

**ANATOMICAL ELUCIDATION OF CHAKRAS****JadhavViraj<sup>1</sup>, Kadam Krishna<sup>2</sup>**<sup>1</sup>Associate Professor, Department of Rachna Sharira, Rani Dullaiya Smriti Ayurved P.G. College, Bhopal, Madhya Pradesh, India<sup>2</sup>Ph.D. Scholar, Asst. Professor, Department of Rog Nidan Vikriti Vigyan, Government Ayurved College, Nanded, Maharashtra, India**ABSTRACT**

In some Indian religions, a chakra (Sanskrit cakra, "wheel") is thought to be an energy point or node in the subtle body. Chakras are believed to be part of the subtle body, not the physical body, and as such, are the meeting points of the subtle (non-physical) energy channels called nadi. Nadi are believed to be channels in the subtle body through which the life force (prana) (non-physical) or vital energy (non-physical) moves. Various scriptural texts and teachings present a different number of chakras. It's believed that there are many chakras in the subtle human body, according to the tantric texts, but there are seven chakras that are considered to be the most important ones. "In fact, there is no "standard" system of the chakras. Every school, sometimes every teacher within each school, has had his own chakra system."

The following features are common:

- They form part of the body, along with the breath channels (nadi), and the winds (vayu).
- They are located along the central channel (sushumna/avadhūtī).
- Two side channels cross the center channel at the location of the chakras.
- They possess a number of 'petals' or 'spokes'.
- They are generally associated with a mantra seed-syllable, and often with a variety of colours and deities.
- There are believed to be 7 major chakras, which are arranged vertically along the axial channel (sushumna nadi)

**Keywords:** Chakras, Muladhar chakra, Swadishthan chakra, Manipur chakra

**INTRODUCTION**

Chakras are the psychic centers in the body that are active at all times, whether we are conscious of them or not. Energy moves through chakras to produce different psychic states. The ancient Indian science of yoga therefore laid great emphasis on knowing these elements for the chakras. In the ancient science of swara yoga (the yoga of conscious breathing), various methods to identify the presence of the tattvas in the body are prescribed and by mastering these techniques Yogis can

perform themselves so as to accomplish much by using the least possible amount of energy. By the constant practise of Shatchakra bhedana (piercing the six chakras by visualisation) and mantra recitation, they can finally transcend the tattvas which dominate the five centres of the body. That is the first five chakras and there by non dual consciousness that liberates them from the illusory world of Maya. Herewith the discussion of chakras, we are necessarily discussing the subtle aspects of these

centres. Nerves are merely vehicles but the message is subtle and not devoid of consciousness. Keeping in view of the location and shape of the chakras as described in literature pertaining to Yoga, a humble attempt had been carried out here to explain the chakras in the light of modern anatomy.

**Muladhara Chakra:** Muladhara means the supporting root. Likewise basal root supporting the upper tree, muladhara chakra supports the other chakras in our body. Parashakti kundalini or serpent power is lying in dormant or static state in the Muladhara chakra. The male prime cause of the universe is Shiva. Within the Swayambhu Linga reins dominant Para, the Sri Parameswari, the awakener of eternal knowledge. She is the omnipotent Kala, wonderfully skilful creator. Over the Linga, the white Kundalini, fine as the fibre of the lotus stalk, lies sleeping, in spiral three and half times round Shiva and her mouth covers Brahamadwara. The circulating energy above that is called as Kama Bija. Ganesha is the devata of this chakra. Thus the muladhara chakra can be compared with the autonomic innervations of the pelvic visceral organs.

**Sacro-coccygeal Plexus:** The Sacral sympathetic efferent fibres leave the spinal cord with the anterior roots of the second, third and fourth sacral nerves. These small medullated preganglionic fibres are collected together in the pelvis into the nervus erigentes or pelvic nerve which proceeds to the hypogastric or pelvic plexuses from which postganglionic fibres are distributed to the pelvic viscera. Motor fibers pass to the smooth muscle of the descending colon, rectum, anus and bladder. Vasodilators are distributed to these organs and to the external genitalia, while inhibitory fibres pass to the smooth muscles of the external genitalia. Afferent sympa-

thetic fibres conduct impulses from the pelvic viscera to the second, third and fourth sacral nerves. Their cells of origin lie in the spinal ganglia.

The pudendal plexus lies on the posterior wall of the pelvis, and is usually formed by branches from the anterior divisions of the second and third sacral nerves and the coccygeal nerve.

