



## RESEARCH ARTICLE

### DECODING THE CONTROVERSIES SURROUNDING THE SOURCE PLANT OF MURVA: A REVIEW

**Dr. Nimmy V.S<sup>1</sup>, Dr. Anju K.P<sup>2</sup>, Dr. Latha K.K<sup>3</sup> and Dr. Surabhi Surendran<sup>4</sup>**

1. Assistant Professor, Department of Dravyaguna Vijnana, Vaidyaratnam Ayurveda College, Ollur, Kerala.
2. HOD, Department of Dravyaguna Vijnana, Vaidyaratnam Ayurveda College, Ollur, Kerala.
3. Principal, Vaidyaratnam Ayurveda College, Ollur, Kerala.
4. Research Assistant, Department of Dravyaguna Vijnana, Vaidyaratnam Ayurveda College, Ollur, Kerala.

#### Manuscript Info

##### Manuscript History

Received: 05 August 2022

Final Accepted: 09 September 2022

Published: October 2022

##### Key words:-

Controversy, Murva, Sandigdhadravya

#### Abstract

Controversy is a state of prolonged public brawl or dispute, usually concerning a matter of debating opinion or point of view. Sandigdhadravya is a term used for medicinal plants having controversial botanical sources in Ayurveda. There are several reasons which lead to controversy of plants. Similar synonyms or vernacular names given to more than one plant, documentation defects and opinion of different authors are some of them. Murva is an important controversial drug used in the treatment of various disorders like intermittent fever, diabetes mellitus, anaemia and so on. It has been observed that about eleven different plant species are considered as Murva in various parts of India. An attempt is done to review and differentiate the plant sources known as Murva.

Copy Right, IJAR, 2022., All rights reserved.

#### Introduction:-

Plant based medicines received a greater attention in the treatment field for combating various diseases because of their efficacy and rapid curative properties. Ayurvedic literature has a comprehensive documentation of medicinal plants. A large percentage of plants used in herbal industries are subject to controversy. In Ayurveda 'Sandigdhadravya' is a term coined for medicinal plants which bear controversial botanicals as their sources.<sup>1</sup>

The Ayurvedic literature has narrated the plant with many synonyms on the basis of morphology, habitat, origin, therapeutic uses, etc. The reason for controversy can be listed from one common synonym used for two or more different plant species, regional distribution and due to documentation defects.<sup>2</sup> Synonyms are also given to plants on the basis of colloquial language. Murva is a popular and well known drug discussed in many Ayurvedic classics. It is one among the controversial plants in Ayurveda.

#### Reasons For Controversy

##### 1. Ancient texts with long chronology

The huge time gap between the writing of Samhitas and their commentaries has resulted in loss of knowledge including the identity of medicinal plants. Different opinions among the commentators on the identity of medicinal plants are clear from their works. Variations in the names of plants in Nighantus showed the extent of changes that occurred in different time periods.<sup>3</sup>

**Corresponding Author:- Dr. Nimmy V.S**

Address:- Assistant Professor, Department of Dravyaguna Vijnana, Vaidyaratnam Ayurveda College, Ollur, Kerala.

## 2. Same synonyms for different plants.

In Ayurvedic literature, identification of plants is mainly done through synonyms. These synonyms are based on habitat, morphological characteristics, therapeutic actions and usage or origin of the drug which help in easy identification. But similar synonyms are used by the authors for different plants which creates confusion among the physicians in identifying the correct species.

## 3. Geographical variation

Some plant species are specific to their habitat and are not easily available. As a result, physicians are compelled to take drugs near their locality having almost similar morphological features or pharmacological actions. This led to the origin of controversy or substitutes.<sup>2</sup>

## 4. Many synonyms for a single plant

A single plant has many names based on its features indicating origin, actions, properties, etc. The inclusion of new names by authors of different period adds up to a huge number of plant names. There are instances where an author coins new names for plants which in most cases are Sanskrit expressions of local names. Addition of new synonyms for plants deepens the problem of identity.<sup>3</sup>

## 4. Traditional teaching & training

In Ayurvedic tradition modern system of classification and identification of plants was not present. This may be due to the unique teaching method 'Gurukulaparampara' which was prevalent at that period. Plants were identified through close contact with nature and the knowledge was transferred through oral tradition of practical education. Therefore once the oral tradition of introduction of a plant is broken the identities of plants became obscure.<sup>2</sup>

## 5. Documentation defects in the manuscripts

Ayurvedic literatures were written in Sanskrit language. Grammatical interpretation of these terms is necessary for the proper identification of plants. Defects during the documentation of literatures and manuscripts can lead to controversy in identification.<sup>1</sup>

## 6. Vernacular names

India is a country having a variety of languages and population dependent on different tribal and folklore medicine. This may be responsible for creating confusion among different source plants having similar names.

