

A Study of Janpadodhvamsa W.S.R. to Epidemiology

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Abstract

Year 2020, a year of pandemic. As whole world is dealing with the pandemic Covid19. This is the time for our ancient system of Medicine, Ayurveda, to review its classical texts for the solution. Ayurveda is ancient science and based on universal principles - not limited to a particular ethnic group. Epidemic and pandemic diseases concepts can also be compared with jandapadodhvams phenomenon. There were many epidemic and pandemic situations faced by the human beings in previous era as well. So, this study has been planned to review all the literature available in classical texts to online publications. These study material thoroughly studied and the results were good. We have brought extract of this vast experience in this article. There were many incidents and many solutions we found for that incidents, and it could help us for going on in future incidents as well. Ayurveda is not only the science of diseased but it's a lifestyle for keep us safe from every possible situations.

Keywords: *Janpadodhvamsa; Epidemiology; Pollution; Outbreaks*

Introduction

The study of the occurrence and distribution of health related events, states and processes in specified populations, including the study of the determinants influencing such processes and the application of this knowledge to control relevant health problems is called epidemiology [1]. Ayurveda does not have specific text as epidemiology but Ayurveda science describes the concept of Janpadodhvamsa that can close to be compared with epidemic. Chakrapani says that Marak (infectious agent, abnormal event) destructs the entire population, the study of the people being related this concepts, it is called Janpadodhvamsa [2]:

“Tkuinkukeq/noalua ejds.k r=R;kuka cgwuka ekuokuka ej.ksusR;FkZ% ||” (chakrapani Tika ch.vi.-3).

Pragya-apradh is the causative factor of Janpadodhvamsa [3] has been mentioned in Ayurveda science. Janpadodhvamsa happens due to vitiation of Vayu, Jal, Desh, and Kaal [4]. This phenomenon can also be compared with environmental pollution (air and water pollution). Pollution represents major role in epidemiology.

Material and Method

Charak Samhita, Sushruta Samhita, Chakrapani Tika, Ayurveda dipika, Nibandh sangrah Preventive and social medicine, internet sources has been referred.

Causative factor

Janpadodhvamsakar Bhav

The factors responsible for the Janpadodhvamsa are referred to as Janpadodhvamsakar Bhav. Vayu, jal, desh and kaal forms the Janpadodhvamsakar bhav [5] along with Niyata hetu and Aniyata hetu [6] affecting individuals and thereby affecting the entire community causing widespread manifestation of disease. It shows that Acharya Charak has also underlined on the environmental components.

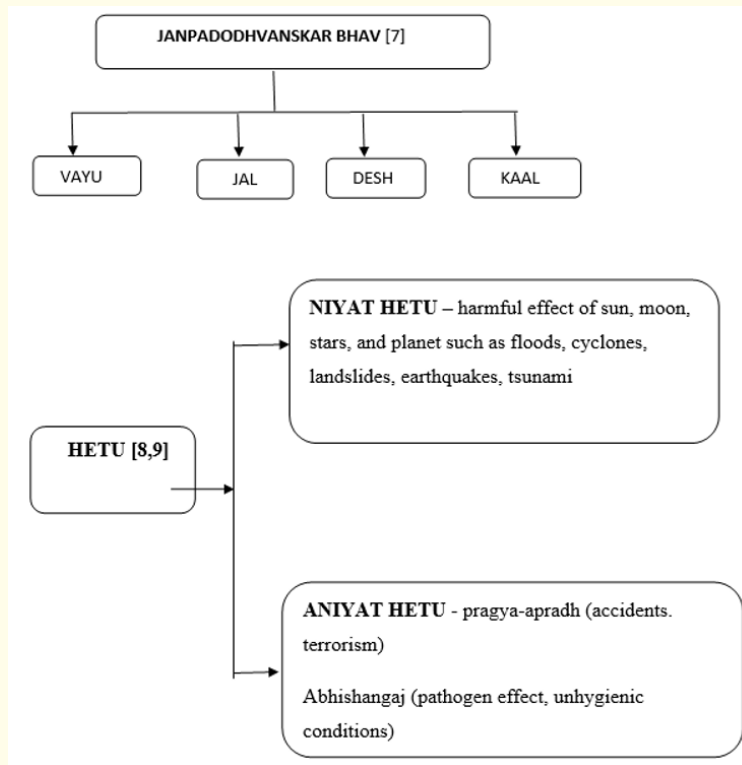


Figure 1

Epidemiological triad [10]

Epidemiologists use a tool to facilitate understand the infectious disease known as the epidemiological triangle. An external agent, a susceptible host and an environment forms the epidemiological triad.

