pratiyate /
Tadakasharavidhau yuktam nametyaharmanishinaha //*

Durga (Nirukta 1.1)

There was no system of morphological description of plants as done in ancient and medieval period. Coining names and

synonyms, which indicated the salient features of plants, however, fulfilled this object.

The naming of plants forms an extremely interesting topic with historical and cultural significance. It sheds interesting light upon the brisk intellectual intercourse among different parts of India, and gives us an indication of the geography of India. The nomenclature also highlights that our ancestors had a keen sense of observation. In Ayurveda, methodology of nomenclature is multinomial. A plant is referred to by many names. Each name describes a particular feature or a specific attribute of the plant.

An attempt has been made to name ten *Anukta Dravya* as per guidelines given in nighantus.

Objective

The main objective of this study is

- i) Identification of *Anukta Dravya* and
- ii) To assign Ayurvedic name to the *Anukta Dravya* as per the Ayurvedic nomenclature.

MATERIALS & METHODS

Materials:

10 (ten) *Anukta Dravya* have been taken up as the material of the present study.

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Methodology:**1. Following criteria has been adopted to collect primary data related to *Anukta Dravya***

- (i) Documentation through folklore
- (ii) Comprehensive survey of literature

Primary data related to *Anukta Dravya* were collected by both direct and indirect means.

(i) Documentation through folklore (Direct means)¹

Information with respect to 10 *Anukta Dravya* was gathered by direct means through field survey from rural areas like Ramnagar, Manduadih and surrounding areas of Varanasi district of Uttar Pradesh. On reaching a village, villager's especially traditional healers, elderly people who were well acquainted with medicinal plants, were approached. Rapport was established with the people of the locality and interviewed them. Relevant information (Local name, Useful part, Form of use, Dosage, Vehicle, Indications) on 10 undocumented medicinal plants and their local names was collected from them. The selected plant specimens were collected for the present study after making a critical observation on habit and habitat, vegetation type, etc. The freshly collected specimens were photographed which exhibit the details of plant and will be helpful in visual identification of the species.

(ii) Comprehensive survey of literature (Indirect means)²⁻¹²

Information related to 10 *Anukta Dravya* (botanical name, English name, family, morphology and chemical composition) was gathered by indirect means through comprehensive survey of literature.

On the basis of information gathered by fieldwork

- Comprehensive review of books, journals and previous research works was carried out.
- Computerised search of published and unpublished works related to the study was conducted.

2. Identification

After recording local name, its botanical identification was done. The plant was identified according to Bentham & Hooker's system of classification using local floristic works like Medicinal flora of certain districts in Uttar Pradesh; CCRIMH, New Delhi (1973)⁸.

All relevant books available on Indian indigenous medicinal plants were consulted for correct identification and verification. Expert opinion of plant taxonomists was also sought for cross checking and confirmation on identity.

3. Nomenclature

After identification, nomenclature of plants in Sanskrit was done prior to determining the name to every plant as per the criteria of nomenclature mentioned in nighantus.

OBSERVATION & RESULTS

The knowledge on 10 plant specimens during field studies and through comprehensive survey of relevant publication was further studied for their correct botanical identification. Vernacular names of plants corresponding to their botanical names are presented in Table 1.

Family, native origin, habit, useful part and therapeutic uses of identified 10 *anukta dravyas* by literary survey have been presented in Table 2.

Table-1**List of vernacular names of *Anukta Dravya* corresponding to their botanical names**

| S.No. | Local Name | Locality where the vernacular names used | Botanical Name |
|-------|---------------------------|------------------------------------------|---------------------------------------------------|
| 1. | Raat ki Rani | Ramnagar (Varanasi) | <i>Cestrum nocturnum</i> Linn. |
| 2. | Khogar, Khaarpot, Kai kar | Ramnagar (Varanasi) | <i>Garuga pinnata</i> Roxb. |
| 3. | Aarogyappacha | Kottayam (Kerala) | <i>Trichopus zeylanicus</i> Gaertn. |
| 4. | Poinsetta | Manduadih, (Varanasi) | <i>Euphorbia pulcherrima</i> Wild.ex Klotzsch. |

| | | | |
|-----|----------------|---------------------------|---------------------------------|
| 5. | Ban tambaku | Ramnagar, (Varanasi) | <i>Solanum erianthum</i> D.Don. |
| 6. | Jonkmari | Nagwa, (Varanasi) | <i>Anagallis arvensis</i> Linn. |
| 7. | Nagphool | Man duadih, (Varanasi) | <i>Gmelina asiatica</i> Linn. |
| 8. | Rangoon ki bel | Nagwa (Varanasi) | <i>Quisqualis indica</i> Linn. |
| 9. | Ghoda tulasi | Man duadih, (Varanasi) | <i>Scoparia dulcis</i> Linn. |
| 10. | Gulabbas | Ramnagar (Varanasi) | <i>Mirabilis jalapa</i> Linn. |

