

Guduchyamritavalyamrita

(गुडूच्यमृतवल्यमृता): A Classical Assess

Mrunal Raja Akre^{1*}, Aparna M Ghotankar²

¹PhD Sch. CSMSS Ayurveda Mahavidyalaya, Kanchanwadi, Ch. Sambhaji Nagar, Maharashtra, India

² Asst. Prof. Dept of Dravyaguna, Global Institute of Ayurveda, Rajkot, Gujarat, India


¹dr.mrunal_akre@yahoo.com


Abstract

Introduction- Through Ayurveda, Indian culture has demonstrated the efficacy of its therapeutic methods. India has a vast variety of plants that include therapeutic properties. These plants' medical capabilities have little, if any, adverse effects. This has motivated researchers to continue their work using the Indian System of Medicine. One of such proven herb is Amruta which is identified as *Tinospora cordifolia*. The present work compiles the information from various ancestral texts available, in a holistic approach. **Material and Methods-** All the Brihatryai, Laghutrayi, Samhita, Nighantu and available modern research work was considered for the review. **Results /Discussion-** Guduchi have been used since Vedic era for different purposes. In Samhita it is used in treatment of many diseases and majorly in Rasayan Karma, Acharya Charak and Vagbhatta described it as a Medya Rasayan. **Conclusion-** Guduchi is considered as rasayan and one of the four drugs stated as Medya Rasayan by acharya charaka, it helps in maintaining health of humans. Guduchi has anti-pyretic, anti-diabetic, rejuvenative, anti-inflammatory and many other properties. It should be consumed regularly to get its Rasayan effect.

Keywords

Amruta, Guduchi, Rasaayan, *Tinospora cordifolia*, *Tinospora crispa*, *Tinospora malbarica*

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1. Introduction

Indian Ayurvedic medicine has a long history of success. The usage of locally produced drugs has increased significantly in India in recent years. Ayurvedic classics such as the Samhita (treaties), Nighantu (lexicons), Samgraha Grantha, Chikitsa Grantha (compendia), and Rasa Grantha (pharmacopeia) have information regarding these medications. The literature highlights a few of these medications for their excellent therapeutic qualities, adaptable modes of action, accessibility, and pre-treatment techniques.

Guduchi is one such drug which became more famous and focused due to its properties in the covid time. Guduchi botanically identified as *Tinospora cordifolia*. It is a member of the Menispermaceae family. At higher altitudes, the plant is a climbing shrub with heart-shaped, greenish yellow leaves. Giloy is also known as Amruta, which translates to "Root of Immortality" because to its many health advantages. Long filiform fleshy aerial roots that form the branches are attached to succulent stems. The plant's bark is watery and gray-brown in color. The blooms are tiny and green in color, while the leaves have membranes. This plant may grow up to 300 meters tall. From the end of summer till winter, the flowers are in bloom. Alkaloids, steroids, diterpenoid lactones, aliphatics, and glycosides are among the several active ingredients that are generated from the herb and may be extracted from the root, stem, and entire plant.

Various aspects of Guduchi like its identification, Pharmacodynamics, Phamaocokinetics and different formulations are mentioned in Samhitas, also wide research on its different actions are done by the modern research. Such complete data of a miracle drug is not available in form of compilation. So, the work is done to get the compilation for other researchers with an innovative idea [1-7].

2. Materials and Methods

The Samhita, Nighantu, Ayurvedic texts, and numerous published works on the latest advancements in *T. cordifolia* research have all been reviewed by me. Original articles and papers, as well as secondary data from a variety of search engines, including Pubmed, Pubmed Central Databases, Google Scholar, Shodhganga, and AYUSH Research Portal, were taken into consideration for the report.

2.1. Inclusion Criteria

The study includes print and electronic versions of Ayurvedic books. Publications and literature about Dravyaguna were consulted for references to the Vedas and mythology. After carefully examining the available data and eliminating redundant information, the data were presented in an exact tabular style in a methodical manner about synonyms, categorization, properties, actions, and indications on a range of medical disorders.

2.2. Exclusion criteria

Ayurvedic manuscripts that have not been published were not included in this study.

3. Results and Discussion

3.1. Mythological view

According to legend, after Ravana kidnapped Sita, Rama engaged him in combat and slew him on the battlefield with the help of an army of monkeys. Feeling immense pleasure at Ravana's demise, Indra congratulated Rama and revived all the dead monkeys by dousing them with nectar. The plant Guduchi began to grow in areas where honey drips from monkey carcasses dropped to the ground.

It is stated in the Vedas Shounakya Atharvaveda and Panini Upadhi Bhojavritta Sayana that every home should have Guduchi in order to keep snakes and scorpions at bay. Guduchi is referred to as "Kudruchi" in the Kaushika Sutra [6-11].

3.1.1. Samhita View

All the different names that are found in *Samhita* for *Guduchi*, and where *Guduchi* has been used by *Acharyas* are mentioned below.

