# Review Article - Ayurveda

# Influence of *Manipur Chakra* (Coeliac Plexus) on *Annavaha Srotas* (Gastro Intestinal Tract)

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#### **Abstract**

Background: Chakra (plexus) are the energy points which are nodes in the subtle body described in Yogic science which are six in number. Manipur Chakra is 3rd among Shad Chakra (six plexus) which is also called Solar plexus. According to modern anatomy these Chakra are the part of autonomic nervous system and are formed from the medial division of sympathetic ganglia. *Manipur Chakra* has control on several functions of digestive system which is even affected by psychosomatic disorders. Aim: To analyze the influence of Manipur Chakra on Annavaha Srotas (gastro intestinal tract). Materials & **Methods:** The literature of *Yogic* compendia as well as contemporary science and relevant research papers are thoroughly analyzed to interpret the influence of Manipur Chakra on Annavaha Srotas. **Results:** The position of *Manipura Chakra* is stated as being either behind the navel or the solar plexus. It is considered to be the center of dynamism, energy, willpower and achievement which radiates Prana (vital power). It is associated with the power of fire and digestion, as well as with the sense of sight and the action of movement. The visceras of *Annavaha Srotas* are supplied mainly by coeliac plexus which is comparable with Manipur Chakra. Yogic practice of Asanas like Vajrasana, Shashankasana, Ushtrasana, Marjariasana, Padhastasana, Dhanurasana, Trikonasana, Pawanmuktasana, Ardhamatsyendrasana, Mayurasana and Paschimottanasana are helpful in regulating the functions of Manipura Chakra which indirectly influence Annavaha Srotas. Conclusion: The key to normal physiology is proper functioning of the bodily organs which in turn is a key for a person to be healthy. Digestive system is also affected by psychosomatic disorders which may result in one of its many metabolic disorders manifestation hence knowledge of Manipur Chakra and its importance in prevention and management of Annavaha Srotas disorders can be a new instinct.

Keywords: Annavaha Srotas (Gastro Intestinal Tract), Coeliac Plexus, Manipur Chakra, Yoga

## Introduction

he word *Chakra* is Sanskrit implying "spinning wheel" refers to the six energy centers within the body that psychics view as spinning vortexes. Each *Chakra* is associated with a gland and system in the body as well as a type of consciousness. The *Chakras* upon their activation run upwards the *Chakra* column. As they ascend up in the spine, they ascend in levels of complexity and spirituality, yet every *Chakra* is important. Those lower on the scale are the foundation and are equally important as the upper *Chakras*. Various exercises, meditations, therapies and rituals used to balance and align the *Chakras*, thereby balancing and alignment of health and awareness. [1]

The concept of *Chakra* features in Tantric and Yogic traditions of Hinduism and Buddhism. Mainly 6 *Chakras* namely *Mooladhar*, *Swadhishthan*, *Manipur*,

Anahat, Vishuddha and Agya are described in literature of Yoga. Sahastrara is 7<sup>th</sup> Chakra described by some Yogic Compendia. <sup>[2]</sup> Manipur Chakra is 3<sup>rd</sup> among Shad Chakra which is also called Solar plexus. <sup>[3]</sup> According to modern anatomy these Chakra can be understood to be formed by the part of autonomic nervous system and from the medial division of sympathetic ganglia. Located at the navel <sup>[4]</sup> Manipur Chakra is said to be the seat of fire within the body and has control on several functions of digestive system.

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Dr. Smitha Jha Post Graduate Scholar, Dept. of Rachana Sharir Mahatma Gandhi Ayurved, College, Hospital & Research Center, Salod (H), Wardha, Maharashtra, India <u>Email</u>: <a href="mailto:smitajha99@rediffmail.com">smitajha99@rediffmail.com</a> Annavaha Srotas is the channel which is responsible for the transportation of food materials and absorption of nutrients. Perversion of Annavaha Srotas results in many symptoms like Adhmana, Shool (colic), Annadwesh, Vaman (vomit), Pipasa (thirst), Andhyam (blindness), Maranam (death) and An-Annabhilasha (loss of appetite), Arochaka (distaste), Avipak (indigestion), Chhardi (vomit). [5,6,7] The present review emphasizes on the anatomical and physiological relation of Manipura Chakra with Gastrointestinal tract (GIT) and measures to stimulate them.

# Materials and Methods:

The study was initiated to find out the influence of *Manipur Chakra* on *Annavaha Srotas*, for which literature of *Yogic* compendia as well as contemporary science and relevant research papers and references from internet are thoroughly reviewed for this study.

