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Review Article

### CONFORMITY OF AYURVEDIC CONCEPTS OF PSYCHOSOMATIC TO ESSENTIAL HYPERTENSION

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#### ABSTRACT

The world has come to the global burden of several diseases including essential hypertension. EHT can be defined as a rise in blood pressure of unknown cause that remains major modifiable risk factors for cerebral, cardiac and renal events despite important advances in our understanding of its patho-physiology and the availability of effective treatment strategies. Latest studies in the field of modern medicine suggests that most modern diseases like cancer, hypertension, diabetes and obesity are caused due to increased stress on the body revealing the concept of psychosomatic illness. This new concept of health and diseases has gained much importance now a day. *Ayurveda*, the science of life over thousands of years had laid down the strong foundation of *Ayurvedic* concept of psychosomatic in context of many fundamentals including the aetiopathophysiology of hypertension. Though the exact reference of hypertension is not mentioned in *Ayurveda* but there are many references about hemodynamic system including heart, blood vessels, kidneys etc. which are commonly affected by high blood pressure. This article has been reviewed in such a way to describe uniformity with the concept of psychosomatic analysis of essential hypertension. It is not designed as a critical review of the literature as a number of comprehensive reviews are available including a seminal work and this goal of study was stimulated by a clinical study based on original research work on Essential hypertension being done in the year 2010.

**Keywords:** Ayurveda, Essential Hypertension, Psychosomatic Illness.

#### INTRODUCTION

The concept of hypertension as it is understood today has witnessed a series of theories and discoveries, all are aimed at uncovering the mystery surrounding this medical problem. For many centuries, the mechanism of blood circulation was a mystery. Towards the end of 16th century, two Italian scientists put forth the idea that blood circulates continuously in the human body. Realdo Colombo<sup>1</sup> discussed in detail the flow of blood from the right ventricle to the lungs, via the pulmonary artery. Cesalpino<sup>2</sup> demonstrated that blood flows from the left side of the heart to the other organs of the body, through a network of arteries. Stephen Hales<sup>3</sup> was the first to observe blood pressure in animals in the 18th century. By the 19th century, knowledge about blood pressure regulation had grown significantly. In the 20th century, McLeod<sup>4</sup> described the main factors controlling blood pressure. Although there has been widespread dissemination of knowledge of hypertension, it is poorly treated in most of the populations including India. Many works have been carried out on

hypertension to evaluate the perfect diagnosis and mode of treatment. But a widely acceptable theory is still not available.

#### AIMS AND OBJECTIVES

Aim is to characterize the development of the literature on Essential Hypertension from a historical and classical perspective and this goal was stimulated by a clinical study based on Essential hypertension in year 2010<sup>5</sup>. Our specific aims are three folds:

1. To trace and describe the history of this area of Research
2. To identify milestones in knowledge and methods
3. To discuss briefly how this literature translates into patient care.

The topic is of major relevance to research and practice because hypertension is a well known risk factor for many diseases. It is important to emphasize two features of this review:

- a) It is not designed as a critical review of the literature but rather to describe the progressive historical influences on our current knowledge base.

- b) A number of comprehensive reviews of this literature are available including a seminal work formative years of this research<sup>6-11</sup>.

## MATERIALS AND METHODS

All valid books viz. *Samhitas* & their respective commentaries, various articles and online database have been referred for the specific materials & the topics are discussed on the basis of its conceptual part to draw out ultimate conclusion.

### LITERARY REVIEW:

#### A. CONCEPT OF PSYCHOSOMATIC DISEASES

Recent studies in the field of Modern medical science suggests that most modern diseases like cancer, Hypertension, diabetes and obesity are caused due to increased stress on the body revealing the concepts of interdisciplinary approach (psychosomatic) among social, psychological and behavioral factors on bodily processes and quality of life in humans. Sigmund Freud pursued a deep interest in psychosomatic illnesses following his correspondence with George Groddeck who was at time, reaching the possibilities of treating physical disorders through psychological processes. Such illness is classified as Neurotics, stress related and Somatoform disorders by World Health Organization in the International Statistical Classification of Diseases and Related health problems<sup>12</sup>.

