

# Modern and Classical Aspects on Infectious Diseases and their Management w.s.r. to Current Pandemic Situation: A Review

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## REVIEW ARTICLE

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### ABSTRACT

The ancient term Sankramaka Roga resembles communicable diseases as per modern science. These diseases mainly arise due to the influence of microbial invasion inside the body. The transmissions of such disease from one person to another take places via various means including Gatra Sansparsha, Prasnaga, sleeping and eating together; sharing objects and sexual contact, etc. The microbial toxin induces pathogenesis of infectious diseases after invasion of microorganism inside the body. Sankramaka Roga turned to Janapadodhwamsa if large numbers of people get affected, this condition can be correlated with resembles situation as per modern science. The modern science described uses of antibiotics and immune-therapy for the management of these diseases. Similarly Ayurveda rely on natural drugs, classical formulations, Panchakarma and Rasayana Chikitsa, etc. to treat Sankramaka Roga. Ayurveda concept of Ahara-Vihara, Dinacharya, Ratricharya, Ritucharya and Sadvritta improves immune system thus helps to prevent pathogenesis of Sankramaka Roga. Present article explores modern and classical aspects on infectious diseases and their management w.s.r. to current pandemic situation.

**Keywords:** Ayurveda, *Sankramaka Roga*, Infection, *Janapadodhwamsa*.

## 1. Introduction

Ayurveda described terminologies *Sankramaka Roga* and *Aupsargikarogas* for communicable diseases and another term *Janapadodhwamsa* elaborated for pandemic situation. *Janapadodhwamsa* means mass destruction of population by infectious disease which merely depends upon certain factors i.e.; *Kala*, *Jala* and *Desha*. *Kushta*, *Jwara*, *Shosha* and *Netrabhishyanada*, etc. are some examples of *Sankramaka Roga*. The current pandemic problem in Ayurveda can be described as *Agantuja vyadhi* which includes *Sannipata Jwara* as main symptom along with vitiation of *Kapha Doshas*. (1-5)

The modern science mentioned that current pandemic condition arises due to the altered immune response; similarly Ayurveda mentioned that *Agantuja* affect host body when *Bala* and *Ojas* gets diminish. Modern science described pandemic diseases as fatal health problems similarly Ayurveda mentioned *Janapadodhwamsa* as *Maraka*. The pathogenesis of current pandemic problem occurs due to the viral invasion similarly *Janapadodhwamsa* occurs after invasion of *Bhuta*. The symptoms of present pandemic conditions are cough, body ache, respiratory distress and fever, etc. Similarly *Janapadodhwamsa Vikara* possesses symptoms of *Jwara* and *Kapha* aggravation. (4-6) Accumulation, aggravation, dissemination, localization,

manifestation and chronicity are pathological stages of infectious diseases as per modern science. Similarly Ayurveda mentioned that toxins of *Bhuta* alter normalcy of *Doshas*, *Dhatus* and *Srotas* leading to the pathological manifestations of *Sankramak Roga*.

The diagnosis of such disease can be done with the help of *Nadi Pariksha*, *Sparshana*, *Prashna*, *Darshana* and *Panchendriya pariksha*, etc. Modern science utilizes Enzyme Assay Kit (ELISA), X-rays, microscopic examination, biochemical and serological test, etc. for diagnosis of infectious diseases.