**Svadhishthana chakra** – Svadhishthana Chakra is the second of the chakras, also called as Jalamandala. Its tattwa is jala (water). Its situated at the base of the Linga –mula (genital organ). Within this chakra is the white watery region of Varuna (vedic God of primordial waters) of the shape of half moon and therein, on a Makara is the bija Vam. Inside the bija, Vishnu and Goddess Rakini are adorned. The Devta of this chakra is the Goddess Rakini. She is of the colour of a blue lotus, four armed, she holds a lotus, a drum, a lance and an axe. She has three red eyes and her mind is exalted with the drinking of ambrosia. The presiding deity is Lord Brahma. This chakra is compared with the prostatic plexus.

**Prostatic plexus-** The prostatic plexus is continued from the lower part of the pelvic plexus. The nerves composing it are of large size. They are distributed to the prostate, seminal vesicles and the corpus cavernosum of the penis and urethra. The nerves supplying the corpus cavernosum consist of two sets, the lesser and greater cavernous nerves, which arise from the forepart of the prostatic plexus and after joining with branches from the pudendal nerve, pass forward beneath the pubic arch. The lesser cavernous nerves perforate the fibrous covering of the penis, near its root. The greater cavernous nerve passes forward along the dorsum of the penis, joins with the dorsal nerve of the penis and is distributed to the corpora cavernosa. The

vaginal plexus arises from the lower part of the pelvic plexus. It is distributed to the walls of vagina, to the erectile tissue of the vestibule and to the clitoris. The nerves composing this plexus contain, like the vesical, a large proportion of spinal nerve fibres.

**Manipura Chakra:** The third Chakra is called Manipura. Within this chakra, there is a space in triangular shape. It is the Agni Mandala. Outside it, there are three Svastik marks and within the Bija of Agni or fire Ram carried on the back of a ram, vehicle of Agni. On its lap dwells Maharudra, who is of a pure vermilion hue. He is the destroyer of creation. His hands are placed in the attitude of granting boons and dispelling fear. The presiding adept is called Rudra. The presiding deity is Vishnu and Goddess is Lakshmi.

**Coeliac Plexus (Solar Plexus):** The celiac plexus, the largest of the three sympathetic plexuses, is situated at the level of the upper part of the first lumbar vertebra and is composed of two large ganglia, the celiac ganglia and a dense network of nerve fibres uniting them together. It surrounds the celiac artery and the root of the superior mesenteric artery. It lies behind the stomach and the omental bursa, in front of the crura of the diaphragm and the commencement of the abdominal aorta and between the suprarenal glands. The plexus and the ganglia receive the greater and lesser splanchnic nerves of both sides and some filaments from the right vagus and give off numerous secondary plexuses along the neighbouring arteries.

The celiac ganglia are two large irregularly shaped masses having the appearance of lymph glands and placed one on either side of the midline in front of the crura of the diaphragm close to the suprarenal glands that on the right side being placed behind the inferior vena cava . The upper part of

each ganglion is joined by the greater splanchnic nerve, while the lower part which is segmented off and named the aorticorrenal ganglion, receives the lesser splanchnic nerve and gives off the greater part of the renal plexus.

**Anahat Chakra:** The fourth chakra, Anahat , is the centre of Vayu mandal with six corners. The sound of shabda Brahman is heard at this centre. Shabda Brahman is the source of all Shabda or nama and rupa, the universe being namarupantaka. The Bijakshara is Yam. Under the Bija, there is an antelope, vehicle of Vayu. The presiding adept is called Pinaki. The presiding deity is Isha, Rudra or Shiva and Devata is Kakini. She carries the noose and the skull in her hands and makes the sign of blessing and the sign which dispels fear. Her heart is softened with the drinking of nectar.

The shakti is in the lotus in the form of a Trikona(triangle). Inside the triangle is the Shiva linga called as Bana linga. The Linga is like shining gold and in his head is an orifice minute as that in a gem. He is splendid abode of Lakshmi. Vishnu Granthiis in this sthana. Under Anahata there is a minor lotus, without Bija, where, over an alter of gems is Kalpataru the celestial wishing tree, one of the trees of Indras heaven, which grants what is asked, this gives us an induction of Cardiac plexus.

**Cardiac Plexus:** The cardiac plexus is situated at the base of the heart and is divided into a superficial part which lies in the concavity of the aortic arch and a deep part, between the aortic arch and the trachea. The two parts are however, closely connected.

The superficial part of the cardiac plexus lies beneath the arch of the aorta, in front of the right pulmonary artery. It is formed by the superior cardiac branch of the left sympathetic and the lower superior cervi-

cal cardiac branch of the left vagus. A small ganglion, the cardiac ganglion is occasionally found connected with these nerves at their point of junction. This ganglion when present is situated immediately beneath the arch of aorta, on the right side of the ligamentum arteriosum. The superficial part of the cardiac plexus gives branches.

