

Evaluating the Clinical Efficacy of Azadirachta Indica in Modern Medicine

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ABSTRACT

Azadirachta indica (neem) is world-renowned medicinal plant, having long history of usage in various ailments in Indian traditional medical system (Ayurveda, Unani), since time immemorial. Each part of neem, including leaves, bark extracts, oil, and products made from neem have medicinal properties. This evergreen plant is native to the Indian subcontinent and to parts of Southeast Asia, but is naturalized and grown around the world in tropical and subtropical areas. Neem is used in Homeopathy, Ayurveda, Siddha and Unani system of medicine due to its anti-inflammatory, antifungal, antibacterial and anti oxidant properties. Despite its extensive therapeutic potential, few materia medica such as Boericke's Materia Medica and Lotus Materia Medica, include information about it and it is not listed in any repertory. There is need to update homeopathic literature to reflect high therapeutic value of Azadirachta Indica.

KEYWORDS: Neem tree, Azadirachta Indica, Therapeutic uses, Medicinal plant

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INTRODUCTION

For centuries, Humans have utilized the Neem tree evergreen plant of Indian subcontinent. Known for its rapid growth on dry, infertile soil and thrives in up to 50° C. The tree can reach up to 15-30 meters with attractive rounded and thick furrowed bark. It produces fruits like green drupes which turn golden yellow on ripening in the months of June–August¹.

The Neem tree particularly found in India, Sri Lanka, Pakistan, Thailand, Malaysia, Indonesia and it hold significant cultural and spiritual importance in these regions. Neem is often planted around the home and temple for its believed protective and purifying qualities. It is thought to prevent negative energies and promote over all well being.

The Neem tree has long been used for its medicinal and therapeutic properties. In Homoeopathy, it is employed to treat various skin condition, fever, cough, Jaundice and many condition.

- Botanical name: Azadirachta Indica, Melia Azadirachta
- Family: Meliaceae²

- Distribution: India, Sri Lanka, Pakistan, Thailand, Malaysia, Indonesia²
- Fruit time: June to August¹

Historical medicinal uses of Neem Tree^{3,5}:

The Neem tree has held significant place in Indian medicinal culture for thousands of years. Ancient Ayurvedic literature extensively documents its diverse therapeutic applications:

Charaka samhita: Describes its use for Leprosy.

Susutra samhita: It is excellent remedy for Leprosy, skin disease, gonorrhoea and bilious fever.

Harit: Excellent remedy in impurities of blood, boils and used in poisoning.

Vagbhat: Describes its use in boils, baldness of head, beneficial when the hairs grow grey before time.

Chakradatta: It recommends in poisonous boils, ulcers, eczema, skin disease and jaundice.

Vangasena: Use Neem for sciatica, heart disease due to cough, Fever in children and eye disease.

Bhavaprakash samhita: Describes its use in worms, hematemesis, ulcer and boil.

Physiochemical action of the Neem tree:

Various parts of the neem tree have been used for millennia in traditional Indian medicine for their claimed antipyretic, antacid, antiparasitic, antibacterial, antiviral, antidiabetic, contraceptive, antidermatic, anticancer, anti-inflammatory, antioxidant, antifungal, dental, and other healing and protective properties.⁴

Phytochemicals:

Active constitute is Azadirachtin and others are nimbin, nimbolinin, nimbidin, nimbidol, sodium nimbinat, gedunin, salannin and quercetin.¹

Leaves contains nimbin, nimbanene, 6-desacetylnimbinene, nimbandiol, nimbolide, ascorbic acid, n-hexacosanol and amino acid, 7-desacetyl-7-benzoylazadiradione, 7-desacetyl-7-benzoylgedunin, 17-hydroxyazadiradione, and nimbiol. Quercetin and β -sitosterol, polyphenolic flavonoids are purified from neem fresh leaves and known to have antibacterial and antifungal properties and seeds hold valuable constituents including gedunin and azadirachtin.¹

Practical utility:

Mind: Depressed and forgetful, mistakes in writing and spelling words, weak and dull, full of anxiety, inactive, forgets the names of very familiar persons, or what has been done in previous day No desire to go out or walk out. Loss of memory.^{3,5,6,7}

Head: Giddiness especially at 10 AM < when rising from , sitting posture. Throbbing headache, throbbing in the temporal arteries, especially of the right side, < in open air, stooping. Scalp is painful and sensitive to touch, even the hair is painful. On walking pain is felt in the back part of the head. Headache caused by congestion of bile.^{3,5,6,7}

Eyes: Burning in the eyes continued throughout even the next day, congested, dull and heavy. Pain in the eye, by slightest pressure. Burning with slight coryza, eyes red and sunken, Pressive pain in the right eye-ball. Saccadic movement of the eyes.^{3,5,6,7}

Ears: Buzzing in the ear like tickling of feather < on opening of mouth.^{3,5,6}

Nose: Watery discharge from the nose < morning > as the day grows.^{3,5,6}

Mouth: Putrid taste in the mouth; no thirst but mouth is clammy and bitter; tongue is painful; burning, felt as scalded; papillae seems enlarged and prominent;

saliva tastes salty; difficulty in deglutition, esp. water and meat; very much thirsty, sp. At long intervals or sometimes thirstless.^{3,5,6}

Abdomen: Twisting pain in epigastrium , clutching pain in umbilical region obliging to bend forward. Great uneasiness in abdomen with flatulence.^{3,5}

Stools: Insufficient bowels. Small hard and knotty when constipated but natural stools are copious, soft and semisolid. Diarrhoea no satisfaction after stool.^{3,5}

Male : Great excitement of sexual organ, sexual desire a little diminished.⁷

Female: Copious Leucorrhoea. Metritis of cervix. Metrorrhagia. Recurring miscarriages.⁷

Kidney: Urine scanty, high colored, scalding and strong odour.^{3,5}

Respiratory organs: Very troublesome cough after bathing at 1 PM^{5,6}. Violent cough with white, thick, jelly like sputum, which is difficult to expel⁷. Sighing breathing at intervals. Cough with grayish expectoration³.

Heart: Pulse rapid and strong or rapid and weak.^{5,6,7}

Extremities: Numbness of limbs as if paralysed. Burning of the hand and soles of feet. Numbness of the hands only especially right hand. Rheumatic pain in the lower extremities.⁵

Sleep and Dreams: Insomnia and agitation in bed. Sleeplessness and tossing in bed, dreamy and interrupted sleep at night. Dreams of quarrels and beating etc. in the later part of night.^{5,6,7}

Skin: Itching of various part of body without the appearance of any eruption, itching of the body⁷. Sudamina on back⁷.

Fever: Fever with slight chill or without chill from 4-30 PM and abates from 7-30 P.M, afternoon fever. Glowing heat and burning, in open air. Copious sweat, especially on the forehead gradually extending towards the trunk. No sweat in lower part of the body.^{5,6,7}

Conclusion:

Despite its significant therapeutic potential, few materia medica such as Boericke's Materia Medica and Lotus Materia Medica, include information about it. Notably currently no repertory includes this medicine under any rubric. There is a need to update Materia medica and Repertory with remedies that have significant therapeutic value. Azadirachta Indica has a broad therapeutic value in Homeopathy and other medical fields. When adequately proven it can be extensively used for various clinic conditions.

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