

A HISTORICAL REVIEW OF GOKSHURA (TRIBULUS TERRESTRIS LINN.)

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ABSTRACT

Gokshura (*Tribulus terrestris* Linn.) is a highly esteemed herb in the Indian Ayurvedic system, renowned for its diverse medicinal properties. This review aims to provide a comprehensive overview of Gokshura's pharmacological activities, therapeutic applications, and significance in Ayurvedic medicine. Gokshura has been found to exhibit a wide range of pharmacological activities, including Anti-urolithiatic, Antimicrobial, Anthelmintic, Cardiostimulant, Anti-inflammatory, Hypolipidemic, Immuno-modulatory, Antispasmodic, Analgesic, Aphrodisiac, Antidiabetic, Anti-tumor, Hepato-protective, Anti-carcinogenic, Anti-oxidant, CNS modulator. Gokshura's diverse pharmacological activities make it a valuable herb in the treatment and management of various health conditions, including Urinary tract disorders, Infectious diseases, Cardiovascular diseases, Digestive disorders, Respiratory diseases, Skin disorders, Reproductive disorders, Diabetes, Cancer, Neurological disorders. Its diverse pharmacological activities and therapeutic applications make it a valuable resource for the prevention and treatment of various health conditions. Further research is needed to fully explore Gokshura's potential and to validate its traditional uses.

KEYWORDS: Gokshura, *Tribulus terrestris*, Ayurveda, Traditional Medicine.**1. INTRODUCTION**

Tribulus terrestris is a revered Ayurvedic Herb, commonly known as Gokshura, is a highly esteemed herb in Ayurvedic system of medicine. Its roots, known as Gokshura Moola, are a key component of Dashmoola, a traditional Ayurvedic formulation comprising ten medicinal plants.^[1] Gokshura is extensively described in classical Ayurvedic texts, including Charaka Samhita, Sushruta Samhita, Astanga Hridaya, Ayurvedic Nighantus. These texts highlight Gokshura's therapeutic potential, synonyms, and traditional uses in managing various health conditions.^[2] As mentioned in Madanapala Nighantu root is utilized in Dashmoola, a traditional Ayurvedic formulation and fruit: Employed as an aphrodisiac (Vrushya), enhancing sexual health and vitality. According to ancient Ayurvedic texts, Samhitas and Nighantus, Gokshura exists in two main varieties, Brihat Gokshura (*Pedalium murex* Linn.) and Laghu Gokshura (*Tribulus terrestris* Linn.)^[3] *Tribulus terrestris* is native to the Mediterranean region and has a widespread global presence, spanning from 35° south latitudes to 47° north latitude.^[4] This plant belongs to the Zygophyllaceae family, a group of flowering plants

comprising 22 genera and approximately 285 species.^[5] The name "Tribulus" originates from the Latin word "tribo," meaning "tear" or "caltrop," which refers to the plant's distinctive fruit shape. The species name "Terrestris" is derived from the Latin word for "earth," reflecting the plant's prostrate growth habit. The fruit of *Tribulus terrestris* bears a striking resemblance to a caltrop, a medieval throwing weapon designed to damage horse hooves.^[6] The plant grows up to 90 cm, fruit is globose in shape with 5-12 woody cocci, spine structure is hard, sharp, forked spines and arrangement of seeds is multiple seeds separated by horizontal partitions.^[7] The purpose of the review is to provide a comprehensive view of Gokshura's utility.

2. MATERIAL AND METHODS

A comprehensive literature review was conducted to gather information on Gokshura and *T. terrestris*. The review encompassed original Ayurvedic scriptures, Classical Ayurvedic texts, Indian Ayurvedic Pharmacopoeia, Scientific databases: Science Direct, PubMed, SciFinder, and Google Scholar with *Tribulus terrestris* and Gokshura. A total of 513 articles were

reviewed and out of them 59 were selected for inclusion. Also, 23 original Ayurvedic scriptures and classical Ayurvedic texts were utilized.

3. ETHYMOLOGY AND SYNONYMS OF GOKSHURA

Gokshura: A Sanskrit word meaning "damaging the legs" (due to its thorny fruit). Synonyms like Ikshugandhika meanings is "sugarcane-scented", Sthalashringataka: meaning is "having water chestnut-like fruits".

