WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 11, Issue 13, 349-358. Review Article ISSN 2277– 7105

REVIEW ON ANTIDIABETIC DRUGS IN DHANWANTARI NIGHANTU

Jyoti Pareek[1]*, Shweta Rankawat[2], Ashwini Kumar Sharma[3] and Hemwati Gurjar[4]

[1,2]M.D. Scholar, Dravyaguna Department, MMM Govt. Ayurved College, Udaipur.

[3]Asso. Prof., Dravyaguna Department, MMM Govt. Ayurved College, Udaipur.

[4]Asst. Prof., Dravyaguna Department, MMM Govt. Ayurved College, Udaipur.

Article Received on
27 July 2022,

Revised on 17 August 2022,
Accepted on 07 Sept. 2022

DOI: 10.20959/wjpr202213-25564

***Corresponding Author**
Dr. Jyoti Pareek
M.D. Scholar, Dravyaguna Department, MMM Govt. Ayurved College, Udaipur.

ABSTRACT

Diabetes Mellitus is a long-term metabolic condition that has significant social, health, and economic ramifications. According to estimates, 285 million people worldwide (or roughly 6.4% of the adult population) had this illness in 2010. If there are no improvements in treatment or control, this number is projected to rise to 430 million. The two main causes of the increase are ageing and obesity. Additionally, it has been demonstrated that about 50% of alleged diabetics do not receive a diagnosis until 10 years after the commencement of the condition, indicating that the true prevalence of diabetes worldwide must be extremely high. This chapter introduces the various kinds of diabetes and its associated consequences, including cardiovascular disease, retinopathy, periodontal disease, nephropathy, somatic and autonomic neuropathy, and immune system damage. *Dhanvanari Nighantu* also describes **important anti-diabetic** drugs which are useful for us in the treatment of diabetic. There are seven *varga* available in *Dhanwantari Nighantu* and a total of 17 *dravyas* with *Pramehahar* property among the medications in *Aushadhivarga*. Both doctors and researchers will benefit from using these medications in their respective disciplines, whether it is to treat *Prameha* or conduct study to learn more about the unexplored. The goal of the current study is to evaluate effective herbal treatments for *Prameha.*

KEYWORDS: *Prameha, Dhanwantari Nighantu*, Diabetes, Herb.

INTRODUCTION

Ayurveda is a rich treasure of safe materia medica which provides a promising field for drug research, especially in view of its vast treasury of drugs. *Dhanvantari Nighantu* also describes important antidiabetic drugs which are useful for us in the treatment of diabetic. There is a description of about 17 drugs *in nighantu* which are antidiabetic. Ayurveda is a treasure trove of safe materia medica that offers a promising subject for drug development, particularly given its huge pharmacological library. *Dhanvanthari nighantu* is a significant *dravyaguna* work. In Ayurveda, *Nighantus* are primarily written with the goal of compiling terminology and providing significant information regarding terms used in the ancient literature, such as definitions. *Dhanvantari nighantu* is a treatise on ayurvedic herbs that lists the names of pharmaceuticals derived from various sources, such as plants, minerals, and animals, as well as their synonyms, actions, and uses. *Dhanvantari nighantu* is still a standard text for studying drug source material. The *Dhanvantari nighantu* has been recognised as the earliest of the *nighantus* due to its link with the holy name *Dhanvantari*. *Dhanvanthari nighantu* is a significant *dravyaguna* work. *Nighantus* are primarily developed in Ayurveda with the goal of compiling terms and providing significant information regarding terminologies used in the system.

Around the world, individuals of all ages are affected by the increasingly prevalent disease known as diabetes. Diabetes has been shown to be the starting point for other health issues, thus those who are diagnosed with it face serious health difficulties. Many people who battle fat experienced around the world, individuals of all ages are affected by the increasingly prevalent disease known as diabetes. Diabetes has been shown to be the starting point for other health issues, thus those who are diagnosed with it face serious health difficulties. Diabetes is a common complication for people who struggle with weight. Additionally, the illness claims more lives each year than both AIDS and breast cancer put together. Nearly 29 million Americans have diabetes, according to the American Diabetes Association; 347 million have, according to the World Health Organization. Diabetes can result in a number of complications. However, cardiovascular disease, obesity, hypertension, hypoglycemia, dyslipidemia, kidney disease, amputations, blindness, and risk of heart attack or stroke are the most prevalent co-morbid illnesses. diabetes affects people everywhere.

