

AYURVEDA PERSPECTIVE ON INFECTIOUS DISEASE AND THEIR MANAGEMENT
THROUGH AYURVEDA DRAVYA (NATURAL DRUGS)Dr. Pradyumna M. Pasarkar*¹, Dr. Shailendra K. Pund² and Dr. Khemraj V. Pawar³¹HOD, Professor, *Dravyaguna* Dept., Vedprakash Patil Ayurved College, Jalna, Maharashtra, India.²HOD, Associate Professor, *Rasashastra & Bhaishajya Kalpana* Dept., Dr. VJD Gramin Ayurved College, Patur, Dist. Akola, Maharashtra, India.³HOD, Professor, Kriya Sharir Vidnyan Vibhag, MUP'S Ayurved College Degaon, Risod, Dist. Washim, Maharashtra, India.

*Corresponding Author: Dr. Pradyumna M. Pasarkar

HOD, Professor, *Dravyaguna* Dept., Vedprakash Patil Ayurved College, Jalna, Maharashtra, India.

Article Received on 15/04/2020

Article Revised on 05/05/2020

Article Accepted on 26/05/2020

ABSTRACT

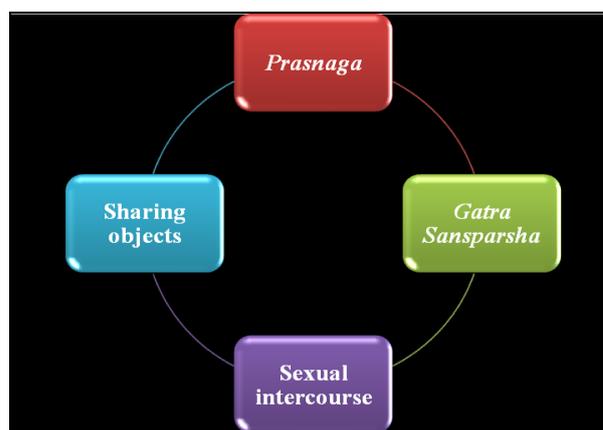
Sankramaka Roga and communicable disease are very common now a day's which arises due to the microbial transmissions. The infectious diseases can transmit from one to another person through various mode of transmission including biological, physical and chemical means, etc. These microbial agents affect specific tissues of body and utilize biological system of host for their multiplication; this way induces pathogenesis of specific diseases. The microbial toxins; endotoxins or exotoxins contribute significantly towards the pathological manifestations of diseases. Ayurveda mentioned various approaches for the management of such diseases including uses of antibiotics, enhancing fluid intake, lifestyle modification, uses of immune booster and purification measures; Raktmokshana as Shodhanupkramas etc. The concept of Dravyaguna provides way for the management of various diseases including infections.

KEYWORDS: Ayurveda, Dravyaguna, Sankramaka Roga, Infections.

INTRODUCTION

The *Sankramaka Roga* described in various ayurveda texts with different terminologies; *Janapadodhwansa* and *Aupsargikarogas* are some of them. *Jala*, *Kala*, *Asdushitavayu* and *Desha* are considered responsible for *Janapadodhwansa*. *Aupsargikarogas* like; *Kushtha* and *Jwara* can spread through various means from one person to another. Similarly *Jwara* & *Shosha* are also considered as *Sankramaka Roga* (contagious disease) spreads through various means of contact.

The microbial diseases occur after the invasion of pathogenic microorganisms including bacteria, fungi, viruses and parasites. These microorganisms may transmit through soil, air, water, body surface and through direct contacts. The mode of transmission of communicable infectious diseases depicted in **Figure 1**.

**Figure 1: Some mode of transmission of communicable infectious diseases.**

Ayurveda described some concepts such as; *Panchamahabhuta*, *Prakriti*, *Dosha*, *Dhatus* and *Srotas* for understanding and preventing disease pathogenesis. *Ayurveda Dravyaguna vgyan* means *Materia Medica* emphasizes pharmacology and pharmaco-therapeutics of drug like materials. The concept of *Dravyaguna* deals with various properties like; *Rasa*, *Guna*, *Veerya*, *Vipaka*

and *Prabhava* which contributes towards the *Karma* of antimicrobial drugs.

Samprapti

The specific pathogens of *Sankramak Roga* affects host cells when *Bala* get diminished due to the aggravation of etiological factors. Pathogens utilizes host biological system for their growth and affects biological responses leading to the vitiation of *Dhatu*, *Dosha* and *Malas* which further resulted aggravation of *Vayu* and quality of *Rasa* get diminished. The severity of clinical manifestation of *Sankramak Roga* depends upon *Prakriti* of an individual.

The modern science also described various stages of pathological progression of microbial infections which are as follows:

- Accumulation
- Aggravation
- Dissemination
- Localization
- Manifestation
- Chronicity

Diagnosis

- *Nadi Pariksha*, *Darshana*, *Sparshana* and *Prashna*.
- *Panchendriya pariksha*.
- Examination of tongue and throat.
- Enzyme Assay Kit (ELISA).
- X-rays and Microscopic examination.
- Biochemical staining and serological test.