3.1.2. Charaka Samhita

Table 1. Description of *Guduchi* in *Charaka Samhita*

Sr.No	Named as	Reference	Description
1	Amrutvalli	Chi- 1-1/75	Used for preparation of Chyavanapraasha
2	Amruta	Su- 3/9	Used for preparation of Kushthaadi Churna
		Su- 4/50	Ref. Vayasthaapana Mahaakashaaya
		Su- 25/39	Hita-Ahitakara Oushada- Saangrahika, Vatahara, Deepaniya, Shleshmashonita Vibandha Prashamanaam
		Chi 1.1/56	Dwiteeya-braamhya Rasaayana
		Chi 1.1/60	Preparation of Chyavanapraasha
		Chi 3/201	Truteeyaka Jwarahara (Pancha Mahaakashaaya)
		Chi 3/342	Jwarahara- Kiraatatiktaadi Kwatha
		Chi 6/29	Pittaja-Pramehahara Yoga
		Chi 23/69	Gandhahastee Naamaka Agad
		Chi 24/241	Amrutaadi Varti
		Chi 26/279	Ref. Treatment for Vaataja-swarabhed
		Chi 26/170	Vrushamoolaadi Taila
		Chi 29/72	Draakshaadi Ghruta
		Chi 30/264	Stanyashodhaka Yoga
		Chi 30/276	Guru Stanya Chikitsaa
3	Guduchi	Si 3/59	Raasnaadi Niruha Basti
		Si 4/17	Vidangaadi Taila
		Si 9/92	Anantavaata Chikitsaa
3	Guduchi	Su- 2/11, 13	Aasthaapana Basti Dravya, (Apaamaarga Tanduleeya)
		Su- 3/2, 21	Bahirparimaarjan (Aaragvadhadiya), Vaatarakta - Peedaa-naashaka Lepa

		Su- 4/ 11,18, 29, 41	Truptighna Mahaakashaaya, Stanyashodahana Mahaa-kashaya, Trushna-Nigrahana Mahakashaya, Daahaprashamana Mhaakashaya
		Su- 21/21	Atistulataa (Medoroga) Chikitsaa, (Ashtaninditeeya)
		Vi- 8/143, 150	Tikta-Skandha
		Chi- 1.3/30	Medhya Rasaayana
		Chi- 3/198, 202,211, 221, 246,251, 266, 298	Jwara Naashaka Kashaya, Vishama-Jwara Naashaka Kashaya, Sannipaata-Jwara Naashaka Shatyaadi Churna, Jeerna-Jwara (Vaasaadi Ghruta), Gudoochyaadi Niruha Basti, Patolaa-di-Anuvaasana Basti, Agurvaadi Taila, Vishamajwara Peya-Padaartha
		Chi- 6/28	Pittaja Pramehahara 3rd Kashaya
		Chi- 7/123, 152	Vaata-Kapha-Kushthahara Yoga
		Chi- 8/71	Parisheka Sweda In Rajayakshmaa
		Chi- 12/24, 33	Vaata-Pittaja Shotha Chikitsaa, Punarnavaadi Arishta
		Chi- 15/190	Panchama Kshaara (Garhaneedosha Chikitsaa)
		Chi- 16/62, 133	Praatah:Kaalika Yoga (Kaamalaa), Haleemala Roga Chiktisaa
		Chi- 17/93, 101	Nidigdikaadi Yoosh (Hikka-Shwasa Chikitsaa), Dasha-moolaadi Yavaagu (Hikka-Shwasa)
		Chi- 18/34, 160	Kantakaari Ghruta, Gudoochyaadi Ghruta (Kasa Chikitsaa)
		Chi- 20/30	Pittaja Chhardi Peya
		Chi- 21/57,129	Draakshaadi Kashaya (Visarpa), Different Yoga used in Gran-hee-Visarpa
		Chi- 24/144	Used In Treatment of Kasa produce as complication in Madatya
		Chi- 26/56	Content of Saptachadai Yoga
		Chi- 28/147, 156, 168	Content of Bala Tail, Guduchyadi Tail, and Vrishamulad Tail
		Chi- 29/70, 102, 120	Content of Dakshadi Ghruta/ Kheer, Amrutadi Taila, Guduchyadi Tail
		Chi- 30/52, 56, 58, 97	Content of Kashmaryadi Ghruta, Rasnadi Ksheer, Guduchyadi Tail, and Pradarnashak Yoga
		Ka- 1/25	20 Avaleha Yoga of Madanphala
		Ka- 2/8	12 Kashaya Yoga of Jimutak
		Si- 3/12, 37	Balaadi Niruha Basti, Erandamoolaadi Niruha Basti
		Si- 4/3	Dashamoolaadi Anuvaasana Taila (Sneha-vyaapat)
		Si- 12/27, 31, 54	Content of Mustadi Yapan Basti, Erandmooladi Yapan Basti, Dwitiya Baladi Yapan Basti
4	Chinnaruha	Chi- 18/53	Content of Chitrakad Leha
5	Chinnodbhava	Si- 12/29	Bruhadyadi Yapan Basti
7	Vatsadani	Chi-27/104	Content of yoga in Urustambha Chhikitsa