There is increasing evidence that stress has a direct biological effect on disease risk, involving the sympathetic neurons system, the Hypothalamic – Pituitary Axis and inflammatory response system<sup>13</sup>. The release of catecholamines, creates fight and flight response, such as increase in blood pressure, mental agility, heart rate etc. Increase in the rate of metabolism of body to counter the stress generates free radicals. Sustained production of free radicals may cause alteration in the genetic constitution of individual leading to disturbances in the physiological functions of the body<sup>14</sup>. This condition leads to variety of metabolic disorders. Essential hypertension is one of those disastrous diseases which are psychosomatic, hereditary and occurring as a result of aging. It means that cause of disease is disturbance in defense mechanism. Weakening of the body is associated with its inability to maintain harmony with surrounding. Sudden changes in the environment and dietary patterns can disturb the normal functional rhythm of the body. Proper understanding of causation of disease warrants a look into the physiological factors. Understanding of functional harmony between different components of the body, and between body and its surrounding has opened windows to the new approach in understanding most of the diseases.

#### B. PSYCHOSOMATIC APPROACH IN AYURVEDA:

Though psychosomatic approach to the problem of health and diseases has attained the central theme of current trends of modern medicine, whereas it has been the basis of *Ayurveda* from its beginning. An approach that cognizes an object in relation to its surrounding is termed as Holistic approach. It gives equal emphasis on the object individually and in relation to all objects in the surrounding. Holistic approach was realized long ago in the form of *Ayurveda* and it is pertinent to mention that the subjectivity involves all objects in the

surroundings and their inter relation. Hence, objective knowledge is an important part of the holistic approach.

In *Ayurveda*, the concomitant role of Mind and Body is seen everywhere. The entire approach of Indian system of Medicine to problem of health and diseases is strongly psychosomatic in nature with great emphasis on the phenomena of the mind than that of body. This can be elucidated by definition of health<sup>15</sup>, causes of diseases<sup>16</sup>, the approach to examination of patients<sup>17</sup>, at the level of genetic constitution (*Prakriti*)<sup>18</sup>, the regimes for prevention of diseases in form of physical and mental hygiene<sup>19-20</sup>, science of longevity (*Rasayana & Vajikarana*)<sup>21</sup>, Aetiopatho-physiology of several diseases like *Kamaj Jwara*<sup>22</sup>, *Vatavyadhi*<sup>23</sup>, *Arochaka*<sup>24</sup>, *Chhardi*<sup>25</sup>, *Aguntaj Atisara*<sup>26</sup> etc. clearly exhibit the psychosomatic concept of ancient science. *Acharya Charak* very clearly emphasized that under circumstances a mental disease may get converted into a bodily illness and vice-versa<sup>27</sup>. Thus *Ayurveda* has not only conceived but has laid foundation on Psychosomatic basis of health and diseases. Thus there is a considerable conformity of *Ayurvedic* concepts of psychosomatic to current thoughts on subject today.

#### C. PATHOGENESIS IN PSYCHOSOMATIC DISEASES<sup>28</sup>:

Anxiety is the major cause of psychosomatic disorders. Anxiety is anticipation of situation of emergency and response of body to the anticipation of emergency is identical to the actual emergency itself. Situation of emergency demands more energy for body tissues because the body counters the situation of emergency in physical way by flight or fight response. In emergency, body mobilizes more reserve food materials in the blood circulation to produce more energy for muscles, heart pumps faster to carry the food faster to muscles, rate of respiration increases to take in more oxygen for utilization by muscles, endocrine glands secretes more hormones to enhance the functions of body and cellular functions (BMR) increases to yield more energy. Net burst of energy is useful for body in short term emergency but prolonged state of increased BMR has harmful effect on body in form of excessive wear and tear of involved organs i.e., structural changes.

Heart and blood vessels may get distended because the blood is flowing through them at higher pressure. Blood vessels may get ruptured and resultant repair mechanisms deposits the hard cholesterol patches on the ruptured portion, which make the wall of blood vessels brittle and inelastic at the repaired site and may cause narrowing of lumen at the affected side. Inelasticity and narrowing of the wall of blood vessels offer more resistance to the blood flow. Thus heart has to pump at greater pressure to send the blood to the farthest corners of the body causing the clinical condition of hypertension. Hypertension further causes the rupture of blood vessels and vicious circle goes on. Continuous state of workload on heart causes the sympathetic hypertrophy of its muscles and ultimately brings structural changes.

#### D. AYURVEDIC REVIEW OF HYPERTENSION :

*Ayurveda* is such a science which has specific doctrines on the basis of which it is flourished. Its diagnostic approach is totally based on the signs and symptoms present in the patients. As hypertension is the instrumental disease there is

no direct reference of it in *Ayurveda*. *Acharya charak* also have the opinion that for every diseases, nomenclature or particular name is not possible<sup>29</sup>, the physician can treat just by simple calculations of doshas etc. involved in the pathogenesis. But there are many references in ancient texts about hemodynamic system including heart, blood vessels and the organs like *Shira*, *Hridaya* and *Basti* which are commonly affected by the high blood pressure. Different nomenclatures also have been adopted by *Ayurvedic* scholars like *Uchharaktachapa*, *Uchharaktabhara* etc. Different opinions cite various diseases as parallels for hypertension e.g. *Raktagata Vata*, *Raktavrita Vata*, *Pranavrita Vyana*, *Vyanavrita Prana*, *Shleshmavrita Vyana* etc. Most of the disease entities not in whole but collectively are the most probable routes of pathophysiology of hypertension according to *Ayurveda*.

