SJIF Impact Factor: 3.458

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 2.
Issue: 5.
Page N. 118-122
Year: 2018

Review Article www.wjahr.com

A REVIEW ON INDIAN MAGICAL HERB SANJEEVANI

Juluri Krishna Dutta Tejaswi*, Dr. R. Govinda Rajan

Department of Pharmaceutical Chemistry, Hindu College of Pharmacy, Amaravathi Road, Guntur (AP), India.

Received date: 01 June 2018 **Revised date:** 22 July 2018 **Accepted date:** 12 August 2018

Corresponding author: Juluri Krishna Dutta Tejaswi

Department of Pharmaceutical Chemistry, Hindu College of Pharmacy, Amaravathi Road, Guntur (AP), India.

ABSTRACT

For the past 1000 years or so in India, Asia and other parts of the world where the Hinduism is followed, the generations have been brought up listening and learning to the Hindu Epic "The Ramayana." In the Ramayana, there was description of a 'magical herb' called as "Sanjeevani Booti" or "Life giving herb" found in Indian Himalayas. It was believed that this magical herb have unique property of 'bioluminescence' for its easy identification and a "panacea" against all known and unknown diseases, which can give life even to dying or unconscious person. In present paper, we have tried to explain the botanical existence along with the medicinal properties of this wonder herb. It contains a variety of secondary metabolites such as Alkaloids, Flavonoids etc due to which it can be used for many activities like anti-oxidants, anti-inflammatory etc. So it is important to explore more and more about this wonder hound in the epic Ramayana.

KEYWORDS: Hinduism, Ramayana, Sanjeevani, Bioluminescence, Panacea, Mythical Herb.

INTRODUCTION

The traditional knowledge[1-3] of medicinal plants had been well documented in Charaka Samhita and Shusruta Samhita. They have been used for centuries in Indian Ayurvedic as well as in Chinese medicines to treat various diseases. It was an endemic species of India and Nepal distributed in warm hilly slopes between 400-1000 m altitudes that grow on the hills of tropical areas, particularly Dronagiri Hills in India.

In India[4-7] it was present in Uttaranchal, U.P., M.P., Chhattisgarh, Bihar, Odisha, Maharashtra, Tamil Nadu, Karnataka, Kerala and Andhra Pradesh. It was observed that this herb can with stand years of drought very effectively. The herb forms a lush green velvety carpet like landscape during the raining season and in summer it undergoes extreme desiccation.

It was believed that medicines prepared from this herb could revive an unconscious person. It was hypothesized that this herb possesses a growth-promoting activity as well as protective action against stress-induced cell death that play vital roles in organism growth and development, tissue homeostasis, and maintenance of genomic integrity. Traditional methods of its utilization include soaking them in water over night, preferably in an earthen pot and herb infusion taken orally. Factors like climate change, increasing urbanization, industrialization, encroachment of forest lands, unplanned developmental activities, over exploitation of natural resources, pose a major threat to the survival of these species. Due to deforestation the number of economically valuable plants have been reducing day-by-day. The uprooting of plants before sporulation makes the risk double which inhibits both vegetative and sexual reproductive cycles of plant and therefore needs special attention as far as conservation is concerned. Many valuable medicinal herbs become rare and precious information was lost. Less the pollution, more ecological balance we can maintain and can add to happiness to humankind.

The present study aims to screen the presence of the various types of phytoconstituents in plant. Our search was based on a set of criteria developed from the consistent details available from the epics on the names of the herb in different languages, its habitat, medicinal values and the ability to 'resurrect' life. Accordingly, from an initial list of potential species, we have filtered some species on which initial studies can be focused. However, our search was not complete and hence not final, as there could be other approaches and accordingly, other suggestions as well for Sanjeevani.[8-11] Till date, no herb had been discovered that has the qualities of the Sanjeevani Booti, as mentioned in the Ramayana.