3.1.3. Sushruta Samhita

Table 2. Description of Guduchi in Sushruta Samhita

Sr.No	Named as	Reference	Description
1	Amrutvalli	Chi- 10/13	Amrutvalli Yoga in Kushta
		Chi- 18/47	In formulation used in treatment of Vataj Galaganda
		U- 39/222	Ghrita prepared for Jwar Chikitsa
		U- 65/9	Example of Yoga - Tantrayukti
2	Amruta	Su 12/23	Leaves used in Atidagdha Chikitsa
		Chi 2/39	Content of Chandanad Tail for Chhinna Vrana Chikitsa
		Chi 9/8	Content of Mahatikta Ghrita- Kushta Chikitsa
		Chi 18/5	Content of Kalka applied on Vataj Granthi
		Chi 19/57	Content of Lepa applied on Kaphaj Shlipad
		Chi 37/20	Content of Bhutikadi Taila
		Chi 38/59	Content of Rodhradi Basti
		Chi 38/70	Content of Rasanadi Basti
		Chi 38/105	Content of Mustadi Raja Yapana Basti
		Ka 1/54	Used for anointing poison
		Ka 2/45	Yavagu used in vish-vega
		Ka 7/29	Ghee prepared used in at poisoning
		Ka 7/33	Kalka applied on rat bite
		U 41/38	Treatment of Shosha
		U 52/42	Content in Agatsyavleha/ Agatsyaharitaki Rasayan
U 57/11	Content of Leha prepared for treatment of Arochak		
3	Guduchi	Su- 12/26	Paste applied on Atidagdha Chikitsa
		Su-25/21	Fibers of Guduchi used in Siven Karma
		Su-38/ 5, 28, 32, 48, 72	Aragvadhdi, Shyamadi, Patoladi, Guduchyadi, Vallipanchamoola
		Su- 42/18	Tiktarasa Varga
		Su-44/6	Used with Trivutta for Virechan
		Su-46/ 262, 270	Tiktarasa Shaka, Pitta-Kapha har
		Chi- 1/114	Leaves are placed on Kaphaj Vrana
		Chi-2/74	Content of oil used for wound healing
		Chi-5/8, 13	Kwath used in Pittaj Vatarakta
		Chi-9/7	Oil used in Avasthik Chikitsa of Vataj Kushta
		Chi-10/4	Mantha Prepared for Kushta
		Chi-11/8	Kwath used in Shonit Meha
		Chi-15/44	Oil used in Mudhgarbha Chikitsa
		Chi-20/50	Used in treatment of Valmika
		Chi-27/7	Kwath used as Anupana for Vidanga Yoga
		Chi- 37/34	Content of Triphaladi Tail
		Chi- 38/42, 46	Content of Sampakadi and Guduchyadi Basti
		U- 19/13	Content of Ayshchotan used in treatment of Netrabhishyand



		U- 39/151, 168, 171, 172, 176, 184, 209, 217, 239, 241	Patoladi Kwath, Guduchi Hima, Kwath in Vataj Fever, Kwath for Pittaj Jwara, Kaphaj Jwar , Visham Jwara, Ghrita for Jeerna Jwara, Content of Triphaladi Ghrita
		U- 40/49, 51, 61	Content of yoga for Aamatisaar
		U- 44/36	Content of Ghrita used in treatment of Pandu
		U- 49/24	Used in treatment of Tridoshaj Chardi
4	Chinnaruha	Chi- 40/4	Content of Kasahar Dhuma
5	Vatsadani	Su- 39/6	Vata Shaman Gana

