



Review Article

Volume 12 Issue 5

Sept-Oct 2023

## COMPARATIVE ANALYSIS OF AYURVEDIC AND MODERN MEDICINAL APPROACHES TO EPIDEMIC CONTROL

Rupali Vaibhav Selukar<sup>1</sup>, Dr. Trushna Tembhekar<sup>2</sup>, Dr. Vrushalee Dodke<sup>3</sup>

<sup>1</sup>Associate Professor, Department of Rognidan, Government Ayurved College, Nagpur (Maharashtra) India.

<sup>2</sup>Professor and HOD, Department of Shalyatantra, Mansarovar Ayurvedic College, Bhopal (M.P.) India.

<sup>3</sup>Associate Professor, Department of Prasutitantra and Strirog, LN Ayurved College, Bhopal

### Abstract

The global impact of viral diseases on public health poses a significant threat to morbidity and mortality worldwide. Ayurveda, with its extensive clinical experience and rich cultural heritage, stands as the oldest system of medicine. Its unique perspective on epidemic diseases is encapsulated in the concept of *Janapadodwansa*, which emphasizes the interplay of *Vayu*, *Jala*, *Bhumi* and *Kala*. In Ayurveda, the vitiation of these elements progressively complicates disease management. The fundamental causes of epidemic diseases are attributed to *Adharma* and *Pragyaparadha*. Ayurveda advocates the adoption of *Sadvritta* and *Rasayana* practices for managing such types of condition. Early detection of disease, vaccination, public health education and social support, etc. are approaches advice in modern system of medicine for epidemic control. As per modern science epidemic control refers to the coordinated efforts and measures taken by public health authorities and other relevant stakeholders to prevent and manage the spread of an infectious disease within a specific population or geographical area. The aim of epidemic control is to minimize the impact of the disease, reduce the number of cases, and ultimately prevent its further spread. Present article explain Ayurvedic and modern medicinal approaches to epidemic control.

**Key-Words:** *Ayurveda, Janapadodwansa, Epidemic, Disease, Infection*

## Introduction

Ayurveda's approach to epidemiology incorporates both physical and spiritual sciences, acknowledging that an epidemic can affect individuals with diverse constitutions, physical strength, dietary habits, ages and mental states, etc. The common underlying factors identified as *Vayu*, *Jala*, *Bhumi* and *Kala* serve as the basis for such widespread calamities, with their increasing influence progressively challenging to mitigate. When these factors deviate from their natural qualities, they can prove destructive to human life. Ayurveda attributes the distortion of *Vayu*, *Jala*, *Bhumi* and *Kala* to the unjust actions of humans, disrupting the harmony between society and nature and exacerbating the imbalance within the ecosystem [1-4].

## Management of Epidemics in Ayurveda:

The timely cessation of disease progression is prime concern in the management of epidemics. *Susruta* highlights the contagious nature of illnesses such as *Kustha*, *Jwara* and *Shosha* which spread through direct contact or the use of contaminated objects. In the context of contagious diseases, the concept of *Aupsargic* disease or the transmission of diseases through contact is underscored [4-6]. *Charaka* proposes a three-fold approach to managing infectious diseases as depicted in **Figure 1**.



**Figure 1: Approaches to manage infectious diseases as per *Charaka***

*Apakarshana* means prevention of disease, *Prakriti Vighata* means amelioration of the inherent nature of the disease and *Nidaana Parivarjana* means avoidance of causative factors. *Panchakarma*, a bio-purification therapy, is advocated to eliminate morbid *Doshas*,

while *Rasayana* therapies are recommended to boost vitality. The strategy for combating epidemics should encompass measures to enhance immunity and halt disease progression, administer appropriate therapies and herbs, adhere to a wholesome lifestyle and spiritual ethics such as *Sadvrita*, *Achara Rasayana*, while avoiding *Pragyaparadha*.

In the effective management of communicable diseases, the implementation of *Sadvritta*, *Dinacharya* and *Rutucharya* is recommended. Collecting medicinal herbs before the onset of diseases in specific regions is emphasized. In high-risk areas, the planning of *Shodhana* procedures can be considered. Bolstering immunity to diminish the risk of infection stands as a pivotal measure in the prevention and treatment of various epidemic diseases [2-5].

### **Preventive Measures:**

General identification and isolation of suspected cases, both in hospital settings and homes, constitute crucial strategies. Emphasizing basic hygiene practices like frequent hand-washing or sanitization, utilizing well-fitted masks, and enforcing infection control measures are essential components of this approach.

*Sthana Parityaaga* means encouraging individuals to relocate from contaminated areas to safer zones to minimize the risk of infection transmission.

*Shaantikarma* involves approaches of stress reduction and strategies to manage and prevent the spread of communicable pandemics in the human population.

*Prayaschittam* emphasizing the importance of tracing the travel history and contacts of diagnosed cases to ascertain the potential spread of the infection.

*Mangala-Japa-Homa-Upahaara* means encouraging practices aimed at preventing the spread of contamination within communities through auspicious rituals and offerings.

*Yajya* means proposing the purification of the atmosphere through the performance of rituals to eliminate microorganisms and promote a healthier environment.

*Tapa* is advocating the adherence to prescribed regimens and lifestyle practices to improve overall health and immunity.

*Aatmagupti* is the practice of isolation or quarantine to curb the transmission of the infection and protect the broader community.

