



Herbal Drugs Used In Nipah Virus

Miss. Gayatri Mahale 1st, Mr. Nikhil Chaudhari 2nd, Mr. Utkarsh Mandage 3rd,
Miss. Jagruti Patil 4th, Miss. Snehal Chaudhari 5th, Miss. Neha Patil 6th, Miss.
Pratiksha Patil 7th

Guide: Mr. Dr. Gajanan Daphal 8th

Date of Submission: 09-11-2023

Date of Acceptance: 23-11-2023

Abstract:

It has been revealed in recent years that a large number of herbal plants have antiviral properties that can treat diseases like Nipah Virus, which are brought on by harmful viruses. The effectiveness and potential of herbal medicines in preventing viral illnesses have been investigated through research on natural products derived from plants that act as antiviral agents against viruses. Viral illnesses pose a serious threat to global health, contributing significantly to rising death rates and exacerbating crises. Herbal formulations, on the other hand, have less negative effects than synthetic antiviral medications, which can have several side effects and a limited therapeutic window. We should divide and create new herbal moieties to combat the emergence of viral diseases because herbal formulations have advantages over manufactured medications. Phytochemicals with antiviral characteristics are present in the medicinal plant. This research examines the antiviral properties of therapeutic plants that are significant in Ayurveda, as well as the source of these substances.

Keywords: Ayurveda; phytochemicals; medicinal plants; antiviral agents; therapeutic window range; viral infections.

I. Introduction :

The nipah virus (NiV) is a paramyxovirus that can infect animals and subsequently transfer to humans. Furthermore, it can spread through physical contact between infected and uninfected people. As a result of NiV, some people experience a symptomatic or moderate infection, but most clinical cases result in severe neurological signs and symptoms. Similar to influenza, the early signs and symptoms include a high fever, headache, and myalgia. The main carriers of the lethal and extremely contagious Nipha virus are fruit bats and pigs. The typical time frame for the onset of Nipha virus symptoms is 3–14 days

following infection. The Nipah virus (NiV) can travel from person to person or through tainted food. Since it is a zoonotic virus, people can contract it from animals. It can cause a wide range of illnesses in those who contract it, from asymptomatic (subclinical) infection to fatal encephalitis and acute respiratory illness. Furthermore, the virus may cause major injury to animals, notably pigs, which could result in significant financial losses for farmers. Although there have only been a few reported outbreaks in Asia, the Nipah virus poses a major threat to public health since it may kill humans and infect a wide range of animals.

Symptoms :

- The first non-specific symptoms of the disease are a sudden onset of fever, headache, muscle pain, nausea, and vomiting, followed by tiredness and confusion.
- Exhibiting some encephalitis-related neurological symptoms, such as stiff neck, photophobia, drowsiness, confusion, and disorientation.
- It shares symptoms with influenza, sometimes referred to as the common or animal flu.
- In severe cases, myocarditis, or inflammation of the heart wall, and in extremely rare cases, a coma, may ensue.

Management by Prevention:

- Avoid contact with horses, bats, pigs, and pig handlers.
- Maintain personal hygiene by washing your hands frequently. Steer clear of raw fruits and make sure they are thoroughly cleaned, peeled, or cooked instead.
- Avoid consuming or buying vegetables from dirty areas or from fruit that has dropped to the ground.



- Eat only home-cooked, well prepared food while the outbreak lasts.
- Avoid consuming unpasteurized juices.
- It is advisable to wear a N95 mask when working in public spaces or travelling to avoid the spread of the virus from person to person.
- Wearing protective gear such boots, goggles, masks, gloves, and impermeable gloves is recommended for individuals who work in laboratories and healthcare facilities or routinely interact with potentially sick animals.
- Patients infected with NiV should receive barrier nursing care and be kept separate due to the virus's contagious nature.

Risk factors :

- Those who come into contact with pigs and bats
- Eating fruits that have been attacked by bats and pork (pig meat)
- Interaction with individuals who have already contracted the Nipha virus.
- The afflicted person's cough and sneeze transmit the infection.

