



AYURVEDIC AND MODERN DESCRIPTIONS OF ANTI-INFECTIVE DRUGS W.S.R. TO THEIR MEDICINAL PROPERTIES

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ABSTRACT

In India, Ayurveda is the most widely used form of complementary and alternative medicine. Natural antibiotics are a few natural products that have a tendency to kill bacteria and promote health and hygiene. Ayurveda described numerous drugs that can be used as a natural antibiotic or we can refer as an Ayurvedic antibiotic. Ayurveda is capable of developing both therapeutic and preventative compounds that can be useful in the prevention of microbial diseases. The extracts of many herbs possess medicinal properties. There are various ranges of bioactive molecules in both single-herbal compounds and poly-herbal compounds. Ayurveda formulations like *Ajmodadi churna*, *Dasamoola churna* and *Triphala churna*, etc. can be used as potential antibiotics against many microbial infections. The natural antibiotics having *Tikta*, *Kashaaya*, *Katu*, *Ushna* and *Kshraia* properties thus possessing ability to calm *Kapha Dosh*, *Jwara* and *Kasa*.

KEYWORDS: Ayurveda, Infection, Krimi, Antibiotic.

INTRODUCTION

Ayurveda is a natural healthcare system that was developed in ancient India by *Rigveda* and *Atharvaveda*. It is believed that Ayurveda can cure human diseases by creating a balance in the various aspects of human life i.e.; mind, intellect, soul and body. A key component of Ayurveda treatment is the idea of strengthening the mind and body so that it can handle a variety of stressors, including infection.

The Ayurvedic concept of immunity is also categorized as *Sahaja*, *Kalaja* and *Yuktikrut*. This immunity plays an important role in the prevention of infectious diseases. Personalized interventions influenced by host and environmental factors are part of the holistic approach to health promotion that Ayurveda advocates. *Panchakarma*, *Rasayana* and uses of certain immunomodulators, etc. are the examples of Ayurveda approaches that can help to treat infectious disease. Number of Ayurvedic remedies has been used to treat and control variety of microbial diseases in humans.^[1-4]

Worldwide, infectious diseases account for the majority of premature deaths and frequently cause pandemics that threaten the entire population. Ayurveda uses crude plant extracts and polyherbal compounds to treat a wide range of infectious diseases. *Charaka Samhita* described *Doshavikriti* and *Agantuja* factors as the causes of infectious diseases. The modes of infectious disease

transmission have also been described, and the evolution of term *Janapadodhwansa* has been attributed to the roles played by *Udak*, *Vayu*, *Desha* and *Kala*.

Atharvaveda and *Charaka Samhita* mentioned the existence of two kinds of microbes; pathogenic and non-pathogenic. In Ayurveda these pathogens described as *Durnam* or *Vaikaric* and *Sunam* or *Sahaja*. *Acharya Gananath Sen* coined the term "*Jeevanu*," which has since been linked to the emergence of a wide range of illnesses, including enteric, respiratory and skin conditions.^[4-7]

Ayurveda drugs for infectious Diseases and Their properties

Drugs with the properties of *Kashaaya*, *Kshraia*, *Katu*, *Tikta* and *Ushna* can be used to treat infections. Formulations from Ayurveda such as *Satavari Kalk*, *Sudhasar Rasa*, *Laghu Gangadhar Churna* and *Rasanjanadi Churna*, etc. can treat infections caused by bacteria. These drugs having ability to calm *Jwara* and *Kasa* which are the major symptoms of infectious diseases. These drugs also boost immunity, suppress vitiated *Doshas* and potentiates *Agni* thus improves internal strength.^[6-8]

Amla, *Guduchi*, *Guggulu*, *Neem*, *Punarnava*, *Tulasi*, *Vasa* and *Haridra*, etc. are the natural drugs which are used for the *Sankramak Roga*.^[8,9] In *Sankramak Roga*,

these natural medicines have the positive health effects as depicted in **Figure 1**.



Figure 1: Therapeutic properties of ayurveda anti-infective properties.