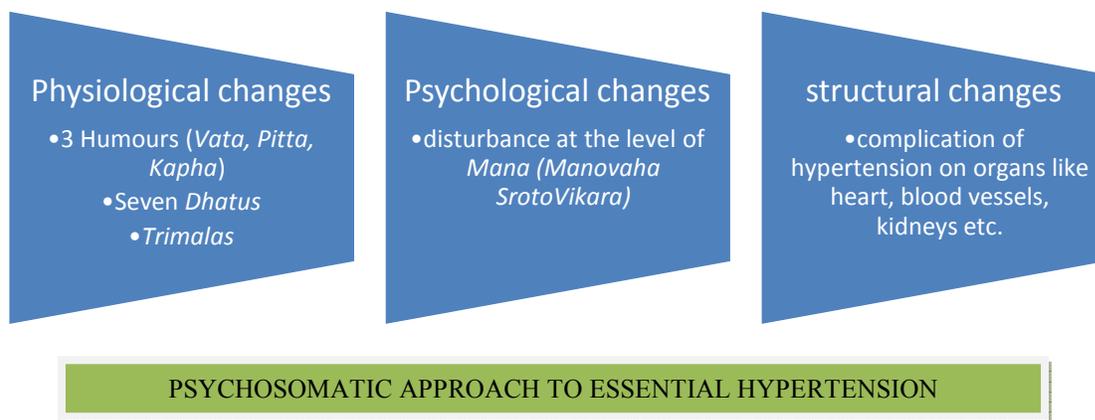
Blood Pressure is the result of many physiological and psychological activities. In *Ayurveda*, three humours—*Vata*, *Pitta* and *Kapha*; seven *Dhatu*s (*Rasa*, *Rakta* etc.), three *Malas* (*Mutra*, *Purisha* etc.) are considered as the root cause of all the functions of the body. So particularly for the understanding of Blood Pressure in terms of *Ayurveda*, consideration of *Dhatu*s like *Rasa*, *Rakta* etc; the *Srotasa* which transport it; *Hridaya*;

types of *Vata* i.e. *Prana*, *Vyana* etc; *Sadhaka pitta*, *Avalambaka Kapha*, *Oja* are necessary.

*Hridaya*, which is said to be *Moolsthana* of *Rasvaha Srotas*, with the help of *Vyana Vayu* contracts (*prasbandana*) and do the *Vikshepana* of *Rasa-Rakta* to all over the body<sup>30</sup>. *Prana* and *Udana vayu* play significant role in its physiological action. *Murdha* (brain) which is seat of *Prana Vayu* sends impulses to *Hridaya* and with the help of *Udana Vayu*, the energy and power is provided to the heart. Moreover, normal functions of all *Dhatu*s including *Vyaus* are depending upon normal directions of *Apana Vayu*. Hence nourishment of all *Dhatu*s (tissues) takes place continuously and in circulatory fashion<sup>31</sup>. Here *Charaka* has indirectly elaborated the theory of closed blood circulation and thus alterations in the physiological condition of *Vyana Vayu* can lead EHT.

*Acharya charak* has quoted that *Chinta* (worry), *Shoka* (grief), *Krodh* (anger), *Lobha* (materialism) are some factors which causes vitiation of *Dosha* and these vitiated *Doshas* reach *Hridaya* and causes *Mahovaha Srotovikara*<sup>32</sup> implicating the concept of psychological influences in pathogenesis of essential hypertension.

**Hence in a nutshell the probable conditions of hypertension in *Ayurveda* can be enumerated as under:**



## CONCLUSION

The concept of mind and body has a unique uniformity in understanding most of the global burdened diseases, including essential hypertension. This has been proved many times by our *Acharyas* in the ancient system of medicine. Hence there is a time to get back to all those fundamentals which have lost their identity in the light of present era. After thorough study of literature and fundamentals both in *Ayurveda* and Modern, it is concluded that the approach of hypertension in *Ayurveda* is very practical and should never be overlooked. Thereby future aspects of treating such conditions through *Ayurveda* must be carried out.

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