## Murva : A Controversial Medicinal Plant

Description of Murva which led to the controversy is as follows:

### 1. Controversy in Ayurvedic literatures

The controversy about the genuine source of Murva is clearly visible in the old commentaries and Nighantus. Dalhana has mentioned Murva as Chorasnayu and described the drug as 'Dhanurgunaupayogya' meaning it can be used to manufacture bow strings.<sup>4</sup> He narrated Murva in various contexts as :

- Hagauda – 'Kandalisadrishyaswalpavitapa' which means a small plant like Kandali named Crinum defixum Ker. Gawl
- Dudhauitiloke – It is a milky exudate plant
- LataAshmantaka – A climber having bilobed leaves like those of Kovidara

According to Acharya, Murva has 'KovidaraSadrishaYugmaPatra' meaning emarginated leaf resembling the leaf of the plant Kovidara.<sup>5</sup>

Jejjata, one of the commentators of CharakaSamhita has named Murva as Chorasnayu. In his commentary, two types of Murva are mentioned.

- Snigdhapatra
- Dhusarapatra.

Snigdhapatra was represented as Murva and the second one was known to be Morata i.e. Peeluparni. But during that period some Vaidyas used Peeluparni as source of Murva.<sup>6</sup>

## 2. Controversy by way of synonyms<sup>7,8</sup>

In the Ayurvedic lexicons like Nighantus, detailed description of plants was given based on synonyms. These synonyms suited to more than one plant species which further provoked the problem of controversy. The synonyms of Murva are:

Dhanurguna	- It is used for making bow strings
Peeluparni	- The leaf resembles the leaf of Peelu
Gokarni	- The leaf is similar to that of a cow's ear
Triparni	- It has compound leaf with three leaflets
Latavisesha	- A creeper
Snigdhaparni	- It is shiny in appearance
Prathaktwacha	- Bark is easily removable
Sruva	- It produces secretions like that of ghrita
Soochiparni	- The leaf resemble needle like appearance
Dridasootrika	- It possess string like tough fibres
Madhuras	- It possess madhurarasa
Thikta	- It possess thiktarasa

## 3. Botanical sources of Murva

There are many fibre yielding drugs in Ayurveda which can be related to Murva. 11 drugs are considered as Murva in different parts of India.<sup>9</sup> The list of medicinal plants is given in table 1.

**Table 1:-** Botanical sources of Murva.

	Botanical Name of Plant	Family
1	Marsdeniataenacissima (Roxb.) Moon	Asclepiadaceae
2	Chonemorpha macrophylla (Roxb.) G. Don	Apocynaceae
3	Clematis triloba Heyne ex Roth	Ranunculaceae
4	Maerua arenaria Baill.	Capparaceae
5	Sansevieria zeylanica Roxb. nom. illeg.	Asparagaceae
6	Wattakakavolubilis (L. fil.) Stapf.	Apocynaceae
7	Helicteres isora L.	Malvaceae
8	Bauhinia tomentosa L.	Fabaceae
9	Marsdenia roylei Wight	Apocynaceae
10	Salvadora persica L.	Salvadoraceae
11	Argyrea nervosa (Burm. fil.) Bojer	Convolvulaceae

Marsdeniataenacissima is an accepted source plant of Murva mostly used in all parts of India. Chonemorpha macrophylla is widely been used as the botanical source in Kerala as it resemble all the characteristics of Murva described in literatures. Clematis triloba is used as the plant source in Maharashtra and Gujarat. Sansevieria zeylanica also possess similar qualities as that of Murva so it is widely used in North East and West Bengal by the Bengal Kavirajas. Helicteres isora L. is used as Murva in Punjab. The roots of Maerua arenaria are used by the Vaidyas as Murva in Madhya Pradesh, Bihar and Rajasthan. Bauhinia tomentosa and Argyrea nervosa are also used as Murva in some parts of the country. Salvadora persica L. and Wattakakavolubilis are used as the source of Murva in South India.<sup>9,10</sup>

## Discussion:-

Acharya Susrutha mentions the drug Murva among Seevyadravyas. It possesses strong fibres (Valkasutra) so mainly used in Shalyakriyas for suturing wounds (Vranaseevana).<sup>11</sup> Dalhana has mentioned Murva in various contexts from which atleast three plant species can be inferred. The first description of Murva 'Hagauda' can be identified as Sansevieria zeylanica Roxb. nom. illeg. 'Dudhauitiloke' can be identified as Marsdeniataenacissima (Roxb.) Moon and Chonemorpha macrophylla (Roxb.) G. Don and 'Kovidara Sadrisa Yugma Patra' can be traced as Bauhinia vahlii Wight & Arn. So it clearly shows that confusion had prevailed during that period in identifying the correct plant source of Murva. During the Nighantu era more synonyms were added in order to describe the plant by different authors who further increased the problem of controversy of Murva. While going through the synonyms about 11 different plant species emerged to be considered as Murva in different parts of India.

Based on the synonyms, the botanical sources of Murva can be classified as given in table 2.