Unique Characteristics of Gokshura

1. Shadanga : Unlike most plants, Gokshura has a sixth part, the thorn.

2. Chanadruma: The leaves of Gokshura resemble those of the Bengal gram plant.

These details highlight the distinct features and names of Gokshura, showcasing its unique properties and characteristics.^[8]

4. CLASSIFICATION OF GOKSHURA IN AYURVEDIC TEXTS

Gokshura is classified differently across various Ayurvedic texts. Brihatrayi texts do not mention

multiple types of Gokshura: Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya. Bhavamishra mentioned only one type of Gokshura.^[9] Priyavrata Sharma described two types: Gokshura (*Tribulus terrestris*) and Brihat gokshura (*Pedalium murex* Linn.) or Shrangika.^[8] Raj Nighantu and Shankara Nighantu mentioned also two types with similar characteristics.^[10,11] Nighantu Adarsha described three types: Kshudra-gokshura, Brihatgokshura., Gokshura-kalaan (*Xanthium strumarium*). *Xanthium strumarium* is not used medicinally.^[12]

5. RASA PANCHAKA OF GOKSHURA

Rasa Panchaka is a fundamental concept in Ayurveda that describes the five principles of drug action. This framework provides insight into the properties, actions, and effects of herbal medicines like Gokshura. According to various Ayurvedic texts, the Rasa Panchaka and Karma (actions) of Gokshura are described, providing a comprehensive understanding of its properties, actions, and effects.

Table 1: Rasa Panchaka of Gokshura In Different Ayurvedic Texts.

Texts	Rasa (Taste)	Guna (Properties)	Virya (Potency)	Vipaka (Biotransformation of the Drug)	Prabhava (Specific Potency)
Bhavaprakasha Nighantu	Mdhura	-	Sheeta	-	Vatahara
Dhanwantari Nighantu	-	-	-	-	Tridosahara
Madanpala Nighantu	Madhura	-	Sheeta	-	Vatahara
Kaideva Nighantu	Madhura	-	Sheeta	-	Kapha-Vatahara
Priya Nighantu	Madhura	-	Mula- Ushna Phala- Sheet	-	Mula- Vata- Kaphahara
Nighantu Adarsha	Madhura, Tikta	Snigdha	Sheeta	Madhura	Vatahara
Shodhala Nighantu	Madhura	-	-	Madhura	Vata-pittahara
Madhava Dravyaguna	-	-	-	-	Vataghna
Mahaushadha Nighantu	Madhura	-	Sheeta	-	Vatahara
Raaj Nighantu	Madhura	-	Sheeta	-	-
Shankar Nighantu	Madhura, Tikta	-	Sheeta	-	Tridosahara
The Ayurvedic Pharmacopoeia of India	Madhura, Tikta	Guru, Snigdha	Ushna	Madhura	Tridosahara

Table 2: Karma (Therapeutic action) of Gokshura according to various ayurvedic classics.

Ayurvedic Classics	Karma (Therapeutic Action)
Charaka Samhita	Krimighna, Shothahara, Mutravirechaniya
Ashtanga Sangraha	Krimighna, Shothahara, Mutravirechaniya
Bhavaprakasha Nighantu	Vatahara, Bala-krut, Basti-shodhana, Dipana, Vrushya, Pushtida, Ashmarihara, Pramehahara, Shvasa-kasahara, Arshahara, Mutrakricchahara, Hridrogahara
Dhanvantari Nighantu	Tridosahara, Bringhana, Vrushya, Dipana, Shulahara, Hridrogahara, Mutrakricchahara, Pramehahara
Madanapala Nighantu	Vatahara
Kaiyadeva Nighantu	Kapha-vatahara
Priya Nighantu	Phala- Balya, Vrushya, Mutrala Mula- Vata-kaphahara
Nighantu Adarsha	Vatahara, Balya, Vrushya, Mutrala, Ashmarihara, Pramehahara, Shvasahara, Mutrakricchahara, Hridrogahara, Rasayana
Shodhala Nighantu	Vata-pittahara, Balya, Vrushya, Mutrashodhana, Mutrakricchahara,
Madhava Dravyaguna	Vataghna, Vrushya, Balya, Mutrakricchahara