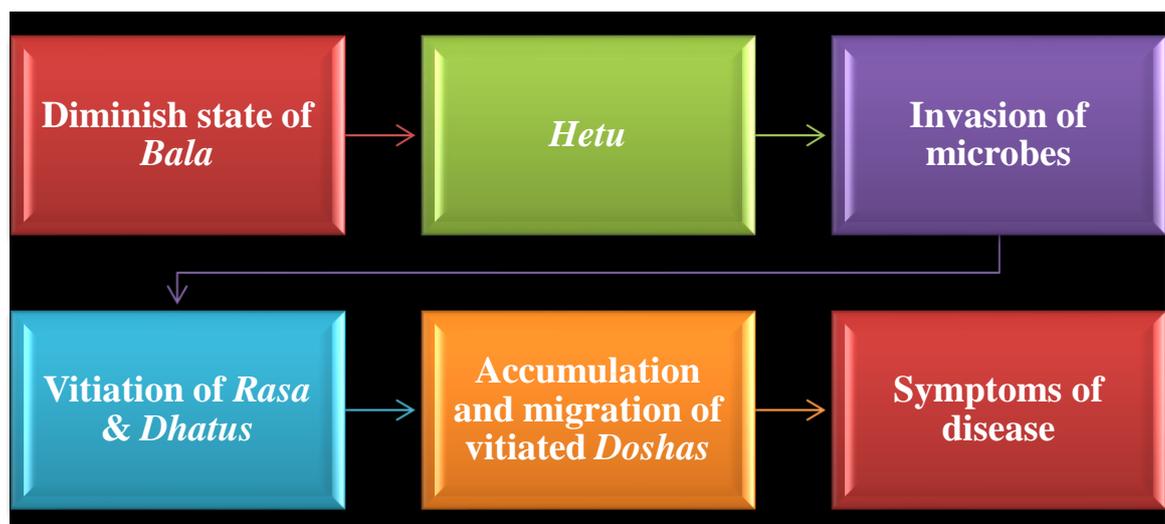
## 2. Pathogenesis

The diminished *Bala* and aggravation of etiological factors increases susceptibility towards microbial invasion and that after pathogenesis of *Sankramak Roga* get started. The vitiation of *Dosha*, *Dhatu* and *Srotas* mainly involve in pathogenesis of *Sankramak Roga*. However progression of such disease depends upon *Prakriti* of infected individual and types of infections.

*Agantuja Roga* caused by micro-organisms mainly occurs when *Bala* of affected person get altered. *Agantu* as foreign agent produces toxins inside the body this initial stage of enhanced susceptibility towards microorganism can be considered as stage of *Sanchaya*. *Doshas* get accumulated and vitiated in later stages; these aggravated *Doshas* spreads in other body parts and settle in particular organ finally. Production of *Ama*, *Srotadushti* and diminish state of *Dhatus* causes manifestation of infectious disease. *Agantuj Jwara*, *Agantuja Atisara* and *Visuchika*, etc. also seen in such cases due to the vitiation of *Doshas*. The pathogenesis of infectious disease depicted in **Figure 1**.

The major pathological components of these diseases are as follows:

- ✚ *Dosha*: *Kapha* mainly
- ✚ *Dushya*: *Rasa Dhatu*
- ✚ *Srotashmi*: *Pranavaha Srotas* and *Rasavaha Srotas*
- ✚ *Agni*: *Mandagni*
- ✚ *Vyakta*: Lungs & respiratory passage, etc.



**Figure 1.** General steps involved in pathogenesis of infectious diseases

## 3. Stages of Pathogenesis

The susceptibility towards infective organisms increases when immunity of

person decreases and this stage. *Sañcaya* and *Prakopa* of *Doshas* occur when *Dhatu Bala* gets depleted. In *Sanchya avastha*

accumulation of *Doshas* in their respective places occurs.

*Vata Sanchaya Lakshana* involves pain and stiffness in body, while *Pitta Sanchaya Lakshana* includes rise in temperature and burning sensation. Heaviness and respiratory distress occurs as *Kapha Sanchaya Lakshana*.

*Prakopa avastha* involves migration of *Doshas*, in this stage *Pipasa* and *Amlika* may observe as *Pitta Prakopa Lakshana* while *Hridyotkledascha* and *Annadwesa* observe as *Kapha Prakopa Lakshana*.

*Prasara avastha* involves migration of vitiated *Doshas* through *Srotas* and *Rasa*. *Vimarga-Gamana*, *Atopa*, *Chosha* and *Arochaka*, etc. may observe as *Lakshana* of *Dosha* vitiation in this stage.

*Vyaktavastha* involves major signs and symptoms of infectious disease like; *Jwara*. The prolong condition turned to *Nija Vyadhi* and make person more susceptible to *Sankramak Roga*.

#### 4. Management of Infectious Diseases

Ayurveda mentioned various modalities for managing diseases induce by *Krimi*. *Prakriti Vighata*, *Nidaana Parivarjana* and *Apakarshana*, etc. are some approaches of Ayurveda which can help in the management of infectious diseases. *Nidaan Parivarjana* involves concept of avoidance of disease causative factors. *Prakriti Vighata* means utilization of approaches which reduce pathological progression of disease. Ayurveda mentioned approaches which control vitiation of *Kapha* and *Malas* thus prevent microbial growth and suppress pathogenesis of *Sankramak Roga*.

