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Review Article

CRITICAL ANALYSIS OF SAMANA VATA IN TERMS OF SHAREERA KRIYA

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ABSTRACT

Dosha, Dathu, Mala together form the basis of the body. The balance of these entities represents the healthy state and imbalance will cause various diseases. In normalcy, *Dosha* will be performing their own functions and individual *Dosha* will be having their own specific site.

There are five types of *Vata* namely *Prana, Udana, Vyana, Samana, Apana.* The *Visesha Sthana* of *Samana Vata* is said to *Agni Samipa* and also said to move in Kosta. The functions of *Samana Vata* is said to be *Grahana(*taking*), Pachana(*digestion*), Vivechana(*differentiates into Sara and Kitta*), Munchana (*forward movement*)*of the ingested food.

The myenteric plexus, or plexus of Auerbach, is located between the longitudinal and circular smooth muscle layers of the muscularis. The motor neurons of the myenteric plexus supply the longitudinal and circular smooth muscle layers of the muscularis, this plexus mostly controls GI tract motility (movement), particularly the frequency and strength of contraction of the muscularis. This can be related to *Karma* of *Samana Vata* like *Grahana, Munchana*.

The submucosal plexus, or plexus of Meissner, is found within the submucosa. The motor neurons of the submucosal plexus supply the secretory cells of the mucosal epithelium, controlling the secretions, absorption of the organs of the GI tract. This can be related to *Karma* of *Samana Vata* like *Pachana, Vivechana.*

The functions of *Samana Vata* can be related to the functions of Enteric Nervous system and also to the Autonomic Nervous system control over the same.

Keywords: *Samana, Vata, Shareera, Kriya,* Enteric Nervous system.

INTRODUCTION

The individual is an epitome of the universe. All the material & spiritual phenomenon of the universe are present in the individual. Similarly all those resent in the individual are also contained in the universe[1].

Originating in cosmic consciousness, this wisdom was intuitively received in the hearts of the ancient scholars. They perceived that consciousness was energy manifested into the five basic principles or elements. Man is microcosm of the nature and so the five basic elements present in all matter also exists within each individual. Thus out of the womb of the five elements, all matter is born. The five basic elements exist in all matter. Water provides the classic example: - the solids of iced water are manifestation of the *Prithvi Mahabhuta* (earth principle). Latent heat in the ice (*Agni*) liquefies it, manifesting into *Jala Mahabhuta* (water principle). And then eventually it turns into steam expressing the *Vayu Mahabhuta* (air principle) the steam disappears into *Akasha* or space[2]. *Bhuta* is that which is not born out of something, but out of which something is born. It is the material cause of substances in the world. When we say *Bhuta* we mean that subtle level of existence, where as *Mahabhuta* refers to gross level of existence[3]. *Panchikarana* is the process through which invisible *Bhutas* combine with each other and form the visible *Mahabhutas* in such a way that all *Bhutas* are present together in each *Drisya Bhuta* in varying degrees of predominance. Thus in the physical world everything is a combination of *Pancha Mahabhutas* & we cannot see them independently[4].

Dosha, Dathu, Mala together form the basis of the body[5]. The balance of these entities represents the healthy state and imbalance will cause various diseases[6]. In normalcy, *Dosha* will be performing their own functions and individual *Dosha* will be having their own specific site. By mentioning the various *Sthana* of the each *Dosha* the different function performed by individual *Dosha* in different sites has been emphasised. The sub-types of *Dosha,* its location and function have also been mentioned[7].

Regarding the *Sthana* of various *Dosha* authors have different opinion. Later authors have added some more *Sthana* of *Dosha*. For example, ears among the location of *Vata*; umbilicus, eyes and skin among the location of *Pitta*; *Kloma*, nose, tongue among the location of *Kapha*[8].

There are five types of *Vata* namely *Prana, Udana, Vyana, Samana, Apana.* The *Visesha Sthana* of *Samana Vata* is said to *Agni Samipa* and also said to move in Kosta. The functions of *Samana Vata* is said to be *Grahana (*taking*), Pachana(*digestion*), Vivechana* (differentiates into Sara and Kitta*), Munchana* (forward movement*)*of the ingested food[9].

Brief Physio- anatomical understanding of the Gastro-intestinal tract with reference to chemical and physical digestion is necessary to understand physiology of *Samana Vata*.

Two groups of organs compose the digestive system the gastrointestinal (GI) tract and the accessory digestive organs. The gastrointestinal (GI) tract, or alimentary canal, is a continuous tube that extends from the mouth to the anus through the thoracic and abdominopelvic cavities. Organs of the gastrointestinal tract include the mouth, most of the pharynx, esophagus, stomach, small intestine, and large intestine[10].

Overall, the digestive system performs six basic processes:Ingestion: This process involves taking foods and liquids into the mouth (eating). Secretion: Each day, cells within the walls of the GI tract and accessory digestive organs secrete a total of about 7 liters of water, acid, buffers, and enzymes into the lumen (interior space) of the tract. Mixing and propulsion: Alternating contractions and relaxations of smooth muscle in the walls of the GI tract mix food and secretions and propel them toward the anus. This capability of the GI tract to mix and move material along its length is called motility. Digestion: Mechanical and chemical processes break down ingested food into small molecules. In mechanical digestion the teeth cut and grind food before it is swallowed, and then smooth muscles of the stomach and small intestine churn the food. As a result, food molecules become dissolved and thoroughly mixed with digestive enzymes. In chemical digestion the large carbohydrate, lipid, protein, and nucleic acid molecules in food are split into smaller molecules by hydrolysis. Absorption: The entrance of ingested and secreted fluids, ions, and the products of digestion into the epithelial cells lining the lumen of the GI tract is called absorption. The absorbed substances pass into blood or lymph and circulate to cells throughout the body. Defecation: Wastes, indigestible substances, bacteria, cells sloughed from the lining of the GI tract, and digested materials that were not absorbed in their journey through the digestive tract leave the body through the anus in a process called defecation. The eliminated material is termed feces[11].