3.1.4. Vagbhatta

Table 3. Description of Guduchi in Ashtang Hridayam Samhita

Sr.No	Named as	Reference	Description
1	Amrutvalli	A.H.U- 38/18	Mooshaka Visha Vhikitsaa
2	Amara	A.H.U 5/20	Content of Mahabhutwar ghrita
3	Amruta	A.H.Su- 6/75	Patolaadi Shaaka (Shaaka Varga)
		A.H.Su- 7/20	Sparshaja Visha Chikitsaa
		A.H.Su- 10/35	Vrushya (Tikta Rasa Special reference)
		A.H.Su- 15/12	Padmakaadi Gana
		A.H.Su- 15/17	Aaragvadhaadi Gana
		A.H.Su- 30/51	Samyaka-dagdha Chikitsaa
		A.H.Chi- 1/50, 51, 61, 64, 139	Truteeyaka-jwara Chikitsaa, Vaataja Jwara Naashaka Kashaya, Pitta-Kaphaja Jwarahara Kwatha, Aaragvadhaadi Gana (Pitta-kaphaja jwarahara Yoga), Jwara (Sheeta) Shaamaka Upachara
		A.H.Chi- 3/58, 64, 133	Punarnavaadi Ghruta, Kantakaari Avaleha, Vasishtha Hareetakee Rasaayana (Kaasa Chikitsaa)
		A.H.Chi- 4/22, 24	Shamana Chikitsaa (Yusha Nirmaana, Kashaya & Peyaa) (Shwasa-Kasa)
		A.H.Chi- 5/61	Praseka (Laalaasraava) Chikitsa (Raajayakshmaa)
		A.H.Chi- 8/49	Arsha Roga Naashaka Peya
		A.H.Chi- 12/8	Pittaja Prameha Shamana Yoga 2 nd Kashaya
		A.H.Chi- 13/4	Pittaja Vidradhi Chikitsaa
		A.H.Chi- 14/14	Daadhika Ghruta (Gulma Chiktisaa)
		A.H.Chi- 17/40	Amrutaadi Churna (Shohta Chiktisaa)
		A.H.Chi- 19/2, 9, 17	Tiktaka Ghrut, Mahaatiktaka Ghruta, Vajraka Ghruta (Kushtha Chiktisaa),
		A.H.Chi- 21/58	Nimbaadi Ghruta (Vaata Vyaadhi Chikitsaa)
		A.H.Chi- 22/10	Pitta Dosha Pradhaana Vaatarakta Chikitsaa
		A.H.Ka- 4/37	Yaapanaraaja Basti
		A.H.Ka- 5/19	Ref UrdhvaMaarutaa Vyaapad (Niruha Basti Vyapada)
		A.H.U- 1/44, 46	Ashtaanga Ghruta, Vachaadi Ghruta (Baalopacharaneeya)
		A.H.U -2/13, 25	Dhaatri-stanya Dosha Chikitsaa

		A.H.U -13/12, 68	Mahaatriphalaa Ghruta (Drushti Dosha), Kaphaja Timira Chikitsaa
		A.H.U -22/67, 104	Vaataja Galaganda Chikitsaa, Patolaadi Kwatha (Sarva-mukharoga hara)
		A.H.U 28/38	Content of Guggulu Yoga
		A.H.U 32/9	Content of Lepa used in Valmik Chikitsa
		A.H.U 35/21, 57	Content of Vishnashak Yavagu, used for treatment of Agnimandya in Garavisha
		A.H.U 38/26	Content of Ghrita used in treatment of Mushak Visha
		A.H.U 39/34, 60, 159	Content of Chyavanprash Rasayan, Medya Rasayan, Shavdanshtadi Churna
4	Guduchi	Su- 10/29	Drug of Tikta Sakanda
		Su- 14/22	Juice of Guduchi given in Atisthula treatment
		Su- 15/15, 16	Patoladi Gana, Guduchyadi Gana
		Sha- 2/7	Used in the treatment of Aam Dosha
		Chi- 1/46, 52, 66, 94, 154	Content of Shaman Yoga, Vatajwar Nashak Kwath, Vata-Kapha Jwarr Nashak Yoga, Jeernajwar Nashak Ghrita, Rasayan Yoga
		Chi- 3/3, 164	Content of Vataj Kasa Nashak Yoga, Vyaghrai Ghrita
		Chi- 6/14	Yoga for Pittaj Chardi
		Chi- 7/25	Used in treatment of Kasa developed due to Madatya
		Chi- 11/12	Content of yoge used in treatment of Kaphaj Mutraghat
		Chi-12/6	Kwath used in treatment of Pittaj Prameha
		Chi- 16/13, 43, 53	Content of Vasadi Kwath, Juice used n Kamla, Used in Halimak chikitsa
		Chi-18/6, 30	Content of Yoga used in treatment of Visarpa, Granthi bhedan lepa
		Chi- 19/39, 86	Content of Nishadi Ghrita, Kushtaha lepa
		Chi- 22/7, 15	Used in treatment of Vatarakta,
		Ka- 4/1, 55	Content of Baladi Kalpa, Dashmooladi Sneha
		U- 9/27	Kwath used for treatment of Dushta Stanya
		U- 22/6, 68, 78, 97	Content of Abhyang Yoga, used in Vataj Galaganda treatment, Mukharbuda treatment, Content of Kshudradi Kawal
		U- 34/28, 33	Content of Kashmaryadi Ghrita, Sechan Prayoga
		U- 38/ 20	Content in lepa used in Mushak Visha
		U- 39/44, 104	One among 4 Medya Rasayan, Content of Shunthyadi Rasayan
		U- 40/50	Agrya in Vatarakta
5	Chinnaruha	Su- 15/45	Shyamadi Gana
		Chi- 21/73	Content of Bala Tail
		Ka- 4/7	Content of Erand Mooladi Kalpa



3.1.5. Nighantu View

Lexicons were made for the drug identification, they themed by giving different names to a single drug through its morphological, pharmacological characteristics. Following are the compilation of names of Guduchi from different Nighantu through which it can be identified [12-20].