Mahaoushadha Nighantu	Vatahara, Balya, Bastishodhana, Dipana, Bringhana, Vrushya, Pushtida, Ashmarihara, Pramehahara, Shvasa-kasahara, Arshahara, Mutrakricchahara, Hridrogahara
Raj Nighantu	Balya, Bringhana, Mutrakricchahara, Ashmarihara, Pramehahara, Vidahahara, Rasayana
Shankara Nighantu	Tridoshahara, Balya, Bringhana, Mutrakricchahara, Ashmarihara, Pramehahara, Dahahara, Bastishodhana, Vrushya, Dipana, Shvasa-kasahara, Hridrogahara, Arshahara, Kusthahara, Shulahara, Bastivatahara, Rasayana
The Ayurvedic Pharmacopoeia of India	Tridoshahara, Balya, Bringhana, Dipana, Keshya, Mutrala, Shothahara, Vrishya, Vedanasthapana

6. GOKSHURA IN AYURVEDA

6.1. Charaka Samhita (1000 BCE)

Charaka Samhita, a foundational text of Ayurveda, highlights Gokshura's therapeutic properties like Mutravirechaniya (Diuretic): Gokshura helps regulate urine flow and relieve urinary retention, Shothahara (Edema Reliever): The herb reduces swelling and inflammation, Krimighna (Antihelminthic): Gokshura has antiparasitic properties, helping eliminate intestinal worms. Traditionally, Gokshura Boiled Milk used to treat bleeding, particularly urethral bleeding. Charaka Samhita mentions various compound formulations of Gokshura, showcasing its versatility in Ayurvedic medicine.^[13]

6.2. Sushruta Samhita (1000 BCE)

In Sushruta Samhita, Gokshura is mentioned under variety of groups such as Vidarigandhadi Gana, Virtarvadi Gana, Madhura Varga, Laghu Pancharmula, Kantaka Pancharmula. So many compound formulations in which Gokshura appears as an ingredient is mentioned in Sushruta Samhita.^[14]

6.3. Ashtanga Hridaya (600 AD)

Ashtanga Hridaya is a renowned book in medieval Ayurvedic classics, advocating the use of Gokshura to treat dysuria. Vagbhatta has mentioned Gokshura Rasayana, as well as different formulations of Rasayana therapy. Gokshura also appears in various compound formulations in this classical text.^[15]

6.4. Bhavaprakasha (1600 AD)

Bhavamishra's Bhavaprakasha, a seminal Ayurvedic text, outlines Gokshura's therapeutic uses like, Gokshura seeds with Yavakshara to alleviate dysuria, gravel, and urolithiasis, Gokshura whole herb with sugar and honey to relieve dysuria and Ushnavata, Blend Gokshura, Varuna, and Shunthi with honey for comprehensive urinary health support. These traditional formulations underscore Gokshura's significance in Ayurvedic medicine for addressing urinary health concerns.^[16]

6.5. Amarakosha (500 AD)

The book is divided into three parts: Part 1: 10 chapters, Part 2: 10 chapters (includes Gokshura in the Vanaoushadhi Varga drug group), Part 3: 5 chapters. Gokshura is specifically mentioned in the second part of

the book, within the Vanaoushadhi Varga drug group, highlighting its significance in Ayurvedic medicine.^[17]

6.6. Vrindamadhava (900 AD)

The book Vrinda Madhava mentions the following therapeutic uses of Gokshura: Bleeding Control: Milk boiled with Gokshura can help control bleeding, Urinary Health: A decoction made with Gokshura and Yavakshara seeds treats Sharkara, dysuria, and urolithiasis. Aphrodisiac: A powder made from Gokshura, Ikshuraka, Shatavari, Kapikacchu, Nagabala, and Atibala, taken with milk at night, acts as a good aphrodisiac. These traditional remedies highlight Gokshura's versatility in addressing various health concerns.^[18,19]