Diabetes comes in two main varieties-

Chronic type 1 diabetes is characterised by insufficient insulin synthesis. Lifestyle or exercise choices cannot stop this kind of diabetes, which is typically a lifelong condition. The body's inefficient utilization of insulin causes type 2 diabetes. Approximately 90% of all diabetes diagnoses are type 2, making it a significantly more frequent kind. This kind of diabetes is the focus of the majority of current research.

MATERIAL AND METHOD

The study's foundation is the Hindi translation of *Dhanwantari nighantu*, which was edited by *Prof. Priyavata Sharma Ji* and *Dr. Guru Prasada Sharma Ji*. For a better comprehension of the *Dhanwantari Nighantu* and *Pramehahar dravyas* mentioned in other books, the published work on journals and web pages are consulted. The word *"Pramehahar*" has been looked up in the *Nighantu*, and the medications reported to contain the claimed property have been listed. To determine the most likely characteristics of all the *Pramehahar dravyas*, the features specified for the list of plants are tabulated and thoroughly analysed using *Dravyaguna* principles.

From the observation, it was identified that 17 dravyas are mentioned to have been included in the Pramehahara. The list of the dravyas has been enlisted-

Table 1: *Pramehahara Dravyas* mentioned in *Dhanwantri Nighantu.*

S. n.	Name	Latin name	Family	English name	Useful part
1.	*Guduchi*	*Tinospora cordifolia*	*Menispermaceae*	Heart leaved moon seed	*Kand*
2.	*Murva*	*Marsdenia tenacissima*	*Asclepiadaceae*	Murva	*Mula*
3.	*Manjishta*	*Rubia cordifolia*	*Rubiaceae*	Indian madder	*Mula*
4.	*Dhanwayas*	*Fagonia arabica*	*Zygophyllaceae*	Khorasan thorn	*Panchang*
5.	*Haridra*	*Curcuma longa*	*Zingiberaceae*	Turmeric	*Kand*
6.	*Daruharidra*	*Berberis aristata*	*Berberidaceae*	Indian barberry	*Mula,kand, phal*
7.	*Katphala*	*Myrica nagi*	*Myricaceae*	Box myrtle	*Twak*
8.	*Devdaru*	*Cedrus deodara*	*Pinaceae*	Deodar	*Kandsar,tail*
9.	*Shalparni*	*Desmodium gangeticum*	*Leguminoceae*	Sal leaved desmodium	*Panchang*

10.	*Gokshura*	*Tribulus terrestris*	*Zygophyllaceae*	Land-kaltrops	*Phal,mula*
11.	*Sariwa*	*Hemidesmus indicus*	*Asclepiadaceae*	Indian sarsaparilla	*Mula*
12.	*Ashamantak*	*Ficus rumphii*	*Moraceae*	Golden mock bodhi tree	*Twak,kshir, phal*
13.	*Haritaki*	*Terminalia chebula*	*Combretaceae*	Chebulic myrobalan	*Phal*
14.	*Aragwad*	*Cassia fistula*	*Leguminoceae*	Purging cassia	*Phalmajja, mula twak,pushpa, patra*
15.	*Ushir*	*Vetiveria zizaniodes*	*Graminae*	Khaskhas grass	*Mula*
16.	*Jatiphala*	*Myristica fragrans*	*Myristicaceae*	Nutmeg tree	*Beej(jayphal), kosh(javitri)*
17.	*Vriddhdaru*	*Argyreria speciosa*	*Convolvulaceae*	Wolly morning glow	*Mula*

Table 2: Ras guna virya Vipak and Karma of dravya.[2-4]