- a. To the deep part of the plexus
- b. To the anterior coronary plexus and
- c. To the anterior pulmonary plexus

The deep part of the coronary plexus is situated in front of the bifurcation of the trachea, above the point of division of the pulmonary artery and behind the aortic arch. It is formed by the cardiac nerves derived from the cervical ganglia of the sympathetic and the cardiac branches of the vagus and recurrent nerves. The only cardiac nerves derived from the cervical ganglia of the sympathetic and the cardiac branches of the vagus and recurrent nerves. The only cardiac nerves which do not enter into the formation of the deep part of the cardiac plexus are the superior cardiac nerve of the left sympathetic and the lower of the two superior cervical cardiac branches from the left vagus, which pass to the superficial part of the plexus.

The branches from the right half of the deep part of the cardiac plexus pass, some in front of and others behind, the right pulmonary artery; the former, the more numerous, transmit a few filaments to the anterior pulmonary plexus and are then continued onward to form part of the posterior coronary plexus.

The posterior coronary plexus is larger than the anterior and accompanies the left coronary artery; it is chiefly formed by filaments prolonged from the left half of the deep part of the cardiac plexus and by a few from the right half. It gives branches to the left atrium and ventricle.

The anterior coronary plexus is formed partly from the superficial and partly from the deep parts of the cardiac plexus. It accompanies the right coronary artery and gives branches to the right atrium and ventricle.

**Vishudha Chakra:** Vishudha chakra is situated within the sushma Nadi at the base of the throat, kantha mula sthana. It is the center of Akasha Tattwa or akasha mandal- round in the shape like full moon. The Bija of Akasha tattva Ham is in the center, on a white elephant. The Goddess is Shakini, in her lotus hands.

She carries the bow, the arrow, the noose, the goad. The presiding adept is called Chagalanda. The presiding deity is Sadashiva, the great snow with Deva, three eyed and five faced with ten arms and clothed in a tigers skin.

#### **Pharyngeal and Laryngeal Plexus:**

The Pharyngeal branch, the principal motor nerve of the pharynx, arises from the upper part of the ganglion nodosum and consists principally of filaments from the cranial portion of the accessory nerve. It passes across the internal carotid artery to the upper border of the Constrictor pharynges medius, where it divides into numerous filaments, which join with branches from the glosso pharyngeal, sympathetic and external laryngeal to form the pharyngeal plexus. From the plexus, branches are distributed to the muscles of the soft palate, except the tensor veli palatine. A minute filament descends and joins the hypoglossal nerve as it winds around the occipital artery.

The superior laryngeal nerve larger than the preceding arises from the middle of the ganglion nodosum and in its course receives a branch from the superior cervical ganglion of the sympathetic. It descends by the side of the pharynx, behind the in-

ternal carotid artery and divides into two branches, external and internal.

The external branch, the smaller, descends on the larynx, beneath the Sternothyroideus to supply the Cricothyroideus. It gives branches to the pharyngeal plexus and the Constrictor pharyngitis inferior and communicates with the superior cardiac nerve, behind the common carotid nerve, behind the common carotid artery.

The internal branch descends to the hypothyroid membrane, pierces it in company with the superior laryngeal artery and is distributed to the mucous membrane of the larynx. Of these branches some are distributed to the mucous membrane of the larynx. Of these branches some are distributed to epiglottis, the base of the tongue and the epiglottic glands; others pass backward, in the aryepiglottic fold, to supply the mucous membrane surrounding the entrance of the larynx. Of these branches, some are distributed to the epiglottis, the base of the tongue and the epiglottic glands; others pass backward in the aryepiglottic fold to supply the mucous membrane surrounding the entrance of the larynx and that lining the cavity of the larynx as low down as the vocal folds. A filament descends beneath the mucous membrane on the inner surface of the thyroid cartilage and joins the recurrent nerve.

The recurrent nerve arises on the right side, in front of the subclavian artery; winds from before the side of the trachea behind the common carotid artery and either in front of or behind the inferior thyroid artery. On the left side, it arises on the left of the arch of the aorta at the point where the ligamentum arteriosum is attached and then ascends to the side of trachea. The nerve on either side ascends in the groove between the trachea and esophagus, passes under the lower border of the constrictor pharyngitis inferior and enters

the larynx behind the articulation of the inferior cornu of the thyroid cartilage with the cricoid, it is distributed to all the muscles of the larynx excepting cricothyroideus. It communicates with the internal branch of the superior laryngeal nerve and gives off a few filaments to the mucous membrane of the lower part of the larynx.

As the recurrent nerve hooks around the subclavian artery or aorta, it