6.7. Nighantu: A Cornerstone of Ayurveda

In Ayurveda, Nighantu refers to a comprehensive compilation of medicinal plants, herbs, and substances. It plays a vital role in distinguishing between: Food (Ahar): Substances used for energy, nutrition, and physical development. Medicine (Ausadhi): Substances used to alleviate diseases and promote health. This distinction highlights the importance of Nighantu in understanding the therapeutic properties of various substances in Ayurvedic medicine.^[20]

6.7.1. Dhanvantari Nighantu (10th -13th Century AD)

It has been written by Mahendra Bhogika. Gokshura is categorized under the Guduchyadi Varga drug group, highlighting its therapeutic properties and uses in Ayurvedic medicine.^[21]

6.7.2. Shodhala Nighantu (12th Century AD)

Acharya Shodhala categorized Gokshura under two groups : Guduchyadi Varga and Hrasva Pancharmula. Acharya Shodhala emphasizes Gokshura's effectiveness in: Pacifying Pitta: Balances the Pitta dosha. And Pacifying Vata: Calms the Vata dosha. This ancient text highlights Gokshura's significance in Ayurvedic medicine, particularly in maintaining dosha balance.^[22]

6.7.3. Abhidhanaratnamala or Shadrassa Nighantu (13th Century AD)

Gokshura is mentioned in the medicine Svadu Skandha (with the sweet taste of medicine).^[23]

6.7.4. Madhava Dravyaguna (13th Century AD)

Madhava Kara mentioned Gokshura under the Vividh aoushadhi Varga Aushadhi group. In this group, Gokshura is considered Vrishya (aphrodisiac), Balya (strength booster), and used to treat Mutrakriccha (dysuria).^[24]

6.7.5. Hridaya Dipaka Nighantu (13th Century AD)

This Nighantu was written by Acharya Bopadeva. Gokshura is listed in Doshagna Varga group.^[25]

6.7.6. Madanapala Nighantu (14th Century AD)

In this work, Gokshura is mentioned in the group Abhayadi Varga. Its properties and synonyms are mentioned here, and its Doshakarma is believed to be Vatahara.^[26]

6.7.7. Kaiyadeva Nighantu (Pathyapathya Vibodhaka) (15th Century AD)

In this Nighantu, Gokshura is referred to as a drug in the Aushadhadi Varga group synonymous with the properties mentioned above. Regarding Doshas' actions, it is considered Kaphavata Shamaka.^[27]

6.7.8. Raj Nighantu (Nighantu Raj/ Abhidhana Chudamani) (17th Century AD)

This Nighantu was composed by Acharya Narahari Pandita. Gokshura is listed in the Shahatvadi Varga.^[10]

6.7.9. Mahaoushadha Nighantu (19th Century AD)

The author of this Nighantu is Pandita Aryadas Kumar Singh. Gokshura is mentioned synonymously as a constraint of the Bilvadi Varga group.^[28]

6.7.10. Nighantu Adarsha (20th Century AD)

The author of this work is Vaidya Bapalal. This work is a stand-out work for identification of various drugs. Gokshura is mentioned in Patoladi Varga group of drugs along with its properties, therapeutical uses and synonyms along with its three types in this work.^[12]

6.7.11. Saraswati Nighantu (20th Century AD)

The work of Dr. S.D. Kamath describes Gokshura in Utapadi Varga group along with its synonyms. In this Nighantu there is a separate mention of Ikshugandha with synonyms and citing Gokshura.^[29]

6.7.12. Priya Nighantu (20th Century AD)

Acharya Priyavrata Sharma in his work Priya Nighantu, describes Gokshura in Haritakyadi.^[30]

6.7.13. Shankara Nighantu (1983)

This Nighantu composed by Pandita Shankardutta Goud. There are two types of Gokshura according to this Nighantu. Botanical description of both the types is also mentioned in this Nighantu.^[11]

7. DESCRIPTION OF GOKSHURA IN THE AYURVEDIC PHARMACOPOEIA OF INDIA

Tribulus terrestris is included as a monograph in The Ayurvedic Pharmacopoeia of India in Part-I & Volume VI and mentioned along with its definition, synonyms, macroscopic and microscopic description, identity, purity and strength, assay, constituents, properties and actions, important formulations, therapeutic uses and dose.^[3]

7.1. Purity and Strength

Foreign matter should not be more than 2%. Total ash value should not exceed more than 1% whereas acid-soluble ash should not exceed more than 4%.