Natural herbs or plants

- ✓ **Giloy** is one of the best ayurvedic treatments for colds and coughs, it is a potent herb that strengthens immunity, fights against infections and alleviates cold and flu symptoms. Additionally, it improves the body's natural defence mechanism against viral infections and reduces inflammation. This drug imparts digestive properties thus restore metabolic activities during infections and fever.
- ✓ **Tulsi** is an excellent ayurvedic treatment for viral infections and offers anti-inflammatory properties. It helps to clear the airways and lowers the fever. It boosts strength and energy, *Tulsi* also helps in digestion and reduces anxiety.
- ✓ **Turmeric** is considered as an effective remedy for viral infections. It helps to lower fever, boost immunity, offers anti-inflammatory, antioxidant and antiviral properties. It alleviate throat pain and cures respiratory infections. Turmeric can be used with food to combat viral infections.
- ✓ **Ginger** is one of the most incredible ayurvedic home solutions for colds and viral contaminations. It alleviates coughing and soothes sore throat due to its antiviral and anti-inflammatory properties. Ginger boost immunity and acts as digestive element.
- ✓ **Neem** used for antimicrobial purposes, can also be used topical purpose for skin related infections. It helps in fungal infections, wound healing, gives antiseptic property and possess anti-viral action.
- ✓ **Guggulu** used for oral hygiene and infectious skin diseases. Additionally, it boosts immune responses by acting as a carminative and appetite stimulant, nourishing the body and enhancing *Dhatu* quality. Plant resin reduces microbial load by increasing leucocytes and promoting process of phagocytosis.
- ✓ **Amla** imparts antibacterial and antiviral properties thus traditionally used to treat infectious fevers. Additionally, it stimulates metabolic processes and relieving post-infection symptoms.

- ✓ **Punarnava** boosts lymphocyte proliferation, reduces infections, modifies the cell-mediated immune response and exerts immune-modulators effects.
- ✓ **Pippali** alleviates intestinal parasites, helps in the treatment of giardiasis, strengthens body's immune system thus offers antimicrobial properties.
- ✓ **Vasa** stimulate immune system, act against many pathogens, improve nutritional supply and facilitate process of detoxification.

Ayurveda formulations

- *Shwas kuthar rasa* and *Talisadi Churna* used for fever and *Kasa* associated with infections.
- *Krimikuthar rasa* and *Vidanga Churna* is considered good for *Antajakrimi*.
- *Lakshmililas rasa* is considered useful for *Pratishyaya* associated with microbial infections.
- *Balakalpam* improves immunity and prevent illnesses that arise due to the microbial invasion. It cures intestinal infections in children and relieves stomach discomfort.
- *Amrutharishtam* provides strength to combat the common seasonal cold and cough specially in *Kumara Avastha*. *Amrutharishtam* alleviates fever-related weakness and keeps children's high temperatures under control. This medication prevents respiratory infections and runny noses, etc.
- *Chyavanprash* used as traditional Ayurvedic remedy to restoring immunity and resistance against infections in children. *Chyavanprash* has a lot of nutrients and rejuvenating effects that helps to increasing resistance against respiratory infections.

CONCLUSION

The major *Sankramak Roga* as per Ayurveda includes *Kushta*, *Jwara*, *Netrabhishyanada*, *Rajayakshma*, *Dushta Kasa* and *Shleshmak Jwara*, etc. According to Ayurveda drugs which provide strength and immunity can be advocated to combat such types of conditions. The

natural drugs having *Tikta*, *Katu*, *Ushna*, *Kshraia* and *Kashaaya*, etc. properties can be advises against infectious diseases. Ayurveda drugs such as; *Satavari*, *Kalk*, *Laghu Gangadhar Churna*, *Rasanjanadi Churna*, *Amla*, *Guggulu*, *Guduchi*, *Punarnava*, *Neem*, *Tulasi*, *Haridra* and *Vasa*, etc. are used for the *Sankramak Roga*. These drugs balance *Doshas*, potentiate *Agni* and suppress formation of *Ama*, thus relieve *Jwara* and *Kasa* which are the major symptoms of infectious diseases.

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