



A COMPREHENSIVE REVIEW ON PEELU (*SALVDORA PERSICA* LINN) – A LITERARY REVIEW

Ayurveda

Dr. Ashwini Kumar Sharma * Associate Professor, P.G. Dept. Of dravyaguna, M.M.M. Govt. Ayurvedic College , Udaipur *Corresponding Author

Prof, Mahesh Dixit Principal, PG Department of Shalya Tantra, M.M.M. Govt. Ayurvedic College, Udaipur

Dr Pradeep Soni Lecturer, P.G. Dept. Of dravyaguna, M.M.M. Govt. Ayurvedic College , Udaipur

Dr Renuka Phulwaria M.D., Scholar, P.G. Dept. Of dravyaguna, M.M.M. Govt. Ayurvedic College , Udaipur

ABSTRACT

Salvadora persica (Peelu) miswak is a large, well-branched, and evergreen tree resembling *Salvadora oleoides* found in the dry and arid region of India. Chewing sticks have been used for centuries for tooth cleaning and recommended by the World Health Organization. *Salvadora persica* is a promising product and is useful as analgesic, anticonvulsant, antibacterial, antimycotic, cytotoxic, diuretic, astringent and rheumatism. This review highlights the pharmacologic effects and therapeutic effects of *Salvadora persica*. The chemical constituents present in different parts of the plant are also discussed.

Salvadora persica (peelu) यह एक बड़ा, बहु शाखायुक्त सदाबहार वृक्ष है। यह भारत के शुष्क क्षेत्रों में पाया जाने वाला *Salvadora oleoides* से मिलता-जुलता एक वृक्ष है। इसकी दातों का प्रयोग कई शताब्दियों से दांतों की सफाई के लिए किया जाता है क्योंकि इसकी लकड़ी में नमक व रेजिन पाया जाता है जो दांतों की चमक को बनाये रखता है। पीलु सदियों से एक प्राकृतिक दूधब्रश के रूप में उपयोग किया जा रहा है। विश्व स्वास्थ्य संगठन ने पीलु की रेशेदार शाखाओं को मुख स्वास्थ्य हेतु उपयोगी निर्दिष्ट किया है। यह Antiulcerogenic, Analgesic, Anticonvulsant, Antibacterial, Antimycotic, Cytotoxic, Diuretic, Astringent, Rheumatism हेतु उपयोगी द्रव्य है।

KEYWORDS

Antibacterial, Analgesic, Anticonvulsant, Miswak, *Salvadora persica*, Chewing stick

INTRODUCTION^{1,2} -

Salvadora persica Linn., commonly known as miswak (tooth brush), belongs to the family Salvadoraceae. It is locally called as Kharijal. It is widely distributed in the arid zone of India and often on saline soils. It is an upright evergreen small tree or shrub, seldom more than 1 ft in diameter reaching a maximum height of 3 m. The fresh leaves are eaten as salad and are used in traditional medicine for cough, asthma, scurvy, rheumatism, piles and other diseases. The use of miswak is a Pre-Islamic custom, which was adhered to by the ancient Arabs to get their teeth white and shiny. The beneficial effects of miswak in respect of oral hygiene and dental health are partially due to its mechanical action and partially due to pharmacologic action. There is investigation of its different chemical constituents, which are responsible for these activities.

ETYMOLOGICAL DERIVATION

- **Salvadora** – In honour of J. Salvador he was Spanish botanist. Persica – Belonging to Persia.⁽³⁾
- पीलुति विरेचयतीति । (It does purgation by removing or relieving pratishambhana (constipation).⁽⁴⁾
- fruit of pilu are pugative.⁽⁵⁾

BOTANICAL DESCRIPTION STEM⁽⁶⁾ -

STEM -

- Bark of the old stems are rugose, branches are numerous, drooping, finely striate.
- Wood is whitish yellow in colour.

LEAVES –

- fleshy, glaucous, 4 to 6 cm long, 2 to 3 cm wide elliptical lanceolate, obtuse apex. has to 5 to 6 pairs main nerves.

PETIOLE –

- petiole is 1 to 2 cm long.

INFLORESCENCE –

- Axillary or terminal panicle.

FLOWERS –

- Greenish yellowish colour of flowers.

FRUITS

- Drupe, 3mm in diameter, globose, smooth and becomes red on ripening.

Fruit



CHIEF CHARACTERS⁽⁷⁾ –

- A small crooked tree with spreading and weeping branches.⁽⁷⁾
- Opposite coriaceous leaves
- Minute greenish white flowers.