Name	***Ras***	***Guna***	***Virya***	***Vipak***	***Doshkarma***
Guduchi	*Tikta,kashaya*	*Guru,snigdh*	*ushna*	*Madhur*	*Tridoshhar*
Murva	*Tikta,kashaya*	*Guru,ruksha*	*Ushna*	*Katu*	*Tridoshhar*
Manjishtha	*Tikta,kashaya*	*Guru,ruksha*	*Ushna*	*Katu*	*Kaphpitahar*
Dhanvyas	*Tikta,kashaya, madhura,katu*	*Laghu,snigdh*	*Ushna*	*Madhur*	*Vatapitahar*
Haridra	*Tikta,kashaya*	*Ruksha,laghu*	*Ushna*	*Katu*	*Tridoshhar*
Daruharidra	*Tikta,kashaya*	*Laghu,ruksha*	*Ushna*	*Katu*	*Kaphpitahar*
Katphala	*Tikta,kashaya,katu*	*Laghu,tikshna*	*Ushna*	*Katu*	*kapvatahar*
Devdaru	*Tikta*	*Laghu,snigdh*	*Ushna*	*Katu*	*Kaphvathar*
Shalparni	*Madhura,tikta*	*Guru,snigdh*	*Ushna*	*Madhura*	*Tridoshhar*
Gokshura	*Madhura*	*Guru,snigdh*	*Sheeta*	*Madhura*	*Vatpithar*
Sariva	*Madhura,tikta*	*Guru,snigdh*	*Sheeta*	*Katu*	*Kaphpithar*
Ashmantak	*Kashaya*	*Laghu,ruksha*	*Sheeta*	*Madhura*	*Tridoshhar*
Haritaki	*Madhura,amla, katu,tikta,kashaya*	*Laghu,ruksha*	*Ushna*	*Madhura*	*Tridoshhar*
Aragwad	*Madhura*	*Guru,mridu, snigdh*	*Sheeta*	*Katu*	*Tridoshhar*
Ushir	*Tikta,madhura*	*Ruksha,laghu*	*Sheeta*	*Katu*	*Kaphpithar*
Jatiphala	*Tikta,katu*	*Laghu,tikshna*	*Ushna*	*Katu*	*Kaphvathar*
Vruddaru	*Katu,tikta,kashaya*	*Laghu,snigdh*	*Ushna*	*Madhura*	*kaphvathar*

From the above-mentioned, the drugs are analyzed based on their *Rasa, Guna, Virya, Vipaka,* and *Karma* on *Dosha*. Based on the *Rasa* among the 17 *dravyas* identified 13 *dravyas* have

Tikta rasa, 10 *dravyas* have *Kashaya rasa*, 5 *dravyas* have *Katu rasa*, 7 *dravyas* have *Madhura rasa*, 1 *dravyas* have *Amla rasa* respectively.

Based on the *Guna* of the *dravyas* it was observed that among 17 *dravyas*, 10 *dravyas* have *Laghu guna*, 7 dravyas have Ruksha guna, 7 dravyas have Guru guna, 8 dravyas have Snigdha guna, 2dravya have Tikshna gunas, 1 dravya have mridu guna respectively.

Based on the *Virya* of the identified *dravyas* it was observed that *12 dravyas* are *Ushna virya* while 5 *dravyas have Sheeta Virya*.

Based on the *Vipaka of dravyas* identified it was observed that among 17 *dravyas*, 09 *dravyas* are *Katu Vipaka*, 8 have *Madhura Vipaka* respectively.

Based on the *Karma* it has been observed that out of 17 *dravyas*, 02 *dravyas* are *Vatapitahara*, 04 *dravya* have *kapha- pittahara*, 04 *dravyas* are *Kaphavatahara*, and 7 *dravyas* are *Tridosha hara* respectively.