Table 4. Different synonyms of *Guduchi* in Various *Nighantu*

Sr.No	Nighantu	Varga	Synonyms
1	Abhidhanmanjiri	Guduchyadi	-
2	Abhidhan-ratnamala	Tiktaskanda	Vayastha, Kundali, Chinnaruha, Amrutvalli, Amruta, Madhuparni, Somlata, Guduchi, Devnirmita, Vatsadani, Kandajata, Tantrika, Chakralakshnika
3	Amarkosha	Vana-aushadhi	Vanda, Vruksharuha, Vrukshadani, Jivanti, Vatsadani, Chinnaruha, Guduchi, Tantrika, Amruta
4	Ashtang	Guduchyadi Gana	-
5	Kaidev	Aoushadhi	Guduchi, Kundali, Soma, Chinna, Chinnodbhava, Amruta, Madhuparni, Vayastha, Chinnaruha, Chakralakshani, Chandrasasa, Amrutlata, Dhara, Vatsadani, Vara, Pindaamruta, Kandarohini, Vichinna, Satirupa
6	Dhanvantari	Guduchyadi	Guduchi, Amrutvalli, Chinna, Chinnaruha, Amruta, Chinnodbhava, Amrutlata, Dhara, Vatsadani, Somvalli, Kundali, Chakralakshana, Nagkumari, Chinnangi, Jwaranashini, Madhuparni, Jivanti, Tantrika, Devnirmita, Vayastha, Mandali, Somya, Vishalya, Amrutsambhava, Pindaamruta, Kandarohini, Bahuchinna, Rasayani, Mrutika, Bhisagjita, Kanya, Kandodbhava, Kandaamruta, Kandaguduchika
7	Nighantu Shesha	Latakanda	Guduchi, Amruta, Somvalli, Vatsadani, Dhara, Chinnodbhava, Chinnaruha, Vishaghni, Devnirmita, Vishalya, Kundali, Tantrika, Chakralakshani, Devyanta, Madhuparni, Jivanti, Amrutvalli
8	Paryayaratnamalaa	-	Guduchi, Chinnaruha, Madhuparni, Amruta, Amara, Kundali, Amrutvalli, Vatsadani, Chakralakshana
9	Bhavprakasha	Guduchyadi	Guduchi, Amrutvallari, Madhuparni, Amruta, Chinna, Chinnaruha, Chinnodbhava, Vatsadani, Jivanti, Soma, Somavalli, Kundali, Tantrika, Chakralakshnika, Dhira, Vishalya, asayni, Chandrasasa, Vayastha, Devnirmita, Mandali
10	Madanpaala	Abhayadi	Guduchi, Kundali, Chinna, Vayastha, Amrutvallari, Chinnodbhava, Chinnaruha, Amruta, Jwaranashini, Vatsadani, Chandrasasa, Jivanti, Chakralakshanaa,
11	Rajanighantu	Guduchyadi	Guduchi, Amrutvalli, Amruta, Jwarari, Shyama, Vara, Sukruta, Madhuparni, Chinnodbhava, Amrutlata, asayani, Chinna, Somalatika, Amrutsambhava, Vatsadani, Chinnaruha, Vishalya, Bhisakpriya, Kundalini, Vayastha, Jivanti, Nagkumarika, Chadmika, Chandrasasa, Kandodbhava, KandaAmruta, Pindaguduchi, Bahuchinna, Bahuruha, Pindalu, Kandarohini, Uttara
12	Laghu Nighantu		Guduchi, Amruta, Chhina, Chhinnanga, Jwaranashini, Chhinnodbhava, Amrutalata, Dhara, Vatsadani, Kundali, , Mandali, Shyama, Vishalya, Nagkanya, Chakrangi, Somvalli, Vayashtha, Devnirmita

13	Shabdachandika	Vrukshadi	Vatsadani, Chhinnaruha, Guduchi, Tantrika, Amruta, Jivantika, Somvalli, Vishalya, Madhuparni, Suvalli, Vatraktaari, Shudhhavalli, Amara, Paamodh, Dhara, Vranaha
14	Saraswati	Latavarga	Guduchi, Kundali, Pathya, Chhinna, Chhinnaruha, Amruta, Chhinnodbhava, Brhamalata, Dhara, Vatsadani, Madhuparni, Somvalli, Vishalya, Chakralakshana, Bahuchinna, Sukshmapatra, Jivanti, Devnirmita
15	Siddhamantra	Doshaghna	-
16	Shodhal	Guduchyadi	Guduchi, Amruta, Chhinna, Chhinnanga, Jwaranashini, Chhinnodbhava, Amrutlata, Vayastha, Devnirmita, Kundali, Mandali, Shyama, Vishalya, Nagkanya, Chakrangi, Somvalli, Dhara, Vatsadani, Jivanti, Madhuparni, Tantrika, Guduchika
17	Sushruta	Guduchyadi	-

