



## Traditional herbal formulation for the management of Herpes Zoster

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### Abstract

Viral infection Herpes zoster or Shingles caused by Varicella zoster virus is constantly responsible for epidemiological events of severe importance and has become a major public safety issue. Herpes zoster can affect any age group with a higher incidence in elderly patients particularly in susceptible adults. The treatment and prevention of human viral infections presently rely mainly on a combination of vaccines and drugs. Due to increasing drug-resistant strains, recent antiviral drugs are facing the problem while vaccines frequently do not work much against mutated or novel viruses. Therefore, it is crucial to explore innovative approaches to traditional herbal antiviral formulations. Traditional healers in study area use their herbal formulation (Herbal Oil) to treat the tribal and rural patients suffering from viral infections herpes zoster. The traditional formulation has given the best result for treatment of Herpes zoster.

We can rethink about traditional herbal formulation, especially use of this drug needs to be formulated for highly effective treatment of the above viral infection. This study demonstrates the potential efficacy of traditional topical herbal formulation for the treatment of herpes zoster. The findings provide a clue for further analysis and purification steps with the aim of identifying the active elements existing in the above herbal formulation.

**Keywords:** Herbal formulation, traditional healers, herpes zoster etc

### Introduction

India has a rich treasure of medicinal plants due to the diversity in its agroclimatic conditions<sup>[1]</sup>. Around 2500 effective plant-based formulations used in folk medicine are known to rural communities all over India and around 10,000 designed formulations are available in the indigenous medical texts derived from various plant parts such as aerial parts, flowers, fruits, leaves, seeds, stems, and subterranean components like roots, bulbs, tubers, and rhizomes.

There are several herbal medications waiting for synthetic versions, which are currently unavailable. For the great majority of people on the planet, medicinal plants are the primary source of life-saving herbal remedies, and are also consumed directly as food, fiber, and Medicine. Natural products and traditional medicines are valuable for the treatment and prevention of various diseases<sup>[2]</sup>. Moreover, medicinal plants are also source of raw materials for the synthesis of novel therapeutic drugs.

Medicinal plants have played a significant role in various ancient traditional systems of medicine in management of Herpes zoster. Herpes zoster (HZ) or “shingles” is one of the most common neurological conditions worldwide which is caused by the Varicella-zoster virus (VZV)<sup>[3]</sup> leading to inflammation, painful vesicular rashes, and potential postherpetic neuralgia.

Herpes zoster infection is a worldwide health problem that normally affect human life. A traditional healer is an important expert in researching notable medicinal plants for the treatment of Herpes zoster. This study aimed to document the traditional knowledge and the use of traditional herbal formulations for the treatment of Herpes zoster among traditional healers in Nagbhid tahsil of Chandrapur district. Formulation consists of Herbal oil prepared from leaf extract of *Merremia dissecta* (Jacq.) Hallier, a climber, belongs to family Convolvulaceae (Fig. 1.).

Herbal formulation given to the patients prepared by traditional healers for the treatment of Herpes zoster was recorded. The information was collected from experienced traditional healers by interviews and participant observations.

### Study Area Nagbhid Tahsil

Nagbhid is a town and tahsil in Chandrapur district of Maharashtra. The tribals invaded and localized in the Nagbhid Tahsil are Mana, Gond, Pardhan, Halba, Gond-Gowari and Paradhi. The survey includes all the tribal ranges of the study area. It also includes a major forest range which reveals the maximum diversity of the ethnomedicinal plants.

### Material and Methods

The study was carried out in the tribal region of Nagbhid Tahsil during the period of (January, 2022 to September 2023). Many places were visited in tribal localities of Nagbhid tehsil. The 22 tribal villages were surveyed through periodical tours in tribal localities. The information was documented involving field study by contacting and interviewing traditional healers for plants used in the treatment of Herpes zoster. The tribals and other villagers who had used this formulation prepared by local ethnic medicine-men were also interviewed. The botanical names, vernacular names, family and method of treatment and mode of preparation of drug have been documented. Plant specimens were also collected, identified using the standard taxonomic method and preserved.



Fig 1: *Merremia dissecta* (Jacq.) Hallier

### Observations

Tribal population in Nagbhid tahsil is 19.1%. The tribals invaded and localized in the Nagbhid tahsil rely on traditional healers for the treatment of various diseases. The wealth of ethnomedicinal plant knowledge among the traditional healers of this tahsil is based on hundreds of

years of beliefs and observations. This knowledge has been transmitted orally from generation to generation.

Traditional healers collect different parts of plant for medicinal purposes. The tribals and peoples of adjoining areas were observed suffering from a viral infection called Herpes zoster. The medicinal plant; *Merremia dissecta* is the most used herbal drug by healers in the treatment of Herpes zoster in this region. The method of preparation & dosages for management of Herpes zoster is described below.

### Method of preparation of & administration of herbal Oil

About 250 gms. Fresh leaves of *Merremia dissecta* were grinded to obtained paste. 1000 ml Sesame oil is added in a wide mouth vessel then added paste of leaves. Then gently heated till the total moisture quantity evaporates. After cooling, the oil is strained and is ready for use. The patients suffering from Herpes zoster were cured by topical application of the above herbal oil locally twice a day for a week. The patients cured by using this herbal oil treatment in different villages in Nagbhid Tahsil are shown in Fig. 2.

