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Review Article

VARIOUS HISTORICAL ASPECT OF COMMUNICABLE DISEASES DESCRIBED IN ANCIENT KALA OF VEDA AND SAMHITA

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ABSTRACT

The development of medical system in India witnessed by all common era and the seeding of ancient ayurveda science starts from early development of civilization. The emergence of traditional medical system involves description of religious medicine practiced from the Vedic period in India. The initial development phase of natural medical system later on shaped as Ayurveda which encompasses various logical and rational concept related to the health and well being. The theory and practice of ayurveda mainly based on experimental conclusion of *vaidya* and ancient practitioners. Similarly the historical perspective of infectious diseases is very vast as per the modern and traditional science. Ayurveda researchers and practitioners described various types of infectious diseases time by time and also offered textual evidences of pathogenic organisms. This article presented historical review on infectious diseases as per ayurveda in a view to explore ayurveda perspective of such diseases and their causative organisms.

Keywords: Ayurveda, Sankramak disease, infections, microbes, pathogens, Vedic period.

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INTRODUCTION

The ayurveda science of Indian medical system explored causes, symptoms and treatment approaches of various diseases including infectious disease. The ancient text of Ayurveda involves description of not only pathogenic organisms but also non-pathogenic organisms which found in human body. The early text of ayurveda encompasses description of parasite, worms and other microbes also. The ancient researcher/physician of ayurveda provided knowledge about type and nature of pathogenic organisms along with their role in disease progression. Ayurveda later on greatly explored communicable diseases, epidemics and infections. The ayurveda physician also described natural treatment approaches for the management of communicable

diseases including; use of plants, plant based formulations and animal products.

- ✓ *Kusta*
- ✓ *Jwara*
- ✓ *Rajayakshma*
- ✓ *Netrabhishyanada*
- ✓ *Gonorrhoea*
- ✓ *Visuchika*
- ✓ *Shleshmak Jwar*
- ✓ *Dushta Kasa*

Figure 1: Some example of communicable diseases.

EARLY DESCRIPTION ON COMMUNICABLE DISEASES

Susruta described diseases such as; *Kustha, Jwara* and *Shosha* are communicable and spreads through contaminated objects. The mode of diseases transmission may be *Prasnaga* including *Gatra Sansparsha, Ahar sevana* and sleeping with diseased person.

Charaka Samhita mentioned role of *Vayu, Udaik, Desha* and *Kala* as triggering factors of disease and epidemics (*Janapadodhwansha*). **Charaka** also described *Vishama Jwara* including malaria which greatly related to the epidemics.

Pathological triggering by *Charaka*

Charaka described that *Bala* plays important role towards the prevalence of communicable disease. **Charaka** believe that accumulation of causative factors like; vitiated *Doshas, Dushyas* along with depleted *Bala* enhance susceptibility towards the disease. Later on when concept of microbes emphasized in ayurveda then it was believed that microorganism vitiated *Doshas* which affect *Dhatus* and leads diseases if *Bala* depleted. The great ayurveda physicians strongly recommended that the transmission of diseases from one person to other depends upon strength of immunity. Therefore person with low immunity get easily affected by communicable disease.

The historical development of communicable diseases from *Vedic kala*:

The ancient period of Indian medical system empowered with lot of wisdom due to the presence of many great saints, however communicable disease not emphasized greatly in that time due to the lack of *Pratyaksha pramana*. The some descriptions on spreadable diseases were mentioned in *Vishnudharmottara Purana* and *Agni Purana* on the basis of *Apratyaksha Agama, Anumana* and *yukti pramana*. *Agnipurana* have some description on *Roganashak Aushadi* and *ahar-vihar* conduction for the prevention of diseases already exist in particular area which confirm slight awareness of ancient ayurveda saint regarding epidemic, however communicable disease not emphasized greatly in *Agnipurana*.

As per *Vishnudharmottara Purana*, *Lord Dhanvantri* transferred his knowledge to common people and residents of forest. *Lord Dhanvantri* spread knowledge about diseases and their treatments as per Ayurveda and these all information served as resources for other Indian physician like *Sushruta*. As per textual evident of *Vedic* period the causes of disease related to the poor lifestyle habits, diversified eating habits and disturbing natural pattern of living. Later on it was believed that diseases may be due to the some living micro-organism however their detailed description lacked. As per *Vishnudharmottara Purana*, *Lord Dhanvantri* more than 100 disease are due to the consumption of wrong food material and later on this hypothesis correlated with concept of pathological microorganism.

Knowledge of ancient physicians about causes of communicable diseases:

Susruta earlier described *Sankarmna* (communicable) disease as *Aupsargika Roga*. *Aupsargika Roga* two types *Upadrava* and *Prakkevala*, first one may developed when previous disease remains having similar etiological factors while *Prakkevala* developed earlier without presence of any symptom of previously present disease or without presence of secondary disease.