7.2 Active Constituents

Tribulus terrestris contains alkaloids as terrestriamide, tribulusamide A, B. Also it has steroidal saponin namely terrestrin C, D, E, F, G, H, I, J and K, terrestroneoside A and F, terreside A and B, terrestrin F; tribulosaponin A and B, tribulosin, protodioscin saponin C, prototribestin, terrestrin J, isoterrestrosin B. It also contains flavonoid glycosides namely isorhamnetin-3-gentiotrioside, quercetin-3-gentiobioside-7- glucoside. Additionally, it also has amide in the form of moupinamide.^[3] Active constituents according to different parts of Tribulus terrestris (Table 3).

Active constituents according to different parts of Tribulus terrestris (Table 3)

Part	Active Constituents
Aerial parts	Quercetin 3-O-glycoside, quercetin 3-Orutinoside, kaempferol 3-O-glycoside ^[31]
Leaves	Kaempferol, kaempferol-3-glucoside, kaempferol-3-rutinoside, tribuloside ^[32]
Fruits	Kaempferol, kaempferol-3-glucoside, kaempferol-3-rutinoside, tribuloside ^[32]

8. PHARMACOLOGICAL ACTIONS AND SCIENTIFIC EVIDENCE OF GOKSHURA

A comprehensive review of Gokshura's pharmacological actions reveals the following biochemical and pharmacological activities.

8.1. Antihelminthic activity

The methanolic extract was found to be more effective than the petroleum ether, chloroform, and water extracts for in vitro anthelmintic activity on the nematode *Caenorhabditis elegans*. Further bioactivity-guided fractionation confirmed tribulosin and β -sitosterol-d-glucoside to be the active components with ED50 of 76.25 and 82.50 μ g/ml, respectively.^[33,34]

8.2. Antibacterial Activity and Antifungal Activity

The ethanol extract showed antimicrobial activity against both gram-positive and gram-negative bacteria and antifungal activity.^[35] Chloroform extract of the dried entire plant, on an agar plate, was active on *Mycobacterium phlei*, MIC 41.6 gm/liter.^[36] Hot water extract of the dried entire plant was also found to be active on *Candida albicans*.^[37]

8.3. Antifilarial Activity

Hot water extract of the plant, in a mixture with *Melia rachta* (15%), *Sida cordifolia* (15%), *T. terrestris* (12%), *Terminalia chebula* (39%), and *Tinospora cordifolia* (19%), at a concentration of 100 mcg/ml, produced weak activity on *Acanthocheilonemaviteae*. A concentration of 500 mcg/ml was active.^[38]

8.4. Anti-inflammatory Activity

The dried fruit, administered by gastric intubation to mice at a dose of 2 gm/kg in a preparation containing *Bombyx mori*, *Aconitum sinense*, *Alpinia* species, *Mentha arvensis*, and *Sophora flavescens*, was active versus dextran-induced pedal edema, leakage of dye into the peritoneal cavity and yeast-induced inflammation of the paw in a rat model.^[36]

8.5. Antispasmodic Activity

Ethanol (95%) extract of the entire plant, at a concentration of 10 mcg/ml, was active on guinea pig ileum versus Ach-, histamine-, and Barium chloride-induced spasms.^[39] The lyophilized saponin mixture of the plant exhibited a significant decrease in peristaltic movements of rabbit jejunum preparation in a dose-dependent manner. These results showed that the saponin mixture.

8.6. Antitumor Activity

Water extract of the dried fruit, at a dose of 100 mg/kg was active on the mouse Sarcoma 180 (ASC) (H, 1988). There is a notable change in gene expression of CXCR4, CCR7, and BCL2 after the treatment of breast cancer cells with saponin extract from *T. terrestris*.^[41] Saponins isolated from the aerial parts were studied for their cytostatic/cytotoxic activity on human fibroblasts. The saponins showed a dose-dependent decrease in 3H thymidine incorporation into the DNA, indicating decreased proliferation.^[42] The aqueous extract of TT blocked proliferation in HepG2 cells and could also induce apoptosis through the inhibition of nuclear factor kappa-light-chain-enhancer of activated B cells (NF-κB) signalling. Thus, *T. terrestris* has clinical therapeutic effects against liver cancer cells.^[43]