Table 3: Shows chemical Constituents and Pharmacological properties.[6-21]

S.N	*Dravya*	Chemical constituents	Pharmacological activities	Previous review studies
1.	*Guduchi*	Alkaloids, diterpenoid lactones, glycosides, steroids, sesquiterpenoid, phenolics, aliphatic compounds, and polysaccharides.	antidiabetic, anti-cancer, anti-tumor, and anti-hyperglycaemic, anti-inflammatory, antioxidant, anti-stress, anti-ulcer, digestive, hypolipidemic, immunobiological etc.	A review on magic of wonder herb: Tinospora cordifolia
2.	Murva	Roots and seeds are reported to be rich in pregnane glycosides of 2-deoxysugars, which on hydrolysis give genins, sugars, cinnamic, and acetic acid.	Antidiabetic antihyperlipidimic, asthma, trachitis, tonsillitis, pharyngitis, cystitis, immunomodulatory etc.	Evaluation of antidiabetic and antihyperlipidimic activities of marsdenia tenacissima and sphaeranthus indicus
3.	Manjistha	Alkaloids, glycosides, saponins, Resin, oleoresins, sesquiterperene, Lactones and oils.	Antidiabetic, Anti - acne, Anti-microbial, Antioxidant, Hepatoprotective	Rubia cordifolia: A review

4.	Dhanwayas		fever, thirst, vomiting, dysentery, asthma, urinary discharges, liver problems etc.	Chemical composition and medicinal significance of Fagonia cretica:a review
5.	Haridra	Flavonoid curcumin (diferuloylmethane) and various volatile oils, including tumerone, atlantone, sugars, proteins, and resins.	Anti-diabetic, hypolipidemic, anti-inflammatory, anti-diarrhoeal, hepatoprotective, anti-asthmatic and anti-cancerous drug. Haridra is widely used in cosmetology.	Pharmacological activities of turmeric
6.	Daruharidra	Berbamine, berberine, Oxycanthine, epiberberine, Palmatine, dehydrocaroline, Jatrorhizineand, columbamine	Hepatoprotective, anti-inflammatory, antimicrobial, antibacterial, antifungal, antidiarrheal, anti-glycemic, anti-cancerous, anti-oxidant antiplatelet cardio-tonic	Daruharidra: review based upon its Ayurveda properties.
7.	Katphal	tannins, phenolic acids, flavonoids, terpenes, glycosides, steroids, volatile oils, and amino acids	Asthma, cough, chronic bronchitis, ulcers, inflammation, anemia, fever, diarrhea, and ear, nose, and throat disorders.	Myrica esculanta and its antiasthmatic property with ayurvedic approach: a review
8.	Devdaru	Taxifolin, cedeodarin,ampelopsin, cedrin, Cedrinoside, deodarin,α-terpineol, linalool, limomnene, anethole, caryophylline	Antidiabetic, antispasmodic, antioxidant Aanalgesic, immunomodulatory Anti-inflamatory etc.	Cedrus deodara:A Medicinal herb
9.	Shalparni	N-dimethyltryltryptamine, Hypaphorine, Hordenine, Caudicine, Gangetin-3H, Gangetinin and Desmodin	Cardiac pain, *raktapitta*, *vatarakta*, *netraroga*, *hemicranias*, *pediatric disease etc.*	A review on shalparni (desmodium gangeticum) and desmodium species (desmodium trifolium and desmodium laxiflorum)
10.	Gokshura	Flavonoids, flavonol glycosides, steroidal saponins,	Antiurolithic, Antimicrobial, anthelminthic,	A comprehensive overview of Gokshura (Tribulus terrestris)