Dalhna susruta samhita described that diseases transmitted through *vayu; swasa, kasa* and *pratisyaya* etc. and described that diseases transmitted by *sparash indriya; jawara* and *masurika* etc. may considered as *sankramaka roga*.

Nibandh Sangrah Susruta Samhita mentioned that *sankramaka roga* like *kushta, jwara, sosa* and *netrabhishy* may occur due to the inhaling contaminated air, contacting diseased person, sleeping and sharing cloths and eating together.

Acharaya Vagbhatt and Asthang Hridaya stated that similar mode of transmission for *sankramaka roga* like; *netrabhishy, twak vikar, kushta* and *updansh* etc.

Bhav prakash emphasized skin disease like *kustha, upadamsa*, psychoses and other endemic fever as *sankramaka roga* which transmit though contacting one person to another including sexual contact and skin contact. *Phiranga Roga* is also mentioned as *Gandharaoga roga* under the category of contagious disease. This term specifically related to the female suffered with disease and contact with such female may transmit *Phiranga Roga*.

Yogratnakar presented that *sankramaka roga* like *netraroga* and *twak roga* may occur due to the physical contact, eating, sleeping and sharing with diseased person.

Madhav Nidan mentioned that *aupsargika rogas* such as; *kushta, jawara, tuberculosis* and *ophthalmias* may transmit through physical contact, sexual intercourse, inhalation of air, use of common cloths and garlands.

Yagvalygya samhita Urabha Darshan (diseases by visiting), *Sparsh* (touching) and *Danat* (donating) as mode of transmission diseases like; *Twak roga, Akshi roga, Apasmar, Rajyakshma* and *Masurika* etc. which are considered as *sankramaka roga*.

Microbial consideration on communicable disease as per ayurveda

The ancient physician of Ayurveda described *krimi* including parasites and worms. *Chakravarthy* identified many intestinal worms. However the ancient text of ayurveda not involves very clear cut description of round worm, tape worm and thread worm. The development of early phase of ayurveda was lacking use of equipment such as glass and microscope therefore physician of these era were unable to justify whether invisible *krimis* are microbes. The literature survey revealed that ancient Ayurvedic physicians were aware of the existence of microbes however they could not study about it in detail. Commentary of *Astanga Hrdaya* described that *Arunadatta* clarifies that pathogen are invisible to the human eye and therefore microscopic.

- **Susruta Samhita** mentions that the pathogens are countless and twenty categories are mentioned initially. In 4th Adhyaya *Kushthnidanadhyaya* of *Nidansthāna*, *Aacharya Sushrut* described *Aupasargikrogas* in *Kushthanidan* which are communicable diseases spread through direct or indirect contact. *Susruta* further narrate that physical contact, eating with others, expired air, sexual contact, sharing clothes and touching infected objects leads spread of infectious diseases from person to person.
- **Cakrapanidatta** the commentator of *Caraka Samhita* explain the nomenclature of pathogens those are accepted well traditionally.
- **Bhela Samhita** offered different nomenclature of pathogens.
- **Harīta Samhita** provides nomenclature for pathogens which differ from others and listed only thirteen names.
- **Aacharya Charak** described epidemic as *Janapadodhwans*; destruction of a specific population due to communicable disease. The *Aacharya Charak* further describe that different peoples having different *prakruti*, *sarata* and *aahar* however common factors like air and environment if vitiated then it may leads diseases to specific area termed as *Janapadodhwans*.
- **Charak** finally concluded that *vayu*, *jala*, *desh* and *kala* lead *Janapadodhwans*, the modern science described this phenomena as spread of infectious diseases/communicable disease.
- **Aacharya Charaka** further mentioned that the *Janapadodhwans* (spread of communicable disease) related to the life style of an individual and peoples having disturbed life pattern are more vulnerable to communicable disease. *Dincharya*, *ritucharya* and *vegavidharan* play significant role towards the prevalence of communicable diseases as per *Charaka*.

Ayurveda Descriptions of Pathogens responsible for Communicable Diseases:

- **Vedic** period description not available too much due to the lack of tool/equipment.
- **Caraka Samhita** described initially external pathogens.
- **Caraka**, **Susruta** and **Vagbhata** collectively described visibility criteria of blood pathogens. *Caraka* and *Vagbhata* mention that some of blood pathogens are invisible. *Susruta* states that all blood pathogens are invisible.
- **Caraka Samhita** described shapes of mucus and feces pathogens.
- **Caraka Samhita** and **Astanga Hrdaya** described external pathogens as minute like sesame grains having many feet.

- **Susruta** and **Vagbhata** describe pathogens as *anu*, *vrutta* and sometimes without feet (*apadasca*). *Susruta* state invisibility of pathogens to the naked eye due to their minute size (*kecit sauksmyat adarsanah*).
- **Caraka Samhita** further described that pathogens found in mucus secretions are elongated, whitish, thread like, minute and cylindrical earthworm.
- **Caraka** also described pathogens of fecal matter as whitish, cylindrical, minute, thick, blackish and bluish in colour.