**Table 2:-** Synonym wise classification of Murva.

No.	Synonyms	Botanical name
1.	Latavisesha, Madhusruva Dridasootrika, Dhanurguna Prithaktwacha, Thikta Madhuras	Marsdeniataenacissima (Roxb.) Moon Chonemorphamacrophylla (Roxb.) G. Don Marsdeniaroylei Wight
2.	Triparni, Latavisesha	Clematis triloba Heyne ex Roth
3.	Dridasootrika, Madhuras Soochiparni	Sansevieria zeylanica Roxb. nom. illeg.
4.	Latavisesha, Peeluparni Gokarni, Madhuras Snigdhaparni	Maerua arenaria Baill.
5.	Kovidarasadrushayugmapatra	Bauhinia tomentosa L.
6.	Dridasootrika	Helicteres isora L.
7.	Latavisesha, Madhuras Madhusruva	Wattakakavolubilis (L. fil.) Stapf.
8.	Latavisesha, Thikta	Argyrea nervosa (Burm. fil.) Bojer
9.	Peeluparni, Gokarni	Salvadora persica L.

Clematis triloba is a climber and has tripinnate leaves. Sansevieria zeylanica is a perennial plant with pointed leaves and fibre is obtained from its leaves. Maerua arenaria is a climbing shrub and its leaves resemble another drug Peeluparni. Bauhinia tomentosa has emarginated leaves similar to description of KovidaraSadrushaYugmapatra but it is known as Kanchanara which is a different drug used in Ayurveda. The stem bark of Helicteres isora contains fibres but it is accepted as Avartani, a different drug. Wattakakavolubilis is a woody climber with milky latex producing sweet roots. Argyrea nervosa is a woody climber with bitter roots but it is known as Vriddhadaru, a different drug used in Ayurveda. Salvadora persica is accepted as Peelu in Ayurveda. The synonym Peeluparni created confusion so it might be the reason to take this drug as Murva. Marsdeniataenacissima and Chonemorphamacrophylla are climbers with milky exudate and possess strong fibres which can be used to prepare bow strings. The officinal part used in medicinal preparations is root and the pharmacological actions are almost same for both plant sources of Murva. Among the above source plants, Marsdeniataenacissima and Chonemorphamacrophylla appeared closest to Murva according to the description given in the Ayurvedic literature. The other plant species found to have fewer characteristics in common with Murva and so they are inferior to the above two plants. Based on this review, Marsdeniataenacissima can be considered as genuine source plant of Murva and Chonemorphamacrophylla as its alternate.

### Conclusion:-

Medicinal plants of Indian origin possess a plethora of therapeutic compounds useful for treating various diseases. The long history of safe usage of Ayurvedic medicines can be extrapolated only through proper identification and standardisation of the crude drug. The problem of controversial drugs requires tackling from literary, pharmacognostical, pharmacological and clinical perspective. So there is a need to carry this work further utilising all the available scientific methodology & techniques to arrive at a rational conclusion about identity of controversial drugs.

### Acknowledgement:-

We are extremely thankful to National Medicinal Plant Board forgiving us the opportunity to work on a research project based on controversy of Murva.

### Reference:-

1. Keerthana J, Javagal V, Sheregar R. A controversial medicinal plant Murva: a review. Int J Health Sci Res. 2021;11(1):152 -156.
2. Sreelekshmi.M Et Al: Controversy In Medicinal Plants: A Review. International Ayurvedic Medical Journal. July, 2017;5(7)

3. Varghese Thomas, S.N.Venugopalan Nair, D.K. Ved, Darshan Shankar. Controversial identities of medicinal plants in classical literature of Ayurveda. Journal of Ayurveda and Integrative Medicine.2020;11(4):565-572
4. Sushruta, Sushrutasamhitha, Vaidya Priya Vrat Sharma. Sushrutasamhitha of Sushruta with Nibandhasangraha commentary of Sri Dalhanacharya, Sutrasthana;25/21. Varanasi: Chaukhamba Sanskrit Prakashan; p117
5. Thakur Balwant Singh & K. C. Chuneekar, Glossary of Vegetable Drugs in Brhatrayi, Second edition, Varanasi:ChowkhambaAmarabharati Prakashan;1999;p314-316
6. Sharma Priyavat, DravyagunaVijnana, Volume 5; Varanasi, ChaukhambhaBharati Academy; Reprint 2014: p230-31
7. Hemachandra. NighantuSesha[online]12<sup>th</sup> century[cited 26 Mar 2012]. Available <http://niimh.nic.in/ebooks/e-Nighantu/nighantusesha/?mod=read>
8. Bapalal G Vaidya, NighantuAdarsh, Volume II, Second edition, Varanasi:ChaukhambaBharati Academy;1999;p36
9. [https://www.researchgate.net/publication/328225198\\_Phytopharmacological\\_Overview\\_on\\_Controversial\\_Drug\\_Murva](https://www.researchgate.net/publication/328225198_Phytopharmacological_Overview_on_Controversial_Drug_Murva)
10. Dr. BapalalVaidya, Some controversial Drugs in Indian Medicine, Varanasi: Published by Chaukhamba Orientalia;2014;p8-15
11. Sushruta, Sushrutasamhitha, Sharma P V. Sushrutasamhitha of Sushruta with Nibandhasangraha commentary of Sri Dalhanacharya, Sutrasthana;8/38-39. Varanasi: Chaukhamba Sanskrit Prakashan; p164.