3.1.6. Rasapanchaka

Table 5. Rasapanchak and Karma of Guduchi in Nighantu

Sr.No	Nighantu	Rasa	Virya	Vipaka	Guna	Karma
1	<i>Kaidev</i>	<i>Tikta, Kashya, Katu</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Laghu, Sangrahi</i>	<i>Hridya, Balya, Agnikrut, Tridosahar, Kushta, Krumi, Chardi, Daha, Pandu, Vatarakta, Jwara, Kamala, Meha, Trushna, Kasa, Rasayani, Medya, Vayasthapan, Chakshushya</i>
2	<i>Dhanvantari</i>	<i>Tikta, Kashaya</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Guru</i>	<i>Kushta, Jwar, Jantuhar, Raktarsha, Medya, Trut, Pandu, Vatarakta, Chardi, Meha, Kandu, Visarpa,</i>
	<i>Dhanvantari-Kandaguduchi</i>	<i>Katu</i>	<i>Ushna</i>	-	-	<i>Vishaghni, Bhutaghni</i>
3	<i>Bhavprakash</i>	<i>Katu, Tikta</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Laghu, Sangrahi</i>	<i>Rasayan, Balya, Deepan, Daha ha, Meha, Kasa, Jwar, Pandu, Kamla, Kushta, Vatarakta, Krumi, Swasa, Hridoga</i>
4	<i>Madanpala</i>	<i>Katu</i>	<i>Ushna</i>	<i>Madhua</i>	<i>Laghu, Sangrahi</i>	<i>Rasayan, Balya, Dipani, Kamala, Kushta, Jwara, Krumi</i>
5	<i>Rajnighantu</i>	<i>Tikta, Kashaya</i>	<i>Ushna</i>	-	<i>Guru</i>	<i>Jwarhar, Daha, Trishna, Vatarakta, Prameha, Pandu, Bhrma</i>
6	<i>Laghunighantu</i>	-	<i>Ushna</i>	-	<i>Grahi</i>	<i>Rasayani,, Dipani, Jwar, Trushna, Daha, Kamala, Vatarakta</i>
7	<i>Shodhal</i>	<i>Tikta</i>	<i>Ushna</i>	-	-	<i>Rasayani, Dipaniya, Jwar, Daha, Kamala, Vatarakta, Vishaghna</i>
8	<i>Sushruta</i>	-		-	-	<i>Sarvajwarhar, Dipan, Hrillas, Trishna, Daha-har</i>

3.2. Variety

Kanda-Guduchi is considered as a variety of Guduchi it is described in Dhanvantari Nighantu and Raj Nighantu.

3.3. Classification

Medicinal compounds are methodically categorized into many categories according to their unique properties in old Ayurvedic scriptures. For example, guduchi is listed in 68 categories or sections based on criteria including origin, morphology, qualities, pharmacodynamics, therapeutic uses, habits, impacts on Dosha, and how well it works to cure different kinds of illnesses. Tables Nos. 1, 2, 3, and 4 provide more information on this classification [18-25].

3.3.1. Botanical sources of Guduchi

There are around 450 species in the Menispermaceae family, which are spread across about 70 genera. The botanical origins of Guduchi are *Tinospora crispa* (L.) Hook. f. & Thomson, *Tinospora malabarica* (Lam.) Hook. f. & Thomson, and *Tinospora cordifolia* (Wild.) Miers. Although documentation exists for all three *Tinospora* species, Guduchi is frequently obtained from *Tinospora cordifolia* (Wild.) Miers and *Tinospora malabarica* (Lam.) Hook. f. & Thomson in different parts of India. *Tinospora cordifolia* (Wild.) Miers is widely distributed in China and the tropical Indian subcontinent. Conversely, *Tinospora malabarica* (Lam.) Hook. f. & Thomson is widely distributed in South-East India, especially in areas like Bengal, Konkan, Karnataka, Tamil Nadu, Kerala, and Odisha. Wild *Tinospora cordifolia*. *Tinospora malabarica* (Lam.) Hook. f. & Thomson is a huge deciduous climber, whereas Miers is classified as a widespread climber with corky, grooved bark and adventitious aerial roots. It is interesting to note that *Tinospora cordifolia* (Wild.) Miers is occasionally used in place of the latter or combined with it as an adulterant.

3.3.2. Plant Description

Spreading across large areas of India, Myanmar, and Sri Lanka, guduchi is a glabrous, perennial deciduous twining shrub with succulent stems and papery bark. It grows best in India's tropical areas, where it may be seen growing as high as 500 meters and in temperatures between 25 and 45 °C. The leaves are heart-shaped, straightforward, and have a vivid, dark green hue. Their lamina is broadly ovate, with a multicostate reticulate venation, and measures 10–12 cm in length and 8–15 cm in width. They are alternate, estipulate, and whole. The skin of the stems is longitudinally fissured, with diameters ranging from 3 to 8 mm and lengths of 3-5 cm. The surface of the stems is tightly studded with warty tubercles. The creamy white or grey succulent bark has deep clefts, dots, and huge lenticels that resemble rosettes. The long branches have long, thread-like aerial roots that are dirty white or light greyish brown in hue. The tiny, greenish-yellow, unisexual blooms of the guduchi plant are borne in auxiliary and terminal racemes. While female flowers usually emerge solitarily in an inflorescence, male flowers tend to cluster together. Each flower has six free, smaller, elliptical, membrane sepals placed in two sets of three each, as well as six smaller petals. Fruits form in the winter (November) after flowering takes place in the summer (March to June). The orange-red, meaty fruits cluster together as one or two ovoid, smooth drops on stout stalks with subterminal style scars. Guduchi is included in the moonseed family because of its curled seeds and embryos.