HABITAT^(8,9,10)

- Drier parts of India such as occurring in Rajasthan, Bihar, Some Parts of U.P. and M.P., Konkan and Deccan⁸.
- Acc. to pv Sharma it is found in south india and gujrat and dry forests and specially found in Sindh Pradesh⁹
- It is found in deciduous forests of india, Punjab, rajasthan and gujrat knisth It also distributed in srilanka and ethopiak nisth¹⁰

FLOWERING AND FRUITING⁽¹¹⁾

Table no - 1

Flowering	November to may
Fruiting	March to june

VERNACULAR NAMES OF *SALVDORA PERSICA*^(12,13)

Table. 2

English	Tooth-brush tree, Mustard tree
Hindi	पीलु झाक
Sanskrit	पीलु गुडफल (मधुर फल) रुत्रंसी (सारक)
Panjabi	पीलु
Bangali	झाल
Marathi	पीलु खाखण
Gujrati	खारी जाल
Arbi	टारक

TAXONOMICAL CLASSIFICATION⁽¹⁴⁾ –

Table: 3

Kingdom	Plantae
Class	Dicotyledons
Subclass	Gamopetalae
Series	Bicarpellatae
Order	Gentianales
Family	Salvadoraceae
Species	Persica

GANA OF SALVADORA PERSICA IN VARIOUS⁽¹⁵⁾

TABLE:4

Charaka	विरचन, विरेचनोपग, शिरोविरचन, ज्वरहर, कटुस्कन्ध
Sushruta	शिरोविरचन
Bhavprakash Nighantu	आम्रफलादि वर्ग
Dhanvantri Nighantu	आम्रादि वर्ग
Kaidev Nighantu	औषधि वर्ग
Raj Nighantu	करवीरादि वर्ग
Sodhal Nighantu	आम्रादि वर्ग
Ashtang Nighantu	ध्यामादि गण
Shadhrasa Nighantu	5 स्कन्ध
Madanpal Nighantu	वटादि वर्ग
Shaligram Nighantu	फल वर्ग
Nighantu shesh	वृक्षकाण्ड
Hradaydeepak Nighantu	एकपाद वर्ग
Sidhmantra prakash	दोशघ्नवर्ग
Yogratanakar	घान्यादिफलकन्दगुणा

MEANING OF SYNONYMS OF PEELU IN VARIOUS NIGHANTU⁽¹⁶⁾

Table- 5

• गुडफल (सो. नि)	• इसके फल गुड के समान मधुर होते हैं ।
• गिरिसम्भव (नि. भो.)	• इसके गुल्म गिरि पर होते हैं ।
• विरेचनफल (सो. नि)	• इसके फल विरेचन कर्म करते हैं ।
• करभप्रिय (म. नि)	• इसके फल /पत्र करभ को प्रिय होते हैं ।

DOSH-NASHTAV TAR –TAMA PROPERTY OF PEELU GUNA(21)

Table - 7

दोष नाशत्व व तर – तम भेद	वात		पित्त		कफ		
	++		--		+		
वात के गुणों का नाशन व तर – तम भेद	रुक्ष +	शीत +	लघु -	सूक्ष्म -	द्वल -	विषद -	खर -
पित्त के गुणों का नाशन व तर – तम भेद	स्नेह -	उश्ण -	तीक्ष्ण -	द्रव -	अम्ल -	सर -	कटु -
कफ के गुणों का नाशन व तर – तम भेद	गुरु ++	शीत +	मृदु -	रिन्ध -	मधुर -	स्थिर -	पिच्छिल -

Ayurvedic properties of peelu in nighantu -

1. Bhavprakash nighantu⁽²²⁾ ((16TH CENT. A.D) –
- This book is also known as “Haritakyadi Nighantu”. Its author Bhava Mishra is the son of Latkan Mishra has been divided this Nighantu mainly in to two parts. This text is divided into 23 Varga. Here *peelu* is mentioned in aamradi varga.

पीलु श्लेश्मसमीरघ्नं पित्तलं भेदि गुल्मनुत ।
स्वादु तिक्त यत्पीलु तत्रात्युश्णं त्रिदोशहत् ।

2. Dhanvantri nighantu (10-13TH CENT. A.D)⁽²³⁾ –

- The original name of the book appears to be *Dravyavali Samuchchaya*. On the availability of various manuscripts the name of the author is *Mahendra Bhogik*. There are 7 Varga under which plants are described. *Peelu* is described under *aamradi varg* in *Dhanvantari Nighantu* .

रक्तपित्तहरः पीलुः फलं कटुविपाकि च ।
अर्षोघ्नं बस्तिषमनं सस्नेहं कफवातजित् ।।

3. Priya nighantu (20TH CENT. A.D)⁽²⁴⁾ –

- It is written by Acharya P.V. Sharma. Here *peelu* is mentioned in the phala varga .