Wikipedia, perhaps, falsely claims that *Selaginella* Bryopteris[12-16] is commonly referred to as Sanjeevani Booti according to CCRAS and BSI.

Mythology Behind Sanjeevani

According to Hindu mythology, 'Sanjeevani' was a magical herb which had the power to cure any disease. In the Ramayana poet Tulsidas, mentioned the description of wonder herb, 'Sanjeevani' when, Lakshmana fell unconscious, near death, hit by an arrow from Ravana, Sushena (Lankan Royal Physician) asked Hanuman to bring four plants: Mrutha Sanjeevani (restorer of life), Vishalyakarani (remover of arrows), Sandhanakarani (restorer of the skin) and Savarnyakarani (restorer of skin colour) from Dronagiri Hills. Hanuman, not able to identify them from the multitude and brought back with entire hill and Lakshmana was revived from near death back to life. Thus it was likely that Sanjeevani had properties capable of awakening or rejuvenating (and in that sense 'resurrecting') him.

Accordingly, if Sanjeevani does exist, it should have the ability bringing coma patients back to normal living state. In Ramayana it had been clearly mentioned that 'Sanjeevani Booti' glows in the dark when made slightly wet and kept in dark it glows; emits light. Its properties and usage had also been described. But this had been interpreted to infer that the herb is capable of 'resurrecting' life from near death itself.

Flora from Epics

In the ancient epics or Mahakavya, forests at various places are mentioned. The **Ramayana** was divided into Kandas (Books). One Kanda knows as 'Aranya Kanda'- Book of the Forest was present, named as 'Kishkindha Kanda' – Book of Kishkindha also describes the Geography and forestry of the region. Rama and Lakshmana were guided to a deadly forest on the other banks of River Ganges and acquainted about the provinces Malada and Karusha by the sage Vishvamitra. Here 'Slokas' 12-18 described about the forest trees and plants of the region. Aranya Kanda Slokas 46, 49, 74-76 revealed many trees and plants. Aranya Kanda sarga 15 mentioned about Panchavati situated on Godavari River in Nasik district in Maharashtra. The biodiversity of the area around Pampa Lake was mentioned in Slokas 12-18. Ramayana-Kishkindha Kanda Sarga 1 described of Pampa Lake and about many forest trees in Slokas 73-83. In Kishkindha Kanda Sarga 40, Sugreeva commissioning Vinata explained the topography and geography of Eastern side of the Jambudvipa, where trees have been mentioned in Slokas 39, 53 and 56. Although, a good proportion of species of Medicinal Plants do occur throughout the country, peninsular Indian forests and the Western Ghats are highly significant with respect to varietal richness.

In the **Valmiki Ramayana**, Indrajeet strikes down most of the Devas and Ram's army with arrows by aerial attack under sky cover. When Indrajeet was killed by Lakshmana, Ravana knowing about it, strike Brahma Astram capable of killing like nuclear bomb in present days and in order to respect the weapon Rama and Lakshmana surrender them and fell down. Hanuman who was even powerful that the weapon survives to it and accompanied with Vibhishana search for survivals and Jambavan tells Hanuman, "O Hanuman was the only one who can save the lives of the two brothers, as well as the lives of all the Vanaras. Go immediately to the golden peak on the Mountains called Himavan which was rich in herbs and bring back the four magic herbs. You have to come with those herbs at the earliest (Valmiki' Ramayana in the Slokas 29 to 34 of the 74th Chapter of the 'Yuddakandha').

In the **Adhyatma Ramayan**, Lakshmana indirectly was struck by Ravan when Lakshmana tried to protect Vibhishana. Falling into unconsciousness, Lakshmana was saved by Hanuman who obtained the Sanjeevani Booti healing herb to revive the stricken Lakshmana.