3.3.3. Phyto-chemistry

Biological characteristics inside the plant or host system can be expressed either directly or indirectly by a number of different substances found in the plant extract. Alkaloids, steroids, terpenoids, polysaccharides, glycosides, and various aromatic and aliphatic compounds are just a few of the different classes of compounds found in this plant. These compounds are present in their phytoactive form, which is what gives them their diverse range of medicinal and therapeutic properties.

The stem, leaves, and roots of the plant have a significant concentration of these chemical compounds; however, they are present throughout the plant. This plant's main constituents are furanolactone and berberine. Additionally, the plant contains compounds such as tinosporone, tinosporic acid, cordifolisides A to E, giloin, gilenin, crude giloinin, arabinogalactan polysaccharide, picrotene, bergenin, gilosterol, tinosporol, tinosporidine, sitosterol, cordifol, heptacosanol, octacosanol, tinosporide, columbin, chasmanthin, palmarin, palmatosides C and F, amritosides, cordioside, tinosponone, ecdysterone, m-kisterone A, hydroxyecdysone, magnoflorine, tembetarine, syringine, glucan polysaccharide, syringine apiosylglycoside, isocolumbin, palmatine, tetrahydropalmatine, jatrorrhizine, among others, which have been isolated from the plant. Additionally, the plant has been discovered to contain three chemicals that have been identified: cycloephordenol, cyclohexyl-11-heneicosanone, and 2-hydroxy-4-methoxybenzaldehyde. These molecules are also present in various other species. The presence of proteins and other compounds in the plant is thought to be responsible for its medicinal properties.

3.4. Pharmacological Aspects

3.4.1. Anti-diabetic activity

Numerous Cordifolia compounds have been shown to have in vivo antidiabetic activity by pharmacological tests.

3.4.2. Aphrodisiac activity

On mice of both sexes, *Tinospora cordifolia* extract concentrates on arousal and performance. It was discovered that animals given plant extracts exhibited enhanced sexual activity. Both extracts have a strong aphrodisiac effect on *Tinospora cordifolia*, increasing the number of mounts like hydrolysis and aqueous extracts, ano-genital dysfunction, penis erection index, ejaculation, and sexual activity.

3.4.3. Anticoagulant activity

By identifying and contrasting the test group with the group receiving normal medication therapy, contraindications were determined. The percentage of inhibition of the diffusion phase was 35.3% for the petroleum ether extract and 61.1% for the ethanol extract phase. It has been discovered that ethanol extract for treated animals is more effective than standard treatment situations.

3.4.4. Anti-oxidant activity

Immunity is produced by the presence of arabinogalactan from the stem of *Tinospora cordifolia*. The three plants' secondary metabolites all play a significant part in affecting and suppressing the microorganisms under study. T. Further observation revealed that those extract mixtures with *Cordifolia* shown good pathogen sensitivity and resistance. The basis for this investigation is t. This backs up the plant's traditional use and suggests that it contains some significant bioactive components that prevent the development of microorganisms by serving as a very efficient source of derivatives.

3.4.5. Anti-inflammatory and wound healing activity

In both acute and subacute inflammation models, the dried stem of *T. cordifolia* significantly reduced inflammation.

3.4.6. Antimicrobial activity

T. cordifolia's antimicrobial activity on a variety of microorganisms in various solvents shown strong antifungal and antibacterial activity. According to Jeyachandran et al., stem extracts have good therapeutic potential against infectious diseases and

have been shown to have antibacterial activity against both gram-positive and gram-negative bacteria by in-vitro study. *T. cordifolia* methanolic extract has been used to combat both bacterial groups.

3.4.7. Anti-toxic effects

The extract showed promise in scavenging free radicals produced during aflatoxicosis, suggesting *Tinospora cordifolia*'s protective qualities across a range of parameters. It raised the levels of GSH (glutathione), ascorbic acid, protein, and antioxidant enzyme activity while also showing a protective effect on thio-barbituric acid reactive compounds (TBARS). These enzymes include the kidney's glutathione reductase (GR), glutathione S-transferase (GST), GPx enzyme, catalase (CAT), and superoxide dismutase (SOD). Particular attention was drawn to the alkaloids present in *T. cordifolia*, including choline, tinosporin, isocolumbin, palmatine, tetrahydropalmatine, and magnoflorine, because of their potential to provide protection against nephrotoxicity caused by aflatoxin. These results point to *T. cordifolia*'s potential as a guard against oxidative stress and kidney damage brought on by aflatoxins.