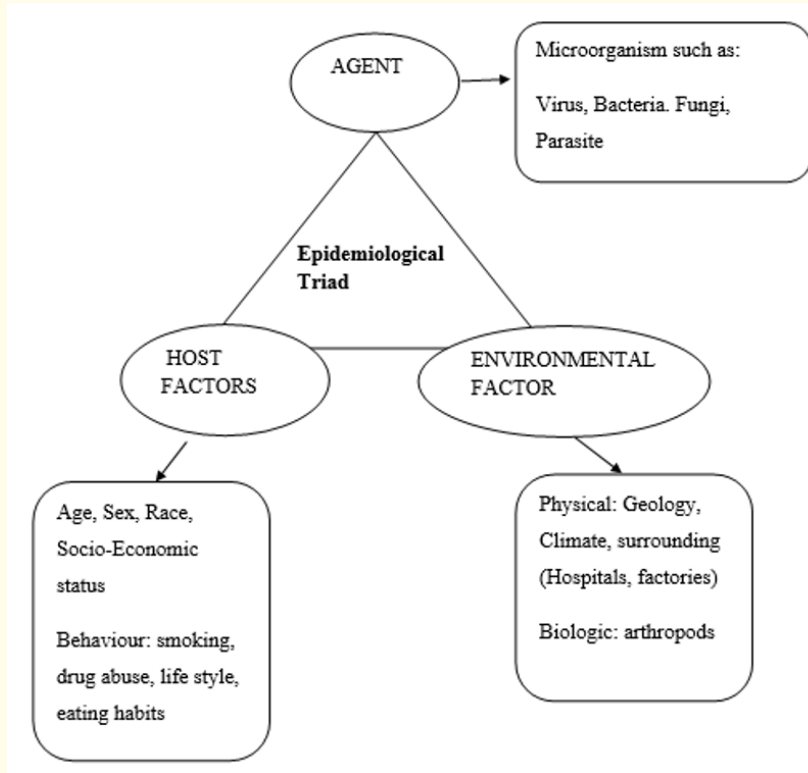


Figure 2

Epidemic events w.s.r. to janpadodhvamsakar bhav

Vitiation of vayu: Vitiation of air by dust, smoke, toxic gases and chemical vapors. Air contains following characteristics is harmful to health: excessive calmness or cruel waves, dryness, cold, warm air, humidity, excessive clashes among each other and the presence of unhealthy smell, gases, sand, ashes and smoke [11].

4.3 million people deace every year prematurely from illness attributable to the householder pollution caused by inefficient use of solid fuels. Among these deaths 12%- Pneumonia, 34%- Stroke, 26%- IHD, 22%- COPD, 6%- Lung cancer [12].

Gas Tragedy Bhopal is good example of it. 2 - 3 December 1984 at the union carbide India limited Pesticide Plant in Bhopal, M.P.

Affected - 5,743,66, Death - at least 3,787, over 16,000 claimed [13].

Vitiation of Jala: Water contains impurities of various kinds natural and manmade. It vitiates by the dissolving of gases, minerals and contact with soil and suspended impurities (clay, silt, sand, mud) and microorganisms [14]. Impure water with following characteristics is reasoned to devoid of its normal attributes that means abnormal smell, color, taste and touch, excessive stickiness, lack of aquatic birds, aquatic animals and unpleasantness in taste and odor [15].

Examples: Viral hepatitis A, Rota virus diarrhoea, Typhoid, Amebiasis, Cholera

Consumption of food or water contaminated with bacterium *Vibrio cholera* (01 and 0139) lead to Cholera is an acute diarrhoeal infection. Its seven large outbreaks occurred.

Affected- 1.3 - 4.0 million cases, Deaths- 21,000 - 1,43,000 worldwide [16].

Hepatitis A- hepatitis virus causes hepatitis A which is a liver disease transmitted through consumption of contaminated food and water or through direct exposure with an infectious person.