In the **Tulsidas Ramcharitmanas**, Indrajeet injured Lakshmana with a powerful weapon and he fell unconscious. Vibhishana advised Hanuman to bring the doctor Sushena from Lanka. Sushena instructed Hanuman to bring the Sanjeevani from the Himalayas. Actually Lakshmana was attacked by poison/'mantraputa' arrows according to Tulsidas in his book. What was the poison on these arrows? In the Himalayas there was a form of Monksbane called *Aconitum Luridum*, which was produced from the roots, deadly in poisonous quality, and which was usually applied to the arrows during the war to kill army. Today Dunagiri had been identified as located in the state of Uttarakhand. From the book we can conclude the fact that the poisonous effect was due to the poison obtained from plant species. So the plant species which can counter act on the effect can also named as Sanjeevani.

It was well worthy to mention here that Sanjeevani Vidya was present in the **Mahabharata**, another great Indian epic, was adopted by Shankaracharya, the preceptor of Demons, to revive all the demons killed by the Gods. According to the Ramayana, while bringing the entire Gandhamardan range from the Himalayas to treat Lakshmana with Sanjeevani, Hanuman broke some parts of the mountain and the pieces fell at the place where today's Gandhamardan stands with its treasure of fragrant medicinal plants. Gandhamardan mountain range was known worldwide as a reservoir for medicinal plants. It was located in the western Odisha. More specifically, it was located in between Balangir and Bargarh districts in India. Also some mountain pieces have fallen in various places in south India.

Criteria for Plants to be Sanjeevani

After detail study of the epic Ramayana, we have collected some characters of Sanjeevani. They are

1. The plant must have been referred to in different languages in India with terms close to Sanjeevani.

2. It should be a plant growing at high altitude.
3. It should be a very potential medicinal plant.
4. It should be capable of 'resurrecting' life.
5. Sanjeevani was supposed to have the characteristic of bioluminescence or emitting light.
6. Every part of the plant was having medicinal value.
7. Fragrance of the plant.
8. It contains Bioflavonoid as only majority of them give aroma.
9. It grows only in winter but becomes dry in summer.

Interference for Sanjeevani

1. As it was present from much long it should be used by people in hilly regions as ornament and also as food.
2. By knowing about the life style of people in hilly region we can know what they had eaten as they have survived from many diseases.
3. The people in hilly region aged above 90 should have definitely taken it knowingly or unknowingly as they are fit even today.
4. It should be definitely used by them for decoration as it gives bioluminescence.
5. It was reported in Vedas that the small animal know much about the medicinal plants than human beings. By observing them we can know much about the possible plants.
6. It can also be interfered that the plants maybe common household plants which are in olden days. Generally grow for fresh air, to be free from germs and infections.
7. It was reported in Vedas that houses are to be constructed in east west direction in the way air flow, from which we get information that plants must be present in that directions only.
8. It was reported in Vedas that the medicinal properties of the plants are generally more in Brahma Muhurtam means early morning so collection in that time was a prerequisite.
9. From the literature review we have knowed that the plants grow only in winter, so collection at that time was also a factor to consider.
10. From the literature review we have knowed that the plants show luminescence only when it comes in contact with the moisture.
11. It was also reported in epics that Hanuman brought the mountain by breaking the mountain so the trees maybe fallen all over his travel and due to natural adaptation and survival of the fittest theory it have taken new form in size and shapes and maybe available throughout the year.

Distribution

The Ramayana and other Mythical Stories / Puranas that refer to Sanjeevani have remained a part of the cultural heritage for several millennia in the Indian sub-continent including certain neighbouring countries such as Thailand, Indonesia and Cambodia. The objective of this was to discuss its existence, the habit, habitat and medicinal values including 'resurrect' life amidst modern scientific approach. In India it may be present in Uttaranchal, U.P., M.P., Chhattisgarh, Bihar, Odisha, Maharashtra, Tamil Nadu, Karnataka, Kerala and Andhra Pradesh and in Nepal.