3.4.8. Anti-stress activity

At a dosage of 100 mg/kg, the ethanolic extract of *Tinospora cordifolia* has shown significant anti-stress action in a number of different parameters, showing efficacy on par with the conventional medication diazepam at 2.5 mg/kg. The plant extract has demonstrated a modest effect on mental deficit response and behavioral abnormalities. According to a clinical study, patients' Intelligence Quotient (I.Q.) scores have improved. *T. cordifolia* is known in Ayurveda for its use as a Medhya Rasayana, or brain tonic, which increases mental capacity and helps to improve cognitive abilities like memory and recall.

3.4.9. Hypolipidemic effect

An aqueous extract from the root was tested for its hypolipidemic impact over a six-week period in rats weighing 2.5 and 5.0 g/kg body weight. The findings indicated that in alloxan-diabetic rats, tissue cholesterol had decreased along with serum phospholipids and free fatty acids. The root extract dosage that had the most hypolipidemic impact was 5.0 g/kg body weight. The results are noteworthy since lower serum lipid levels are connected to a lower risk of vascular illness, whereas increased serum lipid levels in diabetes are frequently associated with coronary heart disease. It is interesting to note that the possibility of using *Tinospora cordifolia* root extract to lower blood or tissue lipid levels in diabetic rats had not been investigated prior to the aforementioned study. This study advances our knowledge of *T. cordifolia*'s possible hypolipidemic effects in relation to diabetes.

3.5.0. Hepatic disorder

The benefits of *Tinospora cordifolia* water extract (TCE) against hepatic and gastrointestinal toxicity were documented by Sharma et al. The alcoholic group in their study showed a significant rise in gamma-glutamyl transferase, aspartate transaminase, alanine transaminase, triglycerides, cholesterol, HDL, and LDL ($P < 0.05$). Nevertheless, following TCE intervention, these increased levels were downregulated. The liver function of the patients who took TCE returned to normal, suggesting that the intervention with *T. cordifolia* was effective in reducing the symptoms of alcohol-induced hepatic and gastrointestinal toxicity. The results point to a possible hepatoprotective benefit of the water extract from *Tinospora cordifolia*.

3.5.1. Anticancer activity

Response surface methodology (RSM) was used by Ali et al. to investigate the anticancer efficacy of *Tinospora cordifolia* palmatine extract in animal models. In a mouse model of skin cancer generated by 7,12-dimethylbenz(a)anthracene (DMBA),

the study demonstrated the anticancer potential of the extract. Rahul et al. synthesized an extract of *T. cordifolia* in a different trial, administering it in a dose-dependent manner at different dosages (200, 400, and 600 mg/kg dry weight). C57Bl mice were administered a 50% methanolic extract of *T. cordifolia* at a concentration of 750 mg/kg body weight for 30 days. This led to a decrease in tumor size and an increase in longevity. All of these studies point to the possibility of *Tinospora cordifolia* extracts, especially those that contain palmatine, having anticancer effects in animal models, which highlights the plant's potential for use in cancer treatment and research.

3.5.2. Anti-HIV potential

HIV positive individuals' immune systems are impacted by *T. cordifolia* root extract, as demonstrated by Kalikae et al. The ability of eosinophil count, activation of B lymphocytes, macrophages, level of hemoglobin, and polymorphonuclear leukocytes is decreased by the stem extract of *Tinospora cordifolia*.

3.5.3. Guduchi Sevan as per Dosha with Anupana

The consumption of Guduch according to Dosha Prakriti and Dosha vitiated was mentioned by Dhanvantari Nighantu and Madanpaal Nighantu Acharya. For example, in cases of Vata disorder, it should be consumed with Grita; in cases of Vibandha, it should be consumed with Jaggery; in cases of Pitta, it should be consumed with Sita; and in cases of Kapha, it should be consumed with Madhu. Overall, Guduchi Taila, or Guduchi mixed with Tail, should be used in Aamvata with Shunthi.

4. Conclusions and Future Scope

India boasts abundant biodiversity. Numerous families of medicinal plants exist, and they are traditionally used to cure a wide range of illnesses. One of the four medications by Medya Rasayan that is listed is guduchi; it has a calming and anxiolytic effect and aids in preserving human mental health. Classical literature classifies Guduchi into a number of categories. Based on characteristics such as origin, morphology, property, pharmacodynamics, therapeutic application of the medication, habit, qualities, impact on dosha and illness situations, etc., Guduchi is mentioned in 68 groups/sections. Among its many other properties, guduchi is anti-inflammatory, rejuvenative, anti-pyretic, and anti-diabetic. For it to have the Rasayan effect, frequent consumption is required.

According to a number of research, guduchi has not yet been shown to have any harmful or hazardous effects. The review provides details on *Tinospora cordifolia*'s traditional anti-toxin, anti-diabetic, anticancer, immunomodulatory, antioxidant, and antibacterial properties. *Tinospora cordifolia* is a plant that has been used to increase people's natural immunity and treat a range of diseases and abnormalities. These claims are supported by pharmacological and clinical research that are covered in this study.

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