Frequency- 114 million symptomatic and non-symptomatic (2015), Death - 268 [17].

Vitiation of land/soil/place: Land impairs via waste disposal (landfills), air deposition either dry (from mining and foundries etc.) or wet (acid rain) exposure with polluted surface or ground waters and land having following characteristics is considered to be noxious perversion or lack of religion, truth, decency, manner and other properties of the inhabitants of the land constant agitation [18].

Examples: Cancer including leukemia presence of gasoline, Benzene.

Presence of lead (pb) damages Nervous system.

Mercury (Hg) damages kidney and liver.

Soil transmitted Helminthiasis infections refer to a group of parasitic diseases in humans.

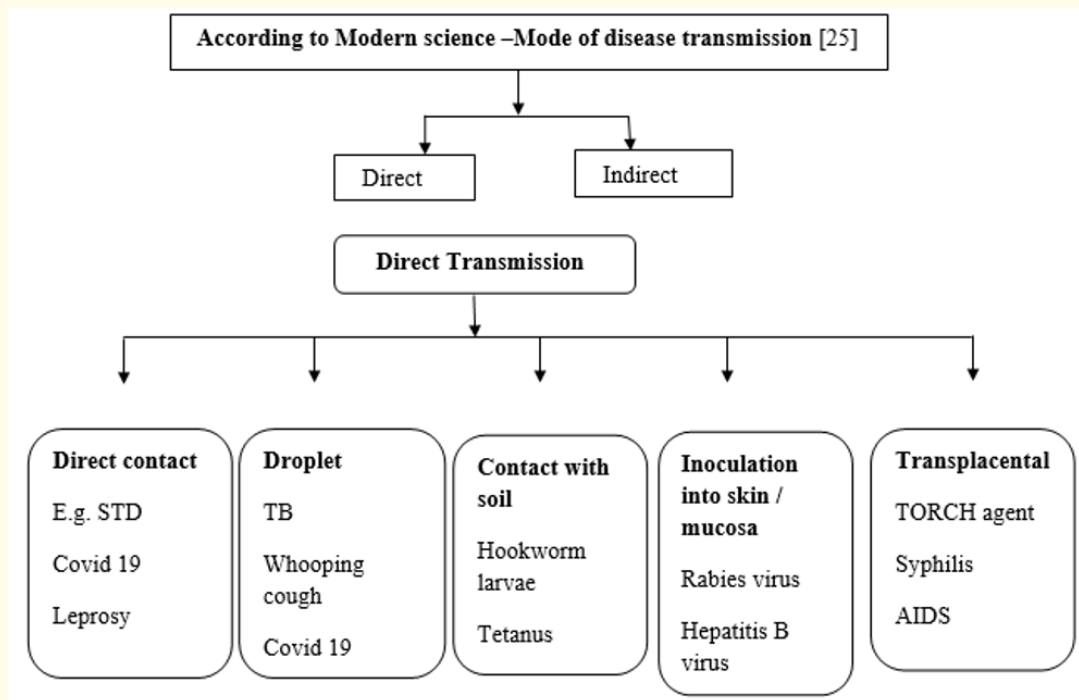
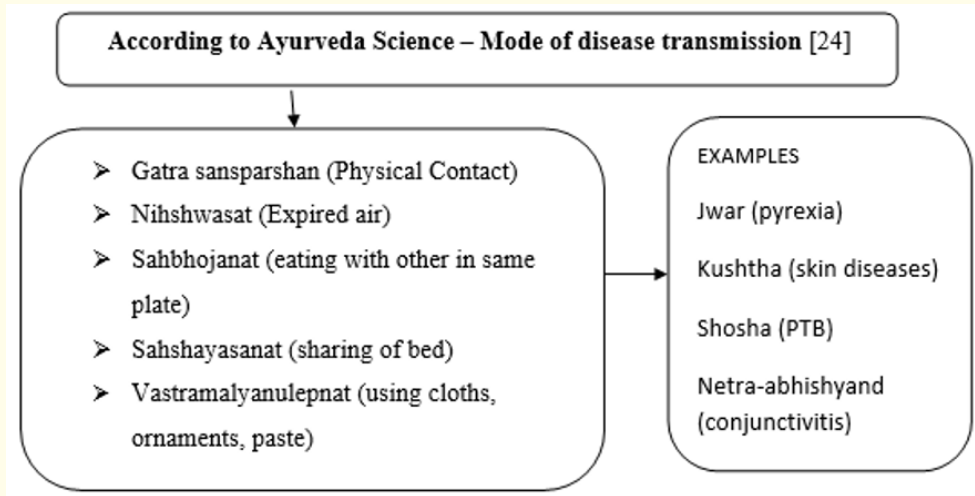
Affected - 2 billion people worldwide or 24% worlds population [19].