Molecular Bioactivities

The herb contains a variety of secondary metabolites and bioactive compounds such as alkaloids, phenol (Flavonoids, tannins, saponins), and terpenoids (triterpene, steroid). The main secondary metabolites of this herb were bioflavonoid, whose type various depending on the species. Bioflavonoid is naturally occurring compounds that are omnipresent in all vascular plants and have many favourable biological and pharmacological effects. These compounds act as antioxidants, anti-stress, anti-inflammatory, anti-cancer, anti-allergic, antimicrobial, antifungal, antibacterial, antiviral, antiprotozoan, anti-spasmodic, vasorelaxant, heart boosters, antihypertensive, anti-clotting, and affect the metabolism enzymes evaluate the anti-microbial activities. This evidence contributes to support and quantify the importance of screening of the herb.

Criteria of Selection

Nature always selects the survival of fittest according to Darwin. In due course of time the Herbs may have taken different forms and adaptations for its existence in nature. The expected adaptations may be in height, shape and size, bioluminescence, occurrence only in winter and becoming dry in summer, growing in higher altitudes, fragrance etc. The Bioluminescence may be lost as in present time we cannot find a plant glowing in present world due to pollution and other factors. Due to adaptations the plant may be persistent and healthy in both summer and winter. In India we have many places where the climate cold resembles the Himalayan climate and temperature. So there was a chance of occurrence of the plant in those areas.

In Organic chemistry, aware of the fact that when plant was socked in suitable solvent it gives florescence which can be treated as bioluminescence of that time. By much research work we came to know that the plants which are having the Flavonoids and Volatile oils are having the property of fragrance and have much activity so the plants may be rich in them. By taking in to consideration these in accountant we have listed out few plants which are named as Sanjeevani in other languages. Those are listed in **Table 1**.

Table 1: List of Plants that named as Sanjeevani.

Scientific name	Family	Common name (in Sanskrit)
Desmotrichum fimbriatum	Orchidaceae	Jeevaka, Jeeva, Jeevabhadra, Jeevavani, Jeevanthi, Jeevapathra, Jeeva pushpa, Jeevavardhini, Jeevadhaathri, Jeevya, Rakthaanthi, Yashasya, Sukhankaari, Praanadha
Malaxis acuminata	Orchidaceae	Jeevaka
Malaxis wallichii	Orchidaceae	Jeevaka
Microstylis wallichii	Orchidaceae	Jeevaka, Rishvan
Dregea volubilis	Asclepiadaceae	Jeevanti
Holostemma rheedii	Asclepiadaceae	Jeevanti
Leptadenia reticulate	Asclepiadaceae	Jeevanti
Cimcifuga foetida	Ranunculaceae	Jeevanti
Cressa cretica	Convolvulaceae	Sanjeevani, Amruthashraava, Rudanthi, Madhushraava, Romaanchika
Litsea chinensis	Litseaceae	Jeevani
Putranjiva roxburghii	Euphorbeaceae	Jeevanpatra
Selaginella bryopteris	Selaginellaceae	Sanjeevani, Sanjeevani Bhoothi
Tinospora cordifolia	Menispermaceae	Jeevanthica
Terminalia chebula	Combretaceae	Jeevanthi, Jeevanika, Chethara
Trema orientalis	Urticaceae	Jeevani
Trichopus zeylanicus	Dioscoriaceae	Jeeva
Viscum articulatum	Loranthaceae	Jeevanthica

Plants or Processes Involved in Sanjeevani Herbs

It was opined that since ancient Indian texts such as *Atharvaveda*, *Charak Samhita* and *Susruta Samhita* fail to indicate specific plants corresponding to Mritasanjeevani, Sandhanakarani, Savarnyakarani and Vishalyakarani, these may be a collection of medical techniques based on certain uses of some medicinal plants having synergistic effects, which may Qualify as being elixirs of life. It was postulated that four medical procedures have been described are

1. **Vishalyakarani**: A form of surgery, removal of foreign bodies (arrows, poison, etc.) from the wound.
2. **Sandhanakarani**: Treatment of fractures.
3. **Savarnyakarani**: A form of plastic surgery, treatment of wounded or burnt or amputed areas and return of the affected skin to uniform colour.
4. **Sanjeevankarani**: Treatment to restore life or perhaps consciousness.