Terms described by *Caraka Samhita/Astanga Hrdaya/Auttara Sthana*:

The historical perspective of Ayurveda on communicable diseases yet to be explored with great extent to acknowledge contribution of ayurveda in medical field. When scientific evidence based literature written then initial phase involve descriptions of major terms related to pathogens:

- **Kesada:** Pathogens of the blood and eaters of the head hair.
- **Lomada:** Pathogens related to the small hairs.
- **Audumbara:** Pathogens similar to the fruit of *udumbara*.
- **Jantumatara:** Mother of pathogenic organisms (may multiply profusely inside the body).
- **Kusthaja:** Organisms born out of skin diseases
- **Parīsarpa:** Spreads very fast.

Historical View on Etiological Factors of Communicable Diseases:

Vedic kala:

- *Vishnudharmottara Purana* correlates disease possibility with living pattern and dietary regimen. The *Lord Dhanvantri* described that the eating of *viruddha ahara* leads many diseases and this concept further correlated with micro-organism but detailed description of microbes not available in *Vedic* period.
- *Vedic* period also described concept of **adharma** and **sin** as a cause of communicable diseases since this time highly influenced by mythological belief.

Samhita kala:

- *Susruta* mentioned way of spreading of communicable diseases from one person to the other. The *Samhita* described various mode of disease transmission such as; interaction with infected person, physical contact, through breath, eating infected food, sexual intercourse and sharing cloths.
- *Caraka* described *vayu*, *jala*, *desh* and *kala* as etiological factors for communicable disease. The role of pathogens in transmission of infectious diseases not recognized up to great extent.
- *Caraka* greatly dealt with epidemic concept of communicable diseases and explore spread of communicable disease to a large number of

populations. However at that time the role of pathogens in disease transmission was not understood adequately.

- *Vaghata* emphasized communicable diseases related to skin and state that accumulation of *kled* attracts organisms which eat away the skin, lymph and muscle. *Vaghata* described term *avahana*; the process of invasion of skin diseases with pathogenic organisms.
- The early development of ayurveda possessed some idea about pathogens but it was believed that body attracts pathogens after the pathological derangement means pathogens not initiate disease but contributes towards the progression of disease ones it has started.

Samhita Described Symptoms of Communicable Diseases:

Caraka described symptoms of communicable diseases as symptoms caused by the external pathogens and symptoms caused by internal pathogens. The communicable diseases caused by external pathogens leads itching and eruptions on skin. The pathogens of the blood which are also responsible for diseases cause loss of appetite, indigestion, fever, yawning, fainting, sneezing, body ache, roughness, vomiting and thirst.

Historical Perspective on Treatment of Communicable Diseases:

The early description regarding management of communicable of diseases believes that the treatment approach not only resides around physical boosting but also mental empowerment therefore *Daivavyapaashrya* and *Satvavajaya* methods of psycho-spiritual healing utilized earlier. The ayurveda physician believe that these practices help to balance disturbed psyche state thus potentiating immune system which resist invasion of communicable diseases. *Yukti Vyapaashrya Chikitsa* also implemented which involve use of *shodhana*, *aushdhias* and other approaches to prevent infections.

Vedic kala:

The initial understanding of communicable disease in *vedic* period mainly related to the adharma, sin and indisciplinary life style. The concept of microbes in

communicable disease not emphasized in this era therefore management of such diseases involved use of herbs, *mantra* and use of other natural remedies. The diseased person kept away from others and prevention of disease communication achieved by natural as well as spiritual way.

The *vedic* period emphasized boosting of mental and spiritual wellbeing of diseased person, imparting truth, sympathy and respect. The moral conduction also suggested by various sage including eating nutritious and *Satvikaahar* (milk & ghee) in daily food. These all non medicated approaches in that era played vital role towards the management of communicable disease.

Samhita kala:

Caraka mentioned management of communicable disease by various means however knowledge of microbes opened his view towards the prevention of communicable disease by following means:

- *Apakarsana*: removal of the pathogenic organisms.
- *Prakrtivighata*: generating unfavourable environment for the pathogenic microbes.
- *Nida-naparivarjana*: avoiding the causative factors.

The textual components of *Samhita* described that killing of pathogenic organisms using herbal medications which possess *krmighna* property help to manage epidemic of communicable disease.

Aacharya Charak also described *Rasayananam Viddhi Vaat Upyoga* (use of *Rasayana*) in communicable diseases. *Rasayana* provides immunity therefore help to resist prevalence of communicable diseases. *Vatatapik Rasayana* may be used as prophylactic for communicable disease with minimal precautions. *Charak Samhita Chikitsasthanaadhyay* presented use of *Rasayana* and benefits in infectious disease especially as preventive approach including; *Chyavanprash* and *Triphala Rasayana* etc.

Aacharya Vagbhat described *Raktmokshana* as *shodhanupkramas* to cure communicable disease. *Aacharya Vagbhat* also suggested various remedies depending upon *doshabala* and *vyadhibala* for the prevention of communicable disease.

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