#### **Observations:**

Manipura literally means the "City of Jewels" (Mani gem, Pura or Puri - city). Often associated with the color yellow, blue in classical Tantra and red in the Nath-tradition, this Chakra is associated with fire and the power of transformation. It is said to govern digestion and metabolism and is the home of Agni (metabolism) and the vital Samana Vayu. It is the point where the energies of Prana Vayu and Apana Vayu are connected together. Manipura Chakra is notably the home of coeliac plexus which innervates most of the digestive system. In Chakra based medicine, this area is worked with to affect normal digestion, elimination of waste products as well as regulation of functions of pancreas, kidney and Adrenal gland. Mandagni leads to incomplete digestion of food which results in disturbance of thoughts and emotions ultimately creating a source of Ama (metabolic wastes). [8] Nabhi controls the Manipur Chakra which is the main Pranic center for digestion and exertion. [9] The solar plexus or coeliac plexus is a large cluster of nerves that relay messages from the major organs of the abdomen to the brain. The solar plexus monitors them and makes sure they are functioning correctly. [4]

# Appearance of Manipura Chakra:

Manipura Chakra is shown as having ten petals, bearing the Sanskrit letters da(M), dha,(<), na(.k), ta®, tha(Fk), da(n), dha(/k), na(u), pa(I) and pha(Q). It is represented with a downward pointing red triangle, signifying the Tatva of fire, within a bright yellow circle, with 10 dark-blue or black petals like heavily laden rain clouds. The fire region is represented by the God Agni, who is shining red, has four arms, holds a

rosary and a spear and is making the gestures of granting boons and dispelling fear. He is seated on a Ram (ja), the animal that represents this *Chakra* (fig.1). The seed mantra is the '*Ram*'. Within the dot above this mantra resides the deity *Rudra*, who is red or white. His *Shakti* is the Goddess *Lakinee* who is seated upon a red lotus.

Figure 1: Representation of Manipura Chakra



#### **Functions:**

*Manipura* is considered to be the center of dynamism, energy, willpower and achievement which radiates *Prana* (vital power) throughout the entire human body. It is associated with the power of fire and digestion, as well as with the sense of sight and the action of movement. Through meditating on *Manipura*, one is said to attain the power to create (save) or destroy the world. [1]

## Association with the body:

The position of *Manipura* is stated as being either behind the navel or the solar plexus. The role of solar plexus is to absorb and assimilate *Prana* from the sun. Being related to the sense of sight, it is associated with the eyes movement. In the endocrine system, *Manipura* is said to be associated with the pancreas and the outer adrenal glands (the adrenal cortex). These glands create important hormones involved in digestion, converting food into energy for the body, in the same way that *Manipura* radiates *Prana* throughout the body. [10]

# Coeliac or Solar plexus:

The coeliac plexus is also known as the solar plexus because of its radiating nerve fibers. It is located at the back of the stomach or the upper abdomen where the coeliac trunk, renal arteries and the superior mesenteric artery subdivide from the abdominal aorta. It is positioned behind the stomach and the omental bursa and before the crura of the diaphragm, the level of the first lumbar vertebra.

The plexus is formed by the greater and lesser splanchnic nerves on both sides and fibers from the anterior and posterior vagal trunks. [11] The sympathetic supply to the stomach is from coeliac plexus which receives fibers from T6 to T9 via the greater splanchnic nerve. The fibers of the celiac plexus follows the course of the gastric and gastro-omental arteries to reach the stomach. [12]

The autonomous nervous system is in the form of sympathetic trunks which is situated on either side of *Sushumna* (spinal cord). It is made up of number of sympathetic ganglia. These ganglia give rise to lateral and medial branches. The lateral branches from these ganglia join the spinal nerves and supply to concerned viscera or part of the body. The medial branches of both sides join together along with other components if any and form plexuses. These plexuses are of autonomous nervous system so have no voluntary control over it. And here the role of *Yoga* starts to get control over these plexuses or to regularize their activities the *Asana* and *Pranayama* has great role.

Manipur Chakra has 10 Dalas and coeliac plexus has around 10 subdivisions. This similarity in branching pattern is a key to correlate Manipura Chakra with coeliac plexus (**Table 1**).

Table 1: Comparison between Coeliac plexus and Manipura Chakra

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10 Main branches of	10 Petals of
coeliac plexus	Manipura Chakr <mark>a</mark>
1. Phrenic	da(M)
2. Hepatic	dha,
3. Lienal	na(.k)
4. Sueperior gastric	ta(r)
5. Supra renal	tha(Fk)
6. Renal	da(n)
7. Sermatic or ovarian	dha(/k)
8. Superior mesenteric	na(u)
9. Abdominal aortic	pa(i)
10. Inferior mesenteric	pha(Q)

The autonomic nervous system (ANS) controls the activity of the stomach through parasympathetic stimulation which increases muscle tone and peristalsis relaxes the sphincter thereby open it increases acid and pepsin production. Sympathetic stimulation which decreases muscle tone and peristalsis constricts the sphincter thereby closing it inhibits acid and pepsin secretion.