पीलूष्णमरित कटुकं रसतः सुतीक्ष्णं ।
भेदि प्रकोपयति पित्तमथो विदाहि ।।
वातं कफं भामयति प्रततं प्रषस्तं ।।
गुल्मे गरेऽर्षसि गदे जठरोद्भवे च ।।

4. Kaidev nighantu (15TH CENT. A.D)⁽²⁵⁾ –

• शीतफल (भा. प्र .नि)	• इसके फल शीत वीर्य होते हैं ।
• गुल्मविनाशन (श. र .नि)	• इसके फल गुल्म रोग का विनाश करते हैं ।
• बलकरी (श. र .नि)	• इसके फल मधुर होने से बल बढ़ाने वाले होते हैं ।
• शाखी (कै . नि)	• इसका गुल्म अनेक शाखाओं वाला होता है ।
• पीलू (भा. प्र .नि)	• इसके फल मधुर होते हैं ।
• मधुरफल (डल्हण)	• इसके फल का रस मधुर होते हैं ।
• स्त्रंसी (भा. प्र .नि)	• इसके फल स्त्रंसन कर्म करते हैं ।
• विरेचन (कै . नि)	• इसके फल विरेचन कर्म करते हैं ।
• करभवल्लभ (यो. र)	• उसके फल /पत्र करभ या ऊंट को प्रिय होते हैं ।
• तीक्ष्णतरु (सि मं प्र)	• इसके मूल में तीक्ष्णता होती है ।
• गुल्मारी (नि. भो.)	• इसके फल गुल्म रोग का विनाश करते हैं ।

SYNONYMS ACC. TO MORPHOLOGY AND ACTIONS⁽¹⁷⁾

1. MORPHOLOGY-

- शाखी – प्रभूतशाखायुक्तः ।
(Pilu plants will have many branches.)

2. PROPERTIES AND ACTION -

- गुडफल – गुड इव मधुरं फलस्य ।
(Fruit of Pilu are sweet in taste as like that of Jaggery.)
- गुल्मारि – विरेचनत्वाद् गुल्मनाशकः ।
(Due to purgative action of Pilu is useful in Gulma.)
- स्त्रंसी – स्त्रंसयति पातयति पुरीशमिति ।
(Fruits of Pilu are having purgative action)

RAS PANCHAKA IN VARIOUS NIGHANTU AND CLASSICAL TEXT

Table : 6

	Ras	Guna	Virya	Vipak	Prabhav	Doshkarma
P.V. ⁽¹⁸⁾	Tikt, Madhur	Lagha Snigdha Teekshna	Ushna	Katu	Virchenopag	Kaph-vatashamak
B.N. ⁽¹⁹⁾	Tikt	-	Natyushna	-	Gulma-nashak	Tridosh-nashak
K.N. ⁽²⁰⁾	Katu	Teekshna Vidahi	Ushna	Katu	Malabhedak	Raktpitvardhak

- This book is otherwise known as “*Pathya Apathya Vibodhini*”. Its author *Kaideva* is the son of *Saranga* and grandson of *Pandit Padmanabha*. This text is divided in 9 Varga. Here *peelu* is mentioned in *Oshadhi varga* .

पीलूष्णमूर्च्छं पाकरसयोर्भेदि दीपनम् ।
तीक्ष्णं विदाहि पितास्त्रजननं सन्निष्कृति ।।
गुल्मार्षः कफवातास्त्रप्लीहानाहगरोदरम् ।
तत् स्वादु तिक्तं दोषघ्नं सोष्णं रुक्षं रसायनम् ।।

5. Raj nighantu (17th cent. A.d)⁽²⁶⁾ –

- This Book is also known with the names “*Abhidhana Chudamani*” and “*Nighantu Raja*”. Some other people named it as “*Dravyabhidana Gana Samgraha*”. *Pandit Narahari*, Son Of *Iswara Suri* is considered as The Author Of this *Nighantu*. It contains 23 Varga. *Peelu* is mentioned in *Aamradi Varga* .

अंकाहः कटुकः पीलुः कषायो मधुराम्लकः ।।
सरः स्वादुष्व गुल्माषःषमनो दीपनः परः ।।

6. Shaligram nighantu (19TH CENT. A.D)⁽²⁷⁾ –

- This text is being considered as the last in series of classical nighantus. It was written by *Lala Saligrama*, *Vaidya* of *Muradabad (UP)*. The text is divided in to two parts *Purvardha [Part-1]* and *Uttarardha [Part-2]*. Part-1 contains 23 Varga and part-2 contains only 2 Varga. Here *peelu* is mentioned in *phala varga*.

पीलू शीतसहः स्त्रंसीधानीगुडऽफलस्तथा ।
विरचनफलः शाखीध्यामः करभवल्लभः ।।

7. MADANPAL NIGHANTU (14TH CENT. A.D.)⁽²⁸⁾

This book is also known as “Madana Vinoda”. It has written by Madanpal. It is divided into 13 varga. Here peelu is kept in Vatadi varg.