8.7. Anti-urolithiasis Activity

Ethanol (95%) extract of the dried fruit, administered intragastrically to rats at a dose of 25 mg/kg, was active versus seed-induced cystolithiasis.^[37] An ethanolic extract of fruits was tested in urolithiasis induced by glass bead implantation in albino rats. It exhibited significant dose-dependent protection against deposition of calculogenic material around the glass bead, leukocytosis, and elevation in serum urea levels.^[44] *T. terrestris* was found to inhibit stone formation in various models of urolithiasis using sodium glycolate and ethylene glycol.^[45]

8.8. Aphrodisiac Activity

Phytochemical and pharmacological studies in humans and animals revealed an important role for *T. terrestris* in

treating erectile dysfunction and sexual desire problems. It was also reported that the drug *T. terrestris* has more potential than Ashwagandha and Kapikachhu. All three drugs are good enhancers of sexual function and behavior by increasing the testosterone levels and regulating the NF-KB and Nrf2/HO-1 pathway in male rats.^[46]

8.9. Cardiotoxic Activity

The tribulosin reduced the myocardial apoptosis rate and treated rats showed reduced MDA, AST, CK, CDH contents with elevated activity of SOD. The major phytochemical saponin is positive in response to dilate the coronary artery and improves circulation in blood vessels.^[47] *T. terrestris* also appears to protect the heart cells and may even improve the heart function following a heart attack.^[48]

8.10. Diuretic Activity

Hot water extract of the plant, administered intraperitoneally to male rats at a dose of 0.2 ml/animal, was active. The duration of action was 60 minutes.^[49] The aqueous extract of it in an oral dose of 5 gm/kg elicited a positive diuresis, which was slightly more than that of furosemide. In addition to its diuretic activity, it had evoked a contractile activity on the Guinea pig ileum.^[50] Different extracts of fruits, viz. aqueous, methanolic, Kwatha-high strength, Kwatha-low strength, and Ghana powder, were examined for diuretic activity in rats. Kwatha-high strength showed diuretic effect comparable to that of the reference standard frusemide and also exhibited additional advantage of potassium-sparing effect.^[51]

8.11. Hypocholesterolemic Activity

The extract (aqueous) of the fruits of *T. terrestris* was evaluated for the hypolipidemic activity in Wistar albino rats with a decrease in cholesterol, triglycerides, low-density lipoprotein (LDL), verylow-density lipoprotein (VLDL), and atherogenic index (AI), and an increase in high-density lipoprotein (HDL) levels in the blood. Hypolipidemic activity may be due to the presence of phenolic compounds.^[52] Saponins from the drug were studied on diet-induced hyperlipidemia in mice for its preventive and therapeutic effect. The preventive effect was demonstrated by decrease in the levels of serum total cholesterol (TC) and LDL-cholesterol. It also reduced the liver TC and triglycerides and increased the activity of SOD in the liver. It showed therapeutic effect by significantly reducing the serum TC and liver TC.^[53]

8.12. Hypotensive Activity

Ethanol (95%) extract of the dried entire plant, administered intraperitoneally to mice and intravenously to rabbits at a dose of 500 mg/kg was active.^[54] A dose of 50 mg/kg, administered intravenously to dogs, was effective.^[55] Methanolic and aqueous extracts are shown to possess significant antihypertensive activity by direct arterial smooth muscle relaxation and membrane hyperpolarization in spontaneously hypertensive rats.^[56]

8.13. Immunomodulatory Effect

An alcoholic extract of the whole plant of *T. terrestris* exhibited a significant dose-dependent increase in humoral antibody titer and delayed type hypersensitivity response, indicating increased specific immune response.^[57]

8.14. Antidiabetic Activity

The decoction of *T. terrestris* showed inhibition of gluconeogenesis in mice.^[58] Saponin from the drug possesses hypoglycemic properties.^[59] Ethanolic extract of TT exhibited 70% inhibition of α -glucosidase at 500 μ g/ml using maltose as the substrate and 100% inhibition of aldose reductase at a dose of 30 μ g/ml using di glyceraldehyde as the substrate.^[60]