Ayurveda mentioned uses of many drugs and formulations for treating infectious diseases. Drugs possessing *Kashaaya*, *Katu*, *Tikta*, *Ushna* and *Doshahara* properties are useful to reverse effects of microbial diseases. Natural drugs such as; *Guggulu*, *Neem*, *Amla*, *Punarnava*, *Haridra*, *Guduchi*, *Vasa* and

*Tulasi*, etc. are recommended generally for *Sankramak Roga*. Similarly Ayurveda formulations such as; *Laghu Gangadhar Churna*, *Rasanjanadi Churna*, *Satavari Kalk* and *Jambvadi Patra Swaras*, etc. can be used for curing microbial infections. *Rasayana* drugs improve strength and immunity therefore suggested as prophylactic measure against infectious diseases.

These ayurveda approaches nourishes body, improves immune responses, stimulates migration of antibodies inside the body, imparts anti-inflammatory and analgesic action, removes microbial toxins, suppress growth of microorganism by virtue of their anti-microbial action, restore *Bala* and boost process of healing thus provides relief against infectious conditions.

*Yoga* and *Panchakarma* helps to restore strength and facilitate detoxification of body thus reduces susceptibility towards the *Sankramak Roga*. Moreover balanced lifestyle and maintenance of personal hygiene can also prevent prevalence of such diseases. Ayurveda concept of *Dinacharya*, *Ratricharya*, *Ritucharya* and *Sadvritta* provides strength against common infectious diseases.

#### 5. Role of Ahara and Vihara against infectious diseases

The improper eating habits may cause indigestion, altered state of metabolism and lack of nutritional supply thus suppresses immunity. This condition increases susceptibility towards microbial infection; therefore *Ahara* play vital role to prevent consequences of microbial infections. Moreover balanced dietary habit improves natural healing capacity of body thus boost recovery of infected person suffered from infectious disease. (6-8)

*Ahara* such as brown rice, cabbage, dates; mustard greens, cauliflower and spinach, etc. pacify vitiated *Vata*, similarly pears, sprouts, mushrooms, bitter melon, broccoli,

cabbage, green beans, cauliflower and potatoes, etc. helps to pacify vitiated *Pitta* during infectious disease. The dietary ingredients such as; green gram, parched rice, barley and wheat, etc. pacify vitiated *Kapha* therefore boost recovery of infectious disease in early stage.

Concept of *Vihara* also helps against *Sankramak Roga*, the pandemic outbreak can be control by avoiding mode of transmission i.e.; *Prasanagat*, *Gatra Samsparshat*, *Sahasayya* and *Sahabhajnata*, etc. Maintaining social distance, isolating diseased person, uses of face mask and maintenance of personal hygiene, etc. are combating approaches against current pandemic situation. *Yoga* and meditation are also helpful to restore mental health; steam inhalation advised in current pandemic scenario along with salt water gargling.

Ayurveda concept of *Dinacharya*, *Ritucharya*, *Ratricharya* and *Sadvritta* establishes balances of biological elements thus improves resistance against infectious diseases. Ritual activities such as; *Homa*, *Japa* and *Ijya* also advocated to boost mental and spiritual strength which resist psychological consequences of infectious diseases. (9-11)

## 6. Conclusion

*Sankramak Roga* occurs due to the pathological effects of microbial toxins and these diseases can transmit from one to another by various means of transmission. Vitiating of *Doshas* occurs when immune system gets altered in *Sankramak Roga*. *Dhatu*, *Agni* and *Srotas* also get affected along with *Doshas* during infectious diseases. The current pandemic situation in Ayurveda can be correlated with ancient term *Janapadodhwamsa*. *Sannipata Agantuja Jwara*, *Kasa* and *Svasa* are major symptoms of current pandemic situation in which *Vata-Kapha* vitiation observed along with involvement of *Pranavaha Srota*. Ayurveda helps to improve immunity, maintain body nourishment and

suppress microbial growth thus play vital role to control pandemic situations. Ayurveda formulations, *Panchakarma*, *Rasayana Chikitsa* and natural herbs can provide great health benefits in case of *Sankramak Roga*. Good conduction of concept of *Dinacharya*, *Ritucharya* and *Sadvritta*, etc. can also provide strength against infectious diseases. Therefore it can be stated that Ayurveda provides several ways for controlling and treating infectious diseases.

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## Conflict of Interest

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