Management of Infectious Disease W.S.R. to concept of *Dravyaguna*

Drugs possess *Kashaaya*, *Katu*, *Tikta*, *Ushna* and *Kshraia* properties may be used to decreases microbial growth. Various *Aushadha* such as; *Pipplyadi Yog*, *Jambvadi Patra Swaras*, *Rasanjanadi Churna*, *Laghu Gangadhar Churna*, *SudhasarRas* and *Satavari Kalk*, etc. may offers health restoring effects after microbial infections. The drugs which pacify *Kapha* can be used in infectious diseases possess symptoms of *Kasa* & *Shwasa*. Plants like *Surasa*, *Sugandhaka* and *Nirgundi* were also evaluated by researcher for their antimicrobial property.

Neem (*Azadirachta indica*) used classically for its antimicrobial property. It can be used for topical as well as internal infections mainly related to the skin problems. It reduces fungal infections, helps in wound healing, provides antiseptic action, maintains oral hygiene and relieves symptoms of *Kushtha*. It also offers anti-viral action.

Ginger (*Zingiber officinale*) used for microbial infections, removes microbial toxins, cure symptoms of intestinal infections, cure adverse post diarrheal adverse health effects. It also acts as carminative and stimulant thus enhances digestive process thereby boost nutritional

supply, restore *Bala* and improves resistance against infections.

Guggulu (*Commiphora mukul*) used for infectious skin diseases and oral hygiene. It also acts as carminative and appetite stimulant thus nourishes body and improves quality of *Dhatu*s thereby boost immune responses. The oleoresin of plant increases leucocytes and stimulates process of phagocytosis thus reduces microbial load.

Indian madder root (*Rubia cordifolia*) used for urinary tract infections traditionally. The dried root acts as an astringent thus provide local antiseptic action and it also acts as diuretic therefore removes accumulation of urine which may cause infections.

Amla (*Emblica officinalis*) used traditionally for infectious fevers since it possess antibacterial and antiviral properties. It also stimulates metabolic activities therefore regulate normal physiological activities and cure symptoms of post infections.

Boswellia gum resin (*Boswellia serrata*) recommended for urinary disorders like urinary tract infections. It possesses antibacterial action against enteric bacteria.

Guduchi (*Tinospora cordifolia*) well known for its antimicrobial action and used as a febrifuge. Cure urinary infections, syphilis, skin infections and bronchial infections. *Guduchi* improves phagocytic activity thus enhances natural process of defense mechanism.

Triphala & *Punarnava* promotes immunity, relieve hepatic amoebiasis, reduces infections, modulate cell-mediated immune response, stimulate leukocyte migration, exert immune-modulators effects and boost proliferation of lymphocytes.

Pippali helps in Giardiasis, relieves intestinal parasites, possess antimicrobial actions and improves natural immune system.

Turmeric (*Haridra*) acts as immuno-stimulants, helps in bone marrow proliferation, offers antimicrobial actions and helps in topical as well as internal infections.

Bhumyamalaki and *Katuki* inhibit skin infections; stimulate immune system, act against many pathogens and helps in nutritional supply.

Asvagandha *Euphorbia pilulifera*, *Tulasi* and *Vasa*, etc. offers bactericidal activity against many pathogens including tuberculosis.

Bhallatakasava offers bactericidal activity especially against diphtheria causing microorganism.

Manduka Parni helps in Giardia infection, it facilitate expulsion of parasites from intestinal tract.

CONCLUSION

The many ayurveda drugs acts as an immuno-stimulant, improves immune status, offers tissue protection, boost cellular regeneration thus helps in infectious disease. The anti microbial activity of these natural drugs can be attributed to their chemical constituents. The *Katu*, *Tikta*, *Ushna* and *Kshraia* properties of ayurveda drugs helps to reduces microbial growth and removes microbial toxins from body.

REFERENCES

1. Acharya YT, editor. Charaka Samhita. Varanasi: Chowkhamba Surbharati, 2000. (Charak, Sutrasthan 30/26)
2. Acharya YT, editor. Susruta Samhitha of Susruta with Dalhana Tika. Varanasi: Chaukhamba Orientalia, 1992. (Sushrut, Sutrasthan 15/48)
3. P.V. Sharma, Susruta Samhita, reprint, Varanasi, Chaukhamba Visvabharati, 2005; 44.
4. Kaviraj Atrideva Gupta, Astang Hrdayam, reprint, Varanasi, Chaukhamba Prakashan, 2009; 135: 8. Harish Chandra Singh Kushwaha, Carak Samhita – second part, Reprint, Varanasi, Chaukhamba Orientalia, 2012; 1.
5. Patwardhan B, Payyappalli U. Ayurveda and antimicrobial resistance. J Ayurveda Integr Med, 2018; 9(2): 85–86.
6. Agnivesha, Charaka Samhita elaborated by Charaka & Drudhabala with Ayurveda-Deepika Commentary by Chakraranidatta, edited by Dr. Brahmanand Tripathi, Varanasi, Chaukhamba Surbharati Prakashan, Reprinted, Sutra sthana chapter, 2011; 19(5): 111.
7. Rao AR, Sukumar S, Paramasivam TV, et al. Study of antiviral activity of tender leaves of margosa tree (*Melia azadiricta*) on vaccinia and variola virus: a preliminary report. Ind J Med Res., 1969; 57: 495-502.
8. Atal CK, Sharma ML, Kaul A, Khajuria A. Immunomodulating agents of plant origin. I: preliminary screening. J Ethnopharmacol, 1986; 18: 133-41.
9. Rege NN, Nazareth HM, Bapat RD, Dahanukar SA. Modulation of immunosuppression in obstructive jaundice by *Tinospora cordifolia*. Indian J Med Res., 1989; 90: 478-83.