Herbal and natural cure for Nipha virus infection

Herbs that work like miracles can both heal and shield against Nipha virus infection. Within a week, the herbal medicine listed below can effectively cure Nipha virus infections without causing any negative side effects. This decoction, or kashayam, can be made at home. Herbal stores will carry all of the medicinal herbs listed below in powdered form. Some herbs may be in season right now in your living room.

Ingredients :

- Vishnukiranthai powder - 1 teaspoon or fresh whole plant - 2
- Gudichi or seenthilkodi powder - 1 tsp
- Pavalamalli or Parijatha fresh leaves - 20
- Nilavembu fresh leaves - 20 or powder - 1 tsp
- Tulsi leaves - A hand full of fresh leaves or powder 1 tsp
- Vallarai or brahmi leaves - 20 fresh leaves or powder 1 tsp
- Long pepper powder - 1/2 tsp
- Black pepper powder - 1/2 tsp
- Water - 4 liters
- Honey - 1 tsp

Method of preparation :

- Take all above mentioned ingredients in a vessel.
- Add 4 liters of drinking water to it.
- Boil it and still reduce it to half.
- Strain this mixture and store it in a proper container.
- Take 100 ml of this decoction or *kashayam* in a glass.
- Add one tsp full of honey
- Mix it well
- Have this *kashayam* before food, 3 to 4 times a day, for 5 to 7 days.

1. **Morning glory**, also known as **vishnukiranthai**, is a medicinal herb with tiny purple blossoms. It typically grows in waste areas and at the side of roadways. *Evolvus alsinoides* is the plant's scientific name, and it is a member of the Convolvulaceae family. Both Ayurveda and home remedies are excellent for treating various types of fevers, both acute and chronic. It has antiviral, anti-inflammatory, and immune-stimulating qualities. A Tamil adage known as "vidatha kaaichchalukku vishnukiranthai" also mentions this herb. This demonstrates its ability to treat fevers.



Vishnukiranthai or Morning Glory

2. **Gudichi** is a herbaceous vine, also known as **Seenthil kodi**. The scientific name for this medicinal plant, which is a member of the Menispermaceae family, is *Tinospora cordifolia*. Sankrit for gudichi is 'one which guards the body'. In Siddha and Ayurveda, it is typically used to cure fevers of various kinds and to reduce inflammation. Its qualities include antiviral, immunomodulatory, anti-inflammatory, and restorative. This herb works well for treating Nipha virus infections.



Seenthil Kodi or Gudichi

3. **Pavalamalli**, also known as *parijatha* is a decorative plant with numerous therapeutic uses. Its botanical name is *Nyctanthes arbor-tristis*, and it is a member of the Oleaceae family. It has anti-inflammatory and anti-microbial qualities. These leaves are utilised in Ayurveda medicine to treat all kinds of fevers, both acute and chronic. To treat an infection caused by the Nipha virus, use this plant.
- 4.



Pavalamalli or Parijatham

5. A medicinal herb with numerous therapeutic benefits is **nilavembu**. It is a member of the Acanthaceae family and is known by its botanical name, *Andrographis paniculata*. It is a blood detoxifier, anti-inflammatory, and anti-microbial. It aids in the treatment of persistent and sporadic fever.



Nilavembu

6. **Holy basil, or tulsi, leaves** are a great treatment for fevers, asthma, lung conditions, and heart conditions. Its botanical name is *Ocimum tenuiflorum*, and it is a member of the Lamiaeceae family. Its antiviral, antibacterial, and remarkable therapeutic qualities. Its eugenol, antioxidants, and vitamin C will save our hearts from further illnesses.



Tulsi or Holy Basil

7. **Vallarai, also known as brahmi leaves**, are used in Ayurveda to treat fevers of all kinds and to enhance memory. They also have the power to protect the brain. Its botanical name is *Centella asiatica*, and it is a member of the Apiaceae family. This plant contains a substance called vellarin, which is particularly beneficial to memory.



Vallarai or Brahmi leaves



Black pepper or Milagu

8. **Thippili, or long pepper**, contains antibacterial properties that help lower fevers. *Piper longum* is its botanical name, and it is a member of the Piperaceae family.



Long Pepper or Thippili

9. **Black pepper**, also known as **milagu**, guards the heart and fights illness. *Piper nigrum* is its botanical name, and it is a member of the Piperaceae family.