CONCLUSION

The herb have many therapeutic properties and traditionally. So it was important to explore more and more about this wonder herb and effort should be made for its conservation. There was no doubt that these plants have several important medicinal properties and has been worshipped among local people as a magical herb owing to its medicinal properties. A plant of great importance to the society as a whole and a thorough study in terms of its therapeutic properties and phytochemical researches could upgrade the future prospect of this herb as a life saving plant. Nature had a solution for all these problems, and thus need to explore and utilize these natural products which are readily available in the golden palms of nature which offer a promising remedy for many diseases.

ACKNOWLEDGEMENTS

Authors are thankful to Hindu College of Pharmacy, Amaravathi Road, Guntur, Andhra Pradesh, India to provide the infrastructures to pursue the work.

REFERENCES

1. Tryon RM and Tryon AF. Fern and allied plants, with special reference to Tropical America. Springer Publisher, New York, 1982.
2. Jermy AC: Selaginellaceae. The Families and Genera of Vascular Plants-1, Pteridophytes and Gymnosperms. Springer Publisher, Berlin, 1990.
3. Dixit RD. Selaginellaceae of India. Bishen Singh Mahendra Singh Publisher and Distributer, Dehradun, 1992.
4. Kumari R. Impact of Selaginella bryopteris on biochemical analysis of diabetic swiss albino mice caused induced by alloxan. Int J Basic Appl Sci Res, 2014; 1(2): 95-99.
5. Antony Reena. A mini review on medicinal properties of the resurrecting plant Sanjeevani. Intl J of Pharm and Life Sci, 2011; 2(7): 933-39.
6. Lahkar et al. An Overview on Properties, Therapeutic Efficacy of the Indian Magical Herb-"SANJEEVANI". Am J of Pharm & Health Res, 2015; 3(2): 1-10.
7. Sah NK. Indian herb 'Sanjeevani' can promote growth and protect against heat shock and apoptotic Activities of ultra violet and oxidative stress. J of Biosci, 2005; 30: 499–505.
8. K. N. Ganeshaiah. In search of Sanjeevani. Current Sci, 2009; 97(4): 484-489.
9. Pankaj Sah. Does the Magical Himalayan Herb "Sanjeevani Booti" really exist in Nature? The J of A Sci, 2008; 4(3): 65-67.
10. Nand K Sah. Indian herb 'Sanjeevani' can promote

growth and protect against heat shock and apoptotic activities of ultra violet and oxidative stress. J Biosci, 2009; 30(4): 499–505.
11. Rupa, P. and Lakshmi Bhavani, N. DNA Quantification Studies of Selaginella bryopteris (L.) Bak. Genotypes in Telangana, India. Int J Curr Microbiol App Sci, 2016; 5(6): 144-149.
12. Srimad Valmiki Ramayana, 74th chapter, Yuddakandha, Slokas, 29-34.
13. Ayurvedic Formulary of India, Part I. Government of India, Ministry of Health and Family welfare. New Delhi: Department of Health, Controller of Publications, 1989; 154-162.
14. Ayurvedic Pharmacopoeia of India, Part I. Vol.1, Government of India, Ministry of Health and Family welfare. New Delhi. Department of Health, Controller of Publications, 1989; 26-123.
15. Singh SK, Shrivastava GK, Shukla PK. Comparative morphology of ligules of three Indian species of Selaginella. Am Fern J, 2010; 100(2): 71-79.
16. Bhutani KK, Gohil VM. Natural Products Drug discovery research in India: Status and appraisal. Ind J Experimental Bio, 2010; 48: 199-207.