The process of purifying *Vayu* is achieved through *Dhupan*, involving the use of certain medicinal plants with antimicrobial properties. *Dhupan* serves as a disinfectant, effectively cleansing clothes, bed sheets, and the surrounding atmosphere.

Ayurveda strictly prohibits the use of water contaminated with substances such as urine, insects, decomposed material and other waste materials. Highly contaminated water is typically disinfected through boiling or by the method of quenching a hot iron rod, or it can be purified by exposure to sunlight. *Nirmalikaran*, a recommended water purifier in Ayurveda, aids in the purification process.

*Shodhan* of the body; is accomplished through the practice of *Panchakarma* therapy. This therapeutic approach effectively eliminates toxic and infectious substances from the body, fostering internal cleansing without inducing adverse side effects. *Rasayana Chikitsa*, an integral aspect of Ayurveda, involves nourishing, developing, and correcting the imbalances of the body elements. It serves to enhance immunity, fortify the body, and promote overall well-being, aiding in the establishment of a robust and resilient constitution [4-6].

### **Modern Approaches:**

Transmission of epidemic may occurs through various means, including direct touch, exposure to contaminated surfaces and equipment, respiratory droplets, aerosolized particles and by some other sources. Environmental modifications, disease surveillance, ensuring food safety, and monitoring air quality further contribute to controlling the spread of infections within communities. These measures collectively serve to protect public health and limit the prevalence of infectious diseases on a broader scale.

Vaccinations, on the other hand, bolster immunity against specific diseases by introducing small amounts of disease-causing agents to stimulate natural immunity. For viral infections, antiviral medications are the primary line of defense, effectively slowing down disease progression and boosting the immune system.

Epidemic control involves implementing a range of strategies aimed at curbing the spread of infectious diseases within communities and populations. It typically necessitates a multi-faceted approach that integrates various public health measures, medical interventions, and community engagement [7-9]. The strategy for epidemic control involves following approaches:

- ✓ Early detection of disease
- ✓ Isolation from contaminated area or quarantine
- ✓ Vaccination Campaigns
- ✓ Public health education
- ✓ Social support and community engagement
- ✓ Medical training in local population for enhancing number of medical support staff

### **Conclusion**

The importance of prevention over cure cannot be overstated, although the effective treatment of a disease remains crucial. Maintaining a nutritious diet, a healthy lifestyle, and engaging in regular exercise is essential for building immunity. It is imperative to raise awareness among the populace about health hygiene, immunity enhancement and the adoption of a wholesome lifestyle, all of which are extensively elucidated in Ayurvedic principles for the control of epidemic. It is crucial to acknowledge that every disease may alter its mode of onset and progression with changing climatic conditions and specific timelines. Therefore newer approaches always required to combat against mutant microbes.

### **References**

1. Park K.; editor Park's Textbook of Preventive and Social Medicine, M/s Banarsidas Bhanot Publishers Jabalpur, edition 22.
2. Sharma P.V.; editor Charaka Samhita, Vol-1, Varanasi Chaukhambha Orientalia, reprint, 2011; 237.
3. Charak Samhita, Vimaan Sthaan, Janpadoddhwansniyan, 3/20. Available from: <http://niimh.nic.in/ebooks/ecaraka/>. [Last accessed on 2023 Oct 21].

4. Sharma P.V.; editor Charaka Samhita, Vol-1, Varanasi Chaukhambha Orientalia, reprint, 2011.
5. Amruta Ingale. A conceptual study on an Ayurvedic perspective in prevention and management of COVID-19 with reference to Charak Samhita. J Ayurveda Integr Med Sci 2023;06:80-85.
6. Murthy K.R. Srikantha, editor; Sushruta Samhita, Vol-1, Varanasi, Chaukhambha Orientalia, reprint edition, 2012.
7. Shukla N. Ayurvedic approach to communicable disease – An overview. Open Access Scientific Reports, 2010.
8. Samal J. The concept of public health in Ayurveda. Int Ayurvedic Med J, 2013; 1: 1-5.
9. Vaidya Yadavji Trikamji, Charak Samhita of Agnivesa Elaborated by Charaka and Dridhbala with the Ayurved Dipika Commentary by Chakrapani, edition, Varanasi, Chaukhamba Surbharti Prakashan, 2014.
10. Dias S, Queiroz K, Araujo A. Controlling epidemic diseases based only on social distancing level: General case. ISA Trans. 2022 May; 124:21-30.
11. Ball F.G., Knock E.S., O'Neill P.D. Control of emerging infectious diseases using responsive imperfect vaccination and isolation. Math Biosci. 2008; 216(1): 100–113.
12. Madhav N, Oppenheim B, Gallivan M, et al. Pandemics: Risks, Impacts, and Mitigation. In: Jamison DT, Gelband H, Horton S, et al., editors. Disease Control Priorities: Improving Health and Reducing Poverty. 3rd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2017 Nov 27. Chapter 17.
13. Gaff H. Mathematical biosciences & engineering, vol. 6. 2009. Optimal control applied to vaccination and treatment strategies for various epidemiological models; p. 469.
14. Zaman G., Kang Y.H., Jung I.H. Optimal treatment of an SIR epidemic model with time delay. Biosystems. 2009;98(1):43–50.
15. Wu Y, Zhang Q, Li L, Li M, Zuo Y. Control and Prevention of the COVID-19 Epidemic in China: A Qualitative Community Case Study. Risk Manag Healthc Policy. 2021;14:4907-4922.