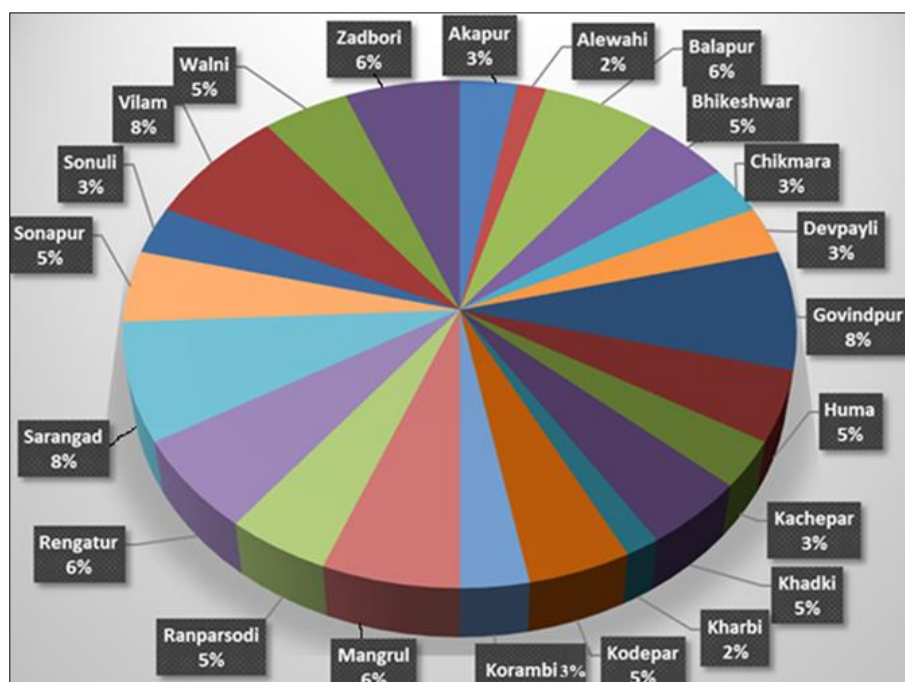


Fig 2: Percentage of patients cured from Herpes zoster in different villages

### Discussion

Effective, inexpensive, and safe indigenous remedies are gaining popularity equally among the people worldwide. Such type of documentation brings out many different clues for the development of novel drugs to treat human diseases.

*Merremia dissecta* shows presence of many phytochemicals which may be responsible for various pharmacological activities. Traditionally, the plant has been used against inflammation, colds, urinary infection, wounds, and scabies. *Merremia dissecta* is used in condiments, medicines and as ornamentals<sup>[4]</sup>. Leaves essence extracted from *Merremia dissecta* was used for food flavour. The leaves used as tea for relieving cold and flu. The plants were used in "folk" medicine in three agro-climatic regions (Andhra, Telangana, and Rayalseema) of Andhra Pradesh, India<sup>[5]</sup>.

Boiled tubers are used traditionally against chest problems, inflammation, urinary tract infections, snake bite, sprains

and scabies<sup>[5, 10]</sup>. Infusion of crushed leaves was for chest problems, applied against inflammation and work as emollients and sedatives at the same time<sup>[11]</sup>. Decoction of the plant was considered an effective external remedy for scabies and itches<sup>[12]</sup>.

Methanolic extract of *M. dissecta* leaf showed 40 different compounds and its callus showed presence of 26 phytoconstituents<sup>[13]</sup>. Secondary metabolite showed biological activities such as anti-inflammatory, antioxidants, antiosteoarthritic, analgesic, antidiabetic, Anticancer, anti-microbial and hepatoprotective<sup>[14]</sup>. Caryophyllene is a sesquiterpene which has anti-tumour, analgesic, antibacterial, anti-inflammatory, sedative and fungicide activity<sup>[15]</sup>.

Phytochemical studies and other research revealed biological activities such as anti-inflammatory, antioxidants, and analgesic, anti-microbial and potent wound healing

abilities which support the traditional use of this species in treating Herpes zoster. *Merremia dissecta* has a leading capacity to prove as effective source for treatment and control of various diseases in future.

### Conclusion

In conclusion, the presented data and various research studies supports the traditional usage of above plant in the treatment of patients suffering from Herpes zoster. A wide range of plants and plant derived products are used in folk medicine for the treatment of Herpes zoster as curative agents. The tribal and rural community depends for their medical aid on traditional healers existing near habitat. Several breakthrough medications have been recently produced from natural plant resources. We can also rethink about traditional herbal formulations and specially use of this drug needs to be formulated for highly effective treatment of Herpes zoster.

In present scenario, traditional medicinal practices form an integral part of complementary or alternative medicine. The above findings prove the efficacy and authenticity of traditional medicines. Furthermore, there is the necessity of extensive research to isolate the specific compounds that are effective against the Herpes zoster and conservation of ethnobotanical knowledge before it is completely vanished.

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