		and alkaloids.	cardiotonic, anti-inflamatory etc.	
11.	Sariwa	Hexatriacontane, d-amyrin, hemidesminine	Antipyretic, analgesic, antimicrobial, antidiabetic, hepatoprotective etc.	The bioactive and therapeutic potential of Hemidesmus indicus R.Br.(indian sarsaparilla)
12.	Ashmantak	B-sitosterl, a methoxyflavone glucoside	Buccal infection, rheumatism, asthma, dropsy, cough, fever, boils etc.	Phytochemical analysis and screening of antioxidant, antibacterial and anti-inflammatory activity of essential oil of Premna mucronata Roxb. leaves
13.	Haritaki	Chebulinic acid, tannic acid, gallic acid	Antibacterial, antifungal, anti viral, antidiabetic, antimutagenic, antiulcer etc.	Biological and pharmacological properties of Terminalia chebula Retz.(haritaki)-An overview
14.	Aragwad	Hydroxymethyl anthraquinones, pectin, sugars, gum	Antioxidant, antimicrobial, antiinflamatory, antidiabetic, anti-tumor etc.	The medicinal properties of cassia fistula L:A review
15.	Ushir	Cedr-8-en-13-ol, alpha-amorphene, beta vetirenene, alpha gurjunene	Blood purifier, tonic, antidiabetic, indigestion, skin disorders etc.	Ethno-botnical and pharmaceutical uses of Vetiveria zizaniodes (Linn)Nash:a medicinal plant of rajasthan
16.	Jatiphal	Myristic acid, eugenol, iso-eugenol	Rheumatism, muscle spasm, ant diabetic, anti-inflammatory, antifungal etc.	Phytochemistry and pharmacologic properties of Myristica fragransHoyutt:A review.
17.	Vrudhdaru	Resin volatile oil, alkaloids	Antioxidant, hepatoprotective, anti-inflamatory, immunomodulatory etc.	Medicinal uses and biological activities of Argyreria speciosa sweet(Hawaiian baby woodrose)-an overview

DISCUSSION

Ayurveda defines *Prameha* as *Santarpajanya vyadhi*, which is brought on by poor diet, a sedentary lifestyle, and related metabolic diseases. The contributing variables vitiate the *Kapha dosha*, which in turn vitiates the *Vata* and *Pitta d*oshas and involves the *Tridosha* in the development of the disease. The vitiated doshas cause additional disruption to the *dhatus* and *malas*, which are then expelled from the body in various ways. *Prameha* is a multifactorial illness that manifests in a variety of ways, including a sweet taste in the mouth, numbness and burning in the hands and feet, dry mouth, palate, and throat, and irregular sleep

patterns. The main signs of all forms of *Prameha* are a rise in the quantity and turbidity of the urine, its sweetness, its honey-like appearance, and its overall sweetness.

It was discovered that there are effective herbal medicines with potentials in the management of Prameha in the current study of *Pramehahar dravyas* stated in the *Dhanwantari Nighantu*. The entire body of Ayurvedic literature is based on their precepts and ongoing observations. Ailment management relies heavily on such principles as *Panchamahabhuta Siddhanta, Tridosha, Samanya-vishesha,* and principles of *Sodhana* and *Sama*. Here, the medicinal effects of the dravyas have been examined.

The elements *Meda, Rakta, Sukra, Ambu, Vasa, Lasika, Majja, Rasa*, and *Ojas* are typically impacted by all three of the doshas that play a role in the creation of Prameha. Urine contamination brought on by Dosha entering the *Vasti* results in *Prameha*. Traditionally, 20 types of *Prameha* have been identified, with 10 of these types being *Kaphaja Prameha,* which is characterised by a predominance of the *Kapha dosha* and an amalgamation of vitiated *Vata, Pitta,* and *Meha*. Due to the merging of *Tridosha* with *Rakta* and *Meha* as *Dushiyas,* there are six different varieties of *Pittaja Prameha*. *Madhumeha* develops as a result of four different forms of *Vataja Prameha* that result from fusion with all Dushiyas.

The bulk of the medications listed above contain *Tikta, Kashaya rasa*, which has an activity similar to that of *Sodhana* and *Sthambana,* respectively. Additionally, the rasa mentioned above balances the disease's initiating *Kapha dosha*. The Dravyas listed here primarily contain *Laghu* and *Ruksha guna*, which work as *Kapha samaka*. Additionally, most of the medications contain *Ushna virya* and *Katu vipaka*, which act as *Baddhavinmutra* and *Kaphavata samaka*, respectively, and help regulate *Prameha. Madhura Rasa, Madhur Vipaka,* and *Sheeta Virya* are three rare medications that work as *Pitta Samaka* and aid in the nourishment of the body.