Table 2
Family, native origin, habit, useful part and therapeutic uses of the ascertained botanical species

| S.No | Botanical Name | Family | Native origin | Habit | Useful part | Therapeutic use |
|------|----------------------------------------------------|-----------------|--------------------------------------------|-------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1 | <i>Cestrum nocturnum</i> Linn. | Solanaceae | Native of West Indies | Shrub | Leaf | Spasm, Heart disease |
| 2 | <i>Garuga pinnata</i> Roxb. | Burseraceae | Native of East Indies | Tree | Root, Stem, Leaf, Fruit, Gall, Bark | Asthma, Roundworm, Obesity, Eye disease, Snake bite, Cough, Cold |
| 3 | <i>Trichopus zeylanicus</i> Gaertn. | Trichopodiaceae | Indigenous to India (Endemic to Kerala) | Herb | Unripe fruit, Leaf | Fatigue, Aging, Debility, Loss of appetite |
| 4 | <i>Euphorbia pulcherrima</i> Willd.ex Klotzsch. | Euphorbiaceae | Native of Central America | Shrub | Latex | Tumors |
| 5 | <i>Solanum erianthum</i> D.Don. | Solanaceae | Native of West Indies | Shrub | Root, Whole plant | Inflammation, Pain, Cough, Skin disease, Wound, Sore, Asthma, Rheumatism, Diabetes |

| | | | | | | |
|----|---------------------------------|------------------|---------------------------------------|---------|-------------------------------|----------------------------------------------------------------------------------------------------|
| 6 | <i>Anagallis arvensis</i> Linn. | Primulaceae | Native of America, Europe & West Asia | Herb | Whole plant | Viper poison, Fish Poison, Epilepsy, Mania, Hysteria, Dropsy, Leprosy |
| 7 | <i>Gmelina asiatica</i> Linn. | Verbenaceae | Native of East Indies | Shrub | Whole plant | Rheumatism, Syphilis, Gonorrhoea, Burning sensation in eye, Fever, Dysuria, Dandruff |
| 8 | <i>Quisqualis indica</i> Linn. | Combretaceae | Indigenous to Burma & Malay Peninsula | Climber | Leaf, Seed | Diarrhoea, Fever, Worm, infestation, Boil, Ulcer, Dysuria |
| 9 | <i>Scoparia dulcis</i> Linn. | Scrophulariaceae | Native of America | Herb | Whole plant | Ague, Gravel, Headache, Toothache, Cough, Wound, Heart disease, Haemorrhoids, Dysentery, Diarrhoea |
| 10 | <i>Mirabilis jalapa</i> Linn. | Nyctaginaceae | Native of Tropical America | Herb | Root, Leaf, Stem, Tuber, Seed | Boil, Syphilis, Abscess, Colic, Diabetes, Dropsy, Gonorrhoea, Itch, Sore, Tumor |

Photographs of 10 undocumented medicinal plants (*Anukta dravyas*) are presented (Plate 1-10) as an evidence of study material



1. *Cestrum nocturnum* Linn



2. *Garuga pinnata* Roxb



3. *Trichopus zeylanicus* Gaertn



4. *Euphorbia pulcherrima* Willd.ex Klotzsch



5. *Solanum erianthum* D.Don



6. *Anagallis arvensis* Linn



7. *Gmelina asiatica* Linn



8. *Quisqualis indica* Linn



9. *Scoparia dulcis* Linn

DISCUSSION

Names of ten *Anukta Dravya* were coined on the basis of varied criteria from works including Raja nighantu and Dhanvantari nighantu, have given an outline of the same as follows.

Ekam tu Nama prathitam bahunamekasya namani tatha bahuni /

Dravyasyajatyakritivarnaviryarasaprabhavadigunairbhavanti //

Dhanvantari nighantu

In Dhanvantari nighantu¹³, the names of plants, one or many are assigned according to their habitat, form, colour, potency, taste, effect etc.