Myenteric plexus [13] which lies between the muscular layers of the gut is a part of coeliac plexus. Its main role is in coordinating the movement of food through gut.

Sub mucosal plexus lies in the sub mucosa that is under the inner mucosal lining of the gut. Its main roles is controlling gastrointestinal secretions, like the gastric acid secretion in the stomach and controlling blood flow in the gut wall which is important for the absorption of nutrients.

The enteric system does not exist in isolation from the rest of the nervous system. While it can function on its own, parasympathetic and sympathetic impulses from extrinsic nerves to the plexus can excite or inhibit gastrointestinal activity. The enteric nervous system is also influenced by impulses of the sensory nerve endings in the epithelium lining the gut.

# Measures to Stimulate Manipura Chakra:

Aasana: The best Yoga poses for solar plexus are those that strengthen the core and helps to feel more powerful and confident. Aasana like Virabhadrasana (warrior pose-I), Paripurna Navasana (boat pose), Ardha Matsyendrasana (half fish pose), Dhanurasana (bow pose), Urdhva Prasarita Padasana (upward extended feet pose) and Agnisar Kriya (activity which causes stirring of abdomen) are best methods for regulation and activation of this Chakra.

*Beejmantra* **Meditation**: *Seed Mantra* meditation can be done by '*RAM*' pronouncing as *rum*. Sitting away from any support in cross legged or lotus pose and with deep breaths. Visualizing the color yellow in the region of the *Chakra*, 'RAM' should be chanted for three times followed by chanting of '*OM*' for three times by which feeling of flow of energy vibrating from head to toe is perceived. This procedure can be repeated as per individual practice. [14]

#### **Discussion**:

Manipur is third Chakra which consists of cluster of nerves having structure like sun rays radiating from center. As the center Chakra is like sunshine and has 10 petals with specific it appears like sun so it is also called as solar plexus. The proper functioning of this Chakra improves dynamism, energy, will power and achievement in a person. The ten subdivisions of coeliac plexus supply to different viscera of abdomen including digestive system. As Moolsthana of Annavaha Srotas are Amashaya and Aahnnavee Dhamanis this Srotas is controlled by coeliac plexus of ANS. The role of parasympathetic activity is major in case of digestion and metabolism. Acharya Vagbhata has rightly quoted 'all diseases are due to Mandagni (lack of digestive power) and *Udara* (abdominal disturbance) that too in case of Annavaha Srotas. [15]

Perversion of *Annavaha Srotas* is due to *Viruddh Aahar* (opposite food), *Vishmashana* (irregular food), *Agnividarana* (suppression), intake of *Tikshna* (spicy) & *Guru Ahara* (heavy to digest meal), *Vyasana* (addiction) and less exercise. Once the *Annavaha Srotas* works correctly, all nutrients will be absorbed efficiently and the body will function correctly.

Holistic management is a special way to treat patient especially in case of chronic diseases. The Shadchakra stimulation with *Yogic* procedures like *Aasana* (pose) and Pranayam (breathing exercise) helps in the management of diseases of Annavaha Srotas. Practicing different poses of Yoga like Lion pose, boat pose have excitatory effect on ANS and set right their mechanism indirectly. In case of some Aasanas where abdominal pressure is raised the blood circulation to terminal parts of abdominal viscera also improves and the sub mucosal plexuses as stated earlier will be operational too. The Aasana like Vajrasana, Shashankasana, Ushtrasana, Marjariasana, Padhastasana, Dhanurasana, Trikonasana, Pawanmuktasana, Ardhamatsyendrasana, Mayurasana and Paschimottanasana through its effects will regularize the ANS activity when it is perverted. Studies also reveal that the Yogic procedures and Pranayama has significant role to change or regulate Autonomic activity either sympathetic or parasympathetic. [16]

#### **Conclusion:**

The maintenance of normal physiology makes person healthy through proper functioning of organs which is the ultimate goal of Ayurveda. *Chakras* are the energy points in the body which are situated in close relation to spinal cord and vertebral column. The *Manipura Chakra* delineated in *Yogic* Compendia has similar activities with that of coeliac plexus which is autonomic in nature. Practicing measures to stimulate them, especially *Manipura Chakra* helps in proper functioning of abdominal organs and thereby help in preventing and managing diseases related to GIT.

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