The enteric nervous system (ENS), the “brain of the gut” consists of about 100 million neurons that extend from the esophagus to the anus. The neurons of the ENS are arranged into two plexuses: the myenteric plexus and submucosal plexus. The myenteric plexus, or plexus of Auerbach, is located between the longitudinal and circular smooth muscle layers of the muscularis. The submucosal plexus, or plexus of Meissner, is found within the submucosa. The plexuses of the ENS consist of motor neurons, interneurons, and sensory neurons. Because the motor neurons of the myenteric plexus supply the longitudinal and circular smooth muscle layers of the muscularis, this plexus mostly controls GI tract motility (movement), particularly the frequency and strength of contraction of the muscularis. The motor neurons of the submucosal plexus supply the secretory cells of the mucosal epithelium, controlling the secretions, absorption of the organs of the GI tract. The interneurons of the ENS interconnect the neurons of the myenteric and submucosal plexuses. The sensory neurons of the ENS supply the mucosal epithelium. Some of these sensory neurons function as chemoreceptors, receptors that are activated by the presence of certain chemicals in food located in the lumen of a GI organ. Other sensory neurons function as stretch receptors, receptors that are activated when food distends (stretches) the wall of a GI organ[12].

Although the neurons of the ENS can function independently, they are subject to regulation by the neurons of the autonomic nervous system. The vagus (X) nerves supply parasympathetic fibers to most parts of the GI tract. Sympathetic nerves that supply the GI tract arise from the thoracic and upper lumbar regions of the spinal cord. Like the parasympathetic nerves, these sympathetic nerves form neural connections with the ENS. Sympathetic postganglionic neurons synapse with neurons located in the myenteric plexus and the submucosal plexus. In general, the sympathetic nerves that supply the GI tract cause a decrease in GI secretion and motility by inhibiting the neurons of the ENS. Emotions like anger, fear, and anxiety may slow digestion because they stimulate the sympathetic nerves that supply the GI tract[13].

AIMS & OBJECTIVES

To critically analyze the *Samana Vata*

MATERIALS AND METHODS

The *Bruhat Trayi* were scrutinised regarding the references for the *Guna* and *Karma* of the *Samana Vata*. Later, physiologico-anatomical aspects of the Gastro-intestinal tract with reference to chemical and physical digestion were studied from modern physiology books. Later, supportive correlation was done between *Ayurvedic* and modern views to build valid and reliable hypothesis regarding *Samana Vata* in relation to the various anatomical and physiological aspects of the central nervous system.

DISCUSSION

Dosha, Dathu, Mala together form the basis of the body. The balance of these entities represents the healthy state and imbalance will cause various diseases. In normalcy, *Dosha* will be performing their own functions and individual *Dosha* will be having their own specific site.

There are five types of *Vata* namely *Prana, Udana, Vyana, Samana, Apana.* The *Visesha Sthana* of *Samana Vata* is said to *Agni Samipa* and also said to move in Kosta. The functions of *Samana Vata* is said to be *Grahana(*taking*), Pachana (*digestion*), Vivechana(*differentiates into Sara and Kitta*), Munchana (*forward movement*)*of the ingested food.

Digestion: Mechanical and chemical processes break down ingested food into small molecules. In mechanical digestion the teeth cut and grind food before it is swallowed, and then smooth muscles of the stomach and small intestine churn the food. As a result, food molecules become dissolved and thoroughly mixed with digestive enzymes. In chemical digestion the large carbohydrate, lipid, protein, and nucleic

acid molecules in food are split into smaller molecules by hydrolysis.

The myenteric plexus, or plexus of Auerbach, is located between the longitudinal and circular smooth muscle layers of the muscularis. The motor neurons of the myenteric plexus supply the longitudinal and circular smooth muscle layers of the muscularis, this plexus mostly controls GI tract motility (movement), particularly the frequency and strength of contraction of the muscularis. This can be related to *Karma* of *Samana Vata* like *Grahana, Munchana*.

The submucosal plexus, or plexus of Meissner, is found within the submucosa. The motor neurons of the submucosal plexus supply the secretory cells of the mucosal epithelium, controlling the secretions, absorption of the organs of the GI tract. This can be related to *Karma* of *Samana Vata* like *Pachana, Vivechana.*

Although the neurons of the ENS can function independently, they are subject to regulation by the neurons of the autonomic nervous system. The vagus (X) nerves supply parasympathetic fibers to most parts of the GI tract. Sympathetic nerves that supply the GI tract arise from the thoracic and upper lumbar regions of the spinal cord.

CONCLUSION

The functions of *Samana Vata* is said to be *Grahana(*taking*), Pachana(*digestion*), Vivechana(*differentiates into Sara and Kitta*), Munchana (*forward movement*)*of the ingested food. The myenteric plexus, or plexus of Auerbach, is located between the longitudinal and circular smooth muscle layers of the muscularis, this plexus controls GI tract motility, particularly the frequency and strength of contraction. This can be related to *Grahana, Munchana Karma* of *Samana Vata*. The submucosal plexus, or plexus of Meissner, is found within the submucosa. This plexus controls the secretions, absorption from GI tract. This can be related to *Pachana, Vivechana Karma* of *Samana Vata.* The functions of *Samana Vata* can be related to the functions of Enteric Nervous system and also to the Autonomic Nervous system control over the same.

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