Namani kvachidiha Rudhitaha prabhavad deshyoktya kvacidiha lanchanopamabhyam viryena kvachiditarahvayadi deshadravyanamiha saptadhoditani //

Raja nighantu

In Raja nighantu¹⁴, seven basis of names and synonyms of plants are described as follows:

1. **Rudhi** (Traditional usage), e.g., Atarushaka, Guduchi
2. **Prabhava** (Effect), e.g., Krimighna, Nidrari
3. **Desha** (Habitat), e.g., Vaidehi, Kairata
4. **Lanchana** (Morphological characters), e.g., Citratandula, Rajiphala
5. **Upama** (Simile), e.g., Ajakarna, Varahikanda
6. **Virya** (Potency), e.g., Ushana
7. **Itarahvaya** (Names prevalent in other regions or other factors) e.g., Indrayava, Analanama

According to Sharma, P.V (2000)¹⁶ name and form are linked with each other like word and its meaning in order to



10. *Mirabilis jalapa* Linn

distinguish objects. In his work on Namarupajnan (characterisation of medicinal plants), he has interpreted the word Namarupajnan in three ways.

1. That by which name and form (of substance) are known
(*Namarupe jayate aneneti*)
2. That which imparts knowledge of the forms of substances on the basis of names
(*Namabhiji rupam jayate aneneti*)
3. That which deals with proper correlation of names and forms so that the entity can be identified correctly
(*Namarupayoh samanjasayam jayate aneneti*)

Apart from guidelines of earlier scholars, help of botanical names in respect of their origin was also considered before finalising a Sanskrit name to a particular plant e.g., (i) the botanical name of *Garuga pinnata* Roxb which has been given a name 'Garugo' (name prevalent in a region), (ii) In case of *Crossandra infundibuliformis* (Linn.) Nees, the genus 'Crossandra' derived from Greek word signifies decorated border of anther,¹⁷ considering it, Sanskrit name 'Alankrita kesara' (morphological character) is coined.

Taking into consideration regarding nomenclature of new medicinal plants, the views of earlier scholars have been honoured and an attempt has been made to coin names of ten medicinal plants, which have been presented in Table 3.

CONCLUSION

Anukta dravya namely *Cestrum nocturnum* Linn, *Garuga pinnata* Roxb. *Trichopus zeylanicus* Gaertn, *Euphorbia pulcherrima* Willd.ex Klotzsch, *Solanum erianthum* D.Don, *Anagallis arvensis* Linn, *Gmelina asiatica* Linn, *Quisqualis indica* Linn, *Scoparia dulcis* Linn and *Mirabilis jalapa* Linn have been collected by field survey. According to guidelines given in Raja nighantu and Dhanvantari nighantu regarding nomenclature of new medicinal plants, ten *anuktra dravya* were named accordingly in Sanskrit as *Nishi Mahishi*, *Garugo*, *Shaktida*, *Kusumapatra*, *Vana tambaku*, *Harshani*,

Table-3
List of Botanical names of *Anukta Dravya* along with their nomenclature based on different criteria

| S. No. | BOTANICAL NAME | NOMENCLATURE | CRITERIA |
|--------|----------------------------------------------------|----------------|---------------------|
| 1. | <i>Cestrum nocturnum</i> Linn. | Nishi Mahishi | Based on Kala |
| 2. | <i>Garuga pinnata</i> Roxb. | Garugo | Based on Rudhi |
| 3. | <i>Trichopus zeylanicus</i> Gaertn. | Shaktida | Based on Karma |
| 4. | <i>Euphorbia pulcherrima</i> Willd.ex Klotzsch. | Kusumapatra | Based on Lanchana |
| 5. | <i>Solanum erianthum</i> D.Don | Vana tambaku | Based on Jati |
| 6. | <i>Anagallis arvensis</i> Linn. | Harshani | Based on Prabhava |
| 7. | <i>Gmelina asiatica</i> Linn. | Nagaprasuna | Based on Upama |
| 8. | <i>Quisqualis indica</i> Linn. | Rangunavalli | Based on Desha |
| 9. | <i>Scoparia dulcis</i> Linn. | Mishtapatri | Based on Rasa |
| 10. | <i>Mirabilis jalapa</i> Linn. | Kautuka Pushpa | Based on Itarahvaya |

Nagaprasuna, Rangunavalli, Mishtapatri and Kautuka Pushpa based on different criteria mentioned in nighantus like *Kala, Rudhi, Karma, Lanchana, Jati, Prabhava, Upama, Desha, Rasa* and *Itarahvaya* respectively.

Further, this study has revealed that there is a need for synthesis of contemporary and Ayurvedic knowledge, which will help the future generation to use *Anukta Dravya*, the ignored medicinal plants of great value. It was also observed that the incorporation of these very popular folk medicines and exotic plants into Ayurveda and in therapeutics would fill the gap in Ayurvedic Pharmacopoeia where the classical drugs are facing the problems of scarcity.

ACKNOWLEDGEMENT

Author sincerely acknowledge the authorities of National Botanical Research Institute, Herbarium Museum, Lucknow and Dr.N.K.Dubey, Reader, Dept. of Botany/Herbarium museum, Banaras Hindu University for helping in the identification of different plant specimens collected during the field survey.

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