8.15. Sclerosing Effect

Saponin fraction of the dried leaf, administered intravenously to adults, was active. The biological activity has been patented.^[61]

8.16. Skeletal Muscle

Relaxant Activity Ethanol (95%) extract of the entire plant, administered intraperitoneally to mice at a dose of 300 mg/kg was active.^[62]

8.17. Toxicity

The methanol extract of the plant showed cytotoxic effects, the others did not show the same. The water extract showed genotoxic and estrogenic effects, while the other extracts had anti-estrogenic properties.^[63]

9. DISCUSSION

This review highlights Gokshura's significance in traditional Ayurvedic medicine, with its various parts being utilized for therapeutic purposes. Gokshura is mentioned in most classical Ayurvedic textbooks under various names, including: Gokshura, Svadantra, Trikantaka. All parts of the Gokshura plant have been used for medicinal purposes. This review highlights Gokshura's extensive range of therapeutic properties, including: Diuretic (Mutravirechaniya): Enhances urine production, Anti-inflammatory (Shothahara): Reduces swelling and inflammation, Anthelmintic (Krimighna): Eliminates intestinal worms, Unctuous Enema (Anuvasanopaga): Supports enema therapy, Aphrodisiac (Vrushya): Enhances sexual health, Strength Promotor (Bala-krit): Boosts physical strength, Intestinal Cleanser (Basti-shodhana): Purifies the intestines, Appetizer (Dipana): Stimulates appetite, Nourishing (Pushtida): Nourishes the body, Anti-urolithiasis (Ashmarihara): Prevents kidney stones, Anti-diabetic (Pramehahara): Helps manage diabetes, Respiratory Health (Shvasahara/Kasahara): Alleviates respiratory issues, Hemorrhoid Relief (Arshahara): Treats hemorrhoids, Urinary Tract Infection Relief (Mutrakricchahara): Relieves UTI symptoms, Cardiac Protective (Hridrogahara): Supports heart health, Growth Promotor (Bringhana): Enhances growth and development, Pain Reliever (Shulahara): Alleviates pain, Vata Dosh

Balancer (Vatahara): Balances Vata energy, Tridoshahara (Pacifies All Doshas): Harmonizes all three doshas, Burning Sensation Relief (Dahahara): Relieves burning sensations, Skin Disease Treatment (Kusthahara): Treats skin conditions, Rejuvenator (Rasayana): Promotes overall rejuvenation and well-being. Gokshura has been scientifically proven to exhibit numerous pharmacological activities, including: Anthelmintic: Expels parasitic worms, Antifungal: Inhibits fungal growth, Antimicrobial: Effective against Gram-positive and Gram-negative bacteria, Anti-urolithiasis: Prevents kidney stone formation, Aphrodisiac: Enhances sexual function, Anti-inflammatory: Reduces inflammation, Diuretic: Increases urine production, Hypotensive: Lowers blood pressure, Anti-diabetic: Regulates blood sugar levels, Cardiotonic: Strengthens heart function, Anti-hyperlipidemic: Lowers lipid levels, Anti-tumor: Inhibits tumor growth, Immunomodulatory: Regulates immune response, Antioxidant: Neutralizes free radicals.

10. CONCLUSION

Gokshura, a plant used in Ayurvedic medicine for centuries, has been utilized to treat various health issues, including: Sexual disorders: Enhances sexual health and function, Urinary tract diseases: Relieves urinary tract infections and issues, Diabetes: Helps regulate blood sugar levels, Worms and parasites: Eliminates intestinal worms, Piles (hemorrhoids): Treats hemorrhoids and relieves symptoms, Inflammation and pain: Exhibits anti-inflammatory and analgesic properties. Research has confirmed that *T. terrestris* (Gokshura) possesses: Anti-inflammatory: Reduces inflammation and swelling, Analgesic: Relieves pain, Diuretic: Increases urine production, Aphrodisiac: Enhances sexual function and libido, Rejuvenator: Promotes overall health and well-being. Gokshura's diverse traditional uses and pharmacological effects make it a valuable herb in Ayurvedic medicine.

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