पीलुश्च दीपनं भेदि रक्तपित्तकरं लघु ।
गुल्मार्षः प्लीहवाताम्बकफहरि रसायनम् ॥

Indication Of Peelu In Ayurvedic Text And Nighantus**Table no - 8**

	B. N. ⁽²⁹⁾	K. N. ⁽³⁰⁾	P. N. ⁽³¹⁾	D. N. ⁽³²⁾	Shankar N. ⁽³³⁾
Virechan	+	+	-	+	-
Aamvata	+	-	-	-	-
Dipan	+	+	-	-	+
Mutrajanan	+	-	-	-	-
Vishanghan	+	+	+	-	+
Swedjanan	+	-	-	-	-
Gulma	-	+	+	+	+
Pliha vradhi	-	+	-	-	+
Aanaha	-	+	-	-	+
Rasayan	-	+	-	-	-
Arsh	-	+	+	+	+
Udar rog	-	+	+	-	+
Vidahi	-	+	+	-	+
Vatrakt	-	-	-	-	+

CHEMICAL CONSTITUENTS (34)**Table no - 9**

Root-bark	Salvadorine Tri-methyl-amine Chlorides
Fruit	Sugar Fat
Leaves	Volatile oil
Seeds	Lauric acid Capric acid Myristic acid

Parts Used⁽³⁵⁾

- Fruit
- Seeds
- Leaves
- Root-bark

Dose⁽³⁶⁾

- Extract 5-10 ml
- Powder 1-3 gm

Karma (Action)⁽³⁷⁾

- Bhedan
- Gulmanashak
- Arsoghana
- Dipana
- Rasayan Arsha
- Gulma
- Agnimandya
- Appetizer

Pharmacological actions⁽³⁸⁾

- Aphrodisiac
- Stomachic
- Appetizer

Formulations⁽³⁹⁾**Table no - 10**

S.n	Name	Indications
1.	Kusthnashk prelepa	Kustha
2.	Visarparodhana yoga	Visarpa
3.	Haritkyadi churna	Udavarta

ACTION AND DISEASE INDICATION (40) –**Table no - 11**

Useful Part	Properties	Indications
• Leaves	<ul style="list-style-type: none"> • Anthelmintic • Anti-scorbutic • Deobstruant • Diuretic • Astringent • Expectorant • Tonic 	<ul style="list-style-type: none"> • Cough • Asthma • Bronchitis • Strangury • Painful tumour • Scurvy • Constipation • Verminosis • Piles

• Flower	<ul style="list-style-type: none"> • Stimulate • Laxative 	• Rheumatic –condition
• Fruits	<ul style="list-style-type: none"> • Thermogenic • Aphrodisiac • Emollient • Alexeteric • Stomachic • Purgative • Carminative • Deobstruent • Diuretic • Lithontriptic • Digestive 	<ul style="list-style-type: none"> • Seminal-weakness • Flatulence • Rheumatism • Tumours • Spleenomegaly • Constipation • Gastropathy • Bilioussness
• Root-bark	<ul style="list-style-type: none"> • Stimulant • Emmenagogue • Tonic 	<ul style="list-style-type: none"> • Spleenalgia • Gastropathy
• Seeds	<ul style="list-style-type: none"> • Diuretic • Purgative 	
• Stem-bark	<ul style="list-style-type: none"> • Emmenagogue • Ascarifuge • Febrifuge • Spasmolytic • Hypo-glycaemic • Anti-inflammatory • Anti-bacterial 	<ul style="list-style-type: none"> • Inflammations • Fevers • Diabetes

THERAPEUTIC USES 41**• Gulma**

एवं पीलूनि भृष्टानि पिबेत् सलवणानि तु ॥

Pilu fruits fried then consumed with Lavana. This remedy is very good in Gulma.

• Thirst –

परुषकाणां पीलूनां रसं शीतमथापि वा ॥

Cold juice of Peelu should be taken in thirst caused by alcoholic drinks. (Charak)

• Udara (Ascitis) –

गुल्मानां गरदोशाणामुदराणाञ्च षान्तये ।
पीलुकल्कोपसिद्धं वा घृतमानाह भेदनम् ॥

Ghrita processed with the paste of pilu breaks hardness of bowels and is efficacious in gulma, poisoning and udararog.

CONCLUSION^{43,44}

The knowledge of various medicinal plants being used is confined to mostly local healers, it is of utmost importance to record this knowledge for future generations, otherwise it will be lost forever with the death of local healers/ persons with knowledge about indigenous health care systems. The traditional values, faith, and indigenous knowledge related to indigenous health care systems of the present society are facing serious challenges due to migration of youths to cities and these urban migrants tend to determine their own cultural beliefs and practices. Thus, the recording of indigenous health care system becomes increasingly important for society. On the basis of a literature survey, it has been found that there are various traditional uses of miswak, which has to be scientifically proved.

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