II. Conclusion :

We concluded in this review that many of the medicinal plants used in Ayurveda, including Vishnukiranthai, Gudichi, Pavalamalli or parijatha, Nilavembu, Tulsi or holy basil leaves, Vallarai or brahmi leaves, Long pepper, and Black pepper, have similar phytochemicals that give them their antiviral properties against the Nipah virus. Phytochemicals obtained from plants target the critical enzymes for viral reproduction in the Nipah virus, acting on distinct phases of the virus's replication process. Many phytoconstituents have yet to have their target viral mechanism revealed. Worldwide, studies and discoveries about these phytochemicals' viral-targeting processes are being conducted. It is necessary to find novel bioactive molecules in this age of viral infections that are on the rise. Medicinal plants are used as a source to discover novel antiviral medicines that have more antiviral activity than traditional antiviral substances.

Reference :

- [1]. http://www.ccras.nic.in/sites/default/files/Notices/24052018_CCRAS_HQ_AyurvedicAdvocacyforManagementofNipahVirusInfection.pdf
- [2]. https://m.facebook.com/MaharishiVedicHealthCentre/photos/the-ayurvedic-advocacy-for-management-of-nipah-virus-infectionniphavirus-niv-is/1699666150153806/?locale=hi_IN
- [3]. <https://www.netmeds.com/health-library/post/nipah-virus-the-causes-symptoms-and-treatment-of-this-deadly-disease>
- [4]. <https://medium.com/@dilipkumark/nipah-virus-niv-prevention-treatment-medicine-and-solutions-c088091b7861>



- [5]. <https://www.practo.com/health-wiki/nipah-virus-symptoms-treatment-transmission/172/article>
- [6]. <https://madhavuniversity.edu.in/nipah-virus.html>
- [7]. <http://drsrevathi.blogspot.com/2018/05/natural-and-herbal-remedy-for-nipah.html>
- [8]. <https://www.ayurvedahimachal.com/nipah-virus-niv-natural-cure/>
- [9]. <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON490>
- [10]. <https://my.clevelandclinic.org/health/diseases/25085-nipah-virus>
- [11]. <https://www.annepublishers.com/articles/JAVR/1102-Ayurvedic-Antiviral-Agents-Overview.pdf>
- [12]. https://en.wikipedia.org/wiki/Nipah_virus_infection
- [13]. <https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/biosecurity/animals/diseases/guide/nipah-virus>
- [14]. <https://www.hindustantimes.com/lifestyle/health/nipah-virus-suspected-behind-unnatural-deaths-in-india-causes-risk-factors-symptoms-treatment-101694511142663.html>
- [15]. <https://www.cambridge.org/core/journals/epidemiology-and-infection/article/nipah-virus-infection-a-review/4D3B54325AF2E6BB45C34E96EA71D66E>
- [16]. American Society for Microbiology. What You Need to Know About Nipah Virus (<https://asm.org/Articles/2023/April/What-You-Need-to-Know-About-Nipah-Virus>). Last reviewed 4/2023. Accessed 6/20/2023.
- [17]. Banerjee S, Gupta N, Kodan P, Mittal A, Ray Y, Nischal N, et al. Nipah virus disease: A rare and intractable disease (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6409114/>). *Intractable Rare Dis Res.* 2019 Feb;8(1):1-8. Accessed 6/20/2023.
- [18]. Centers for Disease Control and Prevention (U.S.). What is Nipah Virus? (<https://www.cdc.gov/vhf/nipah/about/index.html>) Last reviewed 10/2022. Accessed 6/20/2023.
- [19]. National Emerging Special Pathogens Training & Education Center. What You Need to Know about Nipah Virus (<https://netec.org/2023/02/10/what-you-need-to-know-about-nipah-virus/>). Accessed 6/20/2023.
- [20]. Osmosis by Elsevier. Nipah Virus (<https://www.osmosis.org/answers/nipah-virus>). Accessed 6/20/2023.
- [21]. World Health Organization. Fact sheet: Nipah virus (<https://www.who.int/news-room/fact-sheets/detail/nipah-virus>). Last reviewed 5/2018. Accessed 6/20/2023.