Vitiation of time/period: Unlike the natural traits of ritu and fewer symptoms should known as unhealthy period [20].

Covid 19: Now a days world community is facing an unprecedented pandemic of novel corona virus disease caused by SARS-CoV-2. An outbreak of pneumonia in December,2019 in Wuhan, China has now been determined to be caused by a novel corona virus [21]. The disease has spread globally with more than 11,624,875 cases and 538,132 deaths [22] and India with 712,920 cases and 20,073 deaths as of July 06,2020,15:28 GMT [23].

Classification of communicable diseases

Acharya Sushruta has mentioned the reason for modes of contagion.



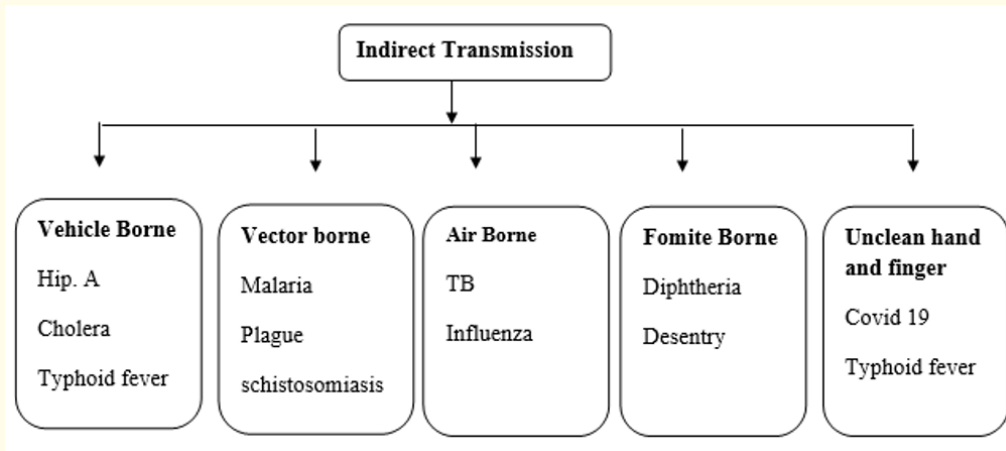


Figure 3

Management of epidemic diseases [26]

- (According to Ayurveda science): Panchakarma detoxification therapy is the more effective treatment. It plays vital role in the preservation, maintenance and conservation of health and promotion of longevity. They form a part in the regimen of preventive.
- Rasayan therapy: Use of rasayan to raise the oja and immunity. Rasayan are health encouraging and revitalizing vehicles which by their factual effects develop resistance against disease both physically and mentally. “yHkksik;ks fg “kLrkuka jlknhuka jlk;ue~ ||” (ch.chi. 1-1/8).
- Sadvritta (code of right conduct): It plays significant role in personal cleanness of body and mind. We should follow our dincharya (daily routine). Sadvritta considered as one of the measures to prevent various type of diseases.

While the impairment of these janpadodhvamsakar bhavas if appropriate management is done, no need to be afraid of diseases [27].

Conclusion

- It is easier to correct the impairment of vayu, jal and desh, then kaal. kaal is inevitable. In that condition we also need to improve immunity for survive.
- Ayurveda is ancient science and based on universal principles - not limited to a particular ethnic group.
- It is very interesting to note that the epidemiology concepts explained centuries back in the Charak Samhita that was named as Janpadodhvamsa.
- The concepts of janpadodhvamsakar bhav (causes of epidemic and pandemic diseases) and modes of transmission of communicable diseases defined in classical treatises of Ayurveda are a outstanding significance and their present day relevance to be capitalized.

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