

POTENTIAL NEEM VERSUS PERNICIOUS CORONA- A HISTORICAL PERSPECTIVE

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ABSTRACT

Corona has become a common man's word for the past three to four months. This has turned into a word of allergy and as days move on with the spike in the death numbers it has become picture of danger and has posed a irrevokable panic in human mind. Constant spur in infection numbers and the death tolls overturned the entire globe in multifaceted angle dethroning all the rich or poor or educated or illiterate or modern or advanced irrespective of country, religion, caste and creed. Though entire medical fraternity of the world are working for its control and sealing its spread amidst emergence of its mutant strains this review aims at bringing to light the effectiveness of Neem in viral pandemics. Neem tree species has multifaceted uses is the ancient age old medicine and occupies an important place in socio-cultural-religious events in Indian communities. Neem is a common disinfectant employed in both animate and inanimate objects. Exploitation of neem tree and its parts in treating and suppressing various viral diseases is explored in this review with a historical perspective

INTRODUCTION

Neem is an indigenous tree species which is omnipotent and is close linked with religion values. Possessing neem is a routine custom during religious ceremonies or sacred rituals. Botanically it is referred to *Azadirachta indica* and falls in the family Meliaceae⁹. Neem tree has been revered by Indian community as a miraculous tree. Age old customs namely using neem tree twigs for cleaning their teeth, application of neem paste on the whole body during viral infections or any skin problems or consuming neem juice has been in practice for centuries among the Indians¹⁰. Rurally its referred to "the village pharmacy".

EVOLUTIONARY HISTORY OF NEEM

Evolution of earth is believed to be approximately 4.54 billion years ago followed by then movement of plants (475 million years) and human (200,000 years) inside earth's surface¹¹. Sequential evolution occurred during Paleozoic era to form Pangaea which eventually split into Laurasia and Gondwanaland¹². Intensive evolution followed up which resulted in splitting of the two to several continents. One such is Kumari Kandam in Indian ocean(100,000years ago). It lies to the south of present day Kanyakumari District¹³. From the date of evolution of this Kumari Kandam there are important references in Tamil Sangam regarding the presence and functioning

of three tamil sangam era. Literally the meaning of Sangam is the assemblies of Siddhars. The first Tamil Sangam had the father of Siddha medicine “ Agathiyar”.

He was empowered with medicine, language, alchemy and spirituality. Second and third Tamil Sangam too perished by natural forces¹⁴. In depth technical knowledge of the siddhars paved way for the deep rooting of Siddha Medicine into the aesculapian world. It was referred as the traditional system of medicine¹⁵ and now as alternative system of medicine. In Siddha medicine the first medicinal plant to be mentioned was Neem as referred by its annals⁶.

INHERENT NEEM IN TRADITIONAL MEDICINE

Ayurveda is one of the ancient Indian system of medicine⁷. It deals with Holistic approach to human health. Neem is referred as Nimba in Sanskrit. In Ayurvedic text it describes as Sarvarogamivarini (the curer of all illness). The terms namely Arishtha(perfect) and Nimba have evolved from nimbatisyasthyamdadati. This means “to give good health”. The uses of neem vividly mentioned in the book Arthashastra written by Kautilya in fourth century B.C. Similar notes are found in foundation books of Ayurvedic medicine namely Carak-Samhita and Susruta-Samhita³.

Siddha medicine according to a renowned Siddha treatise Tirumantiram(formed by Tirumular) means “conquest of death” which prevents mortality¹⁰. The roots of this alternate medicine is Tamil Nadu originated 10,000 years ago and which were popularly practiced by the people of ancient India. This is now still in vogue in various parts of south Tamil Nadu for treating minor wound, skin ailments, cold, cough and diarrhea. This system of medicine originated from Tamil Nadu, South India. This branch of medicine also has its roots in countries like Sri Lanka, Malaysia, and Singapore. The distinctive feature of traditional Siddha medicine is that the knowledge is passed through the generations and the entire family practices it continuously. Thus this medicinal field is age old in its service to humanity for the wholesome development of human health⁸. Siddhars practiced medicine in a spiritual ideology in an enchanting manner. The inscriptions were written on palm leaves in the form of poems. In their inscriptions Neem was the first plant to be mentioned.

NEEM AND VIRUS

Traditional Indian population always employed Neem in all its domestic, spiritual and medicinal usages. In this regard age old practice is to prepare a neem leaves bed for the chicken pox patients¹. The usage of neem leaves was extensive in this disease. Leaves were spread throughout the bed and it was also used as hand fan to create gentle breeze on them. In addition leaves were immersed in their bath tubs well before 2 hours of bath. A paste of neem leaves and turmeric is used instead of soap. This is routine age old practice followed in major parts of Tamil Nadu which is still in vogue. Majority of medical practitioners believe and abide these practices for chicken pox, small pox and viral warts⁴. The neem extracts absorb the viruses, preventing them from spreading to unaffected cells.