CONCLUSION

Therefore, it may be inferred from the aforementioned study that *dravyas* with *Laghu, Ruksha Gunas, Tikta, Kashaya rasa Pradhana, Katu Vipaka,* and *Ushna Virya* will have better *Pramehahara* characteristics. To achieve the *Pramehahara effect,* clinical trials of the medications indicated above and with similar qualities can be conducted.

REFERENCES

1. Vaishali, a review on the pramehahara dravya of kaiyadeva nighantu, a review international ayurvedic medical journal, 2021.
2. Sharma PV/sharma guruprasad "Dhanwantari nighantu" chaukhamba orientalia Varanasi guduchayadi varga slok number, 6, 13, 18, 20, 55, 59, 74, 77, 88, 103, 160, 193, 205, 216.
3. Sharma PV/sharma guruprasad "Dhanwantari nighantu" chaukhamba orientalia Varanasi chandanadi varga slok number, 14, 34.
4. Sharma PV/sharma guruprasad "Dhanwantari nighantu" chaukhamba orientalia Varanasi karveeradi varga slok number, 96.
5. Samal Janmejaya "the concept of public health in ayurved" International Ayurvedic Medical Journal, 2013; 1-5.
6. Kaur rajwant "A review on magic of wonder herb: Tinospora cordifolia" plant cell biotechnology and molecular biology, 2020; 249-253.
7. P wang, "Marsdenia tennacissima: A Review of traditional uses, phytochemistry and pharmacology", the American journal of chinese medicine, 2018; 46(07): 1449-1480.
8. Patil Rupali, rubia cordifolia: A Review, advances in traditional medicine, 2009; 9(1): 1-13.
9. Vinick mark L, pharmacological activities of turmeric (curcuma longa): a review journal of homeopathy and ayurvedic medicine, 2013; 1-4.
10. Choudhary shailja "daruharidra (Berberis aristata): review based upon its ayurvedic properties" international journal for research in applied science s and biotechnology, 2021; 98-106.
11. Sharma Amit "cedrus deodara:a medicinal Herb"Der pharma chemical, 2018; 10(4): 6-10.
12. Singh suman"A review on shalparni (Desmodium gangeticumDC.) and desmodium species (desmodium trifolium DC and desmodium laxiflorum DC)-ethanomedical prospectives"journal of medicinal plant species, 2015; 3(4): 38-43.
13. Qureshi Huma "chemical composition and medicinal significance of fagonia cretica :a review "natural product research, 2016; 30(6): 625-639,.
14. Pareek archana"ethnobotnical and pharmaceutical uses of vetiveria zizanioides (Linn) nash:a medicinal plant of rajasthan"Int. J life pharm sci, 2013; 50: L12-L18.
15. Asgarpanah jinous"phytochemistry and pharmacologic propertiesof myristica fragrans Hoyutt:A review" African journal of biotechnology, 2012; 11(65): 12787-12793.
16. Joseph ancy"medicinal uses and biological activites of argyreria speciosa sweet (Hawaiian baby wood rose)-an overview"NISCAIR-CSIR, India, 2011.

17. Meena priyanka "a comprehensive overview of Gokshura (tribulus terrestris Linn.)"journal of Ayurveda and integrated medicinal sciences, 2019; 4(06): 205-211.
18. Das sarita "the bioactive and therapeutic potential of Hemidesmus indicusR.Br.(indian sarsaparilla) root phytotherapy research, 2013; 27(6): 791-801.
19. Palariya Diksha "phytochemical analysis and screening of antioxidant,antibacterial and anti-inflamatory activity of essential oil of Premna mucronata Roxb.leaves"Trends in phytochemical research, 2019; 3(4): 275-286.
20. Gupta Chandra Prakash "Biological and pharmacological properties of Terminalia chebula Retz.(Haritaki)-An overview "Int. J pharma pharm Sci, 2012; 4(3): 62-68.
21. Mwangi W Ruth "The medicinal properties of Cassia fistula L:A review " biomedicine and pharmacotherapy, 2021; 144: 112240.