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 Sadvrutta 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 Janapadodhwansa elaborated for pandemic situation. Janapadodhwansa means mass destruction of population by infectious disease which merely depends upon certain factors i.e.: Kala, Jala and Desha. Kushtha, 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. Agantu 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](image-url) 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 Annadwesha 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 Doshak 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 helps in the management of infectious diseases. Nidaana Parivarjana involves concept of avoidance of disease causative factors. Prakriti Vighata means utilization of approaches which reduces 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 causes 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 gourd, 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, Gatramsparshat, Sahasayya and Sahabhojnata, 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. Vitiation 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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