Neem has also been shown to be effective against herpes virus and the viral DNA polymers of the hepatitis B virus. Recent pharmacological studies have supported the belief that neem leaves possess some antiviral activity. So far these are only preliminary and unconfirmed results, but they are intriguing, nonetheless. In the United States, aqueous neem-leaf extracts have shown low to moderate inhibition of the viral DNA polymerase of hepatitis B virus. In Germany, an ethanolic neem-kernel extract has proved effective against herpes virus.² German experiments proved that a neem seed extract with ethanol is effective against the herpes viruses. Recent tests, although unconfirmed, have shown that neem is effective against herpes virus and the viral DNA polymerase of hepatitis B virus⁵. Should these findings be confirmed, neem could be used to cure these dreadful diseases.

CONCLUSION

Thirteen viral pandemics have engrossed the globe till date killing millions of population and rendering thousands shelterless and grinding the global economy to a stand still. Present COVID-19 also falls in the same category which is devastating the entire globe from January 2020. It's hard to calculate and forecast the true impact of COVID-19, as the outbreak is still ongoing and researchers are still learning about this new form of coronavirus. Though an effective method of treatment is yet to be discovered lots of preventive steps are advised in all methods of medicine. Combating such pandemics could be successful with an effective integrated approach of a combined methods of medicine. It is advisable that preventive measures are to be envisaged on a large scale to stall the spread of such viral pandemics.

REFERENCES

1. Al-Samarrai, G., H. Singh and M. Syarhabil, 2012. Evaluating eco-friendly botanicals (natural plant extracts) as alternatives to synthetic fungicides. *Ann. Agric. Environ. Med.*, 19: 673-676.
2. Anyaehie, U.B., 2009. Medicinal properties of fractionated acetone/water neem (*Azadirachta indica*) leaf extract from nigeria: A review. *Niger. J. Physiol. Sci.*, 24: 157-159.
3. Bhisagratna, KavirajKunjilal (1907). *An English Translation of the SushrutaSamhita Based on Original Sanskrit text*. Calcutta: K. K. Bhisagratna. Retrieved 16 October 2015.
4. Dhama, K., S. Mani, S. Chakraborty, R. Tiwari, A. Kumar, P. Selvaraj and R.B. Rai, 2013. Herbal remedies to combat cancers in humans and animals-A review. *Int. J. Curr. Res.*, 5: 1908-1919.
5. Elavarasu, S., P. Abinaya, S. Elanchezhian, Thangakumaran, K. Vennila and K.B. Naziya, 2012. Evaluation of anti-plaque microbial activity of *Azadirachta indica* (neem oil) *in vitro*: A pilot study. *J. Pharm. Bioallied Sci.*, 4: S394-S396.
6. Iloveindia . Bangalore: Iloveindia; Siddha Medicine. [Online] Available from: <http://www.iloveindia.com/medicine-systems/siddha/>. [Accessed on 12 August, 2012] [Google Scholar]
7. Meulenbeld, Gerrit Jan (1999). "Introduction". *A History of Indian Medical Literature*. Groningen: Egbert Forsten. ISBN 978-9069801247.

8. National Institute of Siddha . Chennai: National Institute of Siddha; About Siddha. [Online] Available from: <http://www.nischennai.org//about-siddha.htm>. [Accessed on 20 August, 2012] [[Google Scholar](#)]
9. Santhosh Kumar.V and V.Navaratnam, 2013, Neem(Azadirachta indica): Prehistory to contemporary medicinal uses to humankind. Asian Pac.J.Trop.Biomed.Jul;3(7):505-514.
10. Subbarayappa BV. Siddha medicine: an overview. Lancet. 1997;350(9094):1841–1844. [[PubMed](#)] [[Google Scholar](#)].
11. Wikipedia . San Francisco: Wikipedia; Timeline of evolutionary history of life. [Online] Available from: http://en.wikipedia.org/wiki/Timeline_of_evolutionary_history_of_life. [Accessed on 8 August, 2012] [[Google Scholar](#)]
12. Wikipedia . San Francisco: Wikipedia; Pangaea. [Online] Available from: <http://en.wikipedia.org/wiki/Pangaea>. [Accessed on 8 August, 2012] [[Google Scholar](#)]
13. Wikipedia . San Francisco: Wikipedia; Kumari Kandam. [Online] Available from: http://en.wikipedia.org/wiki/Kumari_Kandam. [Accessed on 8 August, 2012] [[Google Scholar](#)]
14. Wikipedia . San Francisco: Wikipedia; Tamil Sangams. [Online] Available from: http://en.wikipedia.org/wiki/Tamil_Sangams. [Accessed on 8 August, 2012] [[Google Scholar](#)]
15. Wikipedia . San Francisco: Wikipedia; Siddha medicine. [Online] Available from: http://en.wikipedia.org/wiki/Siddha_medicine. [Accessed on 8 August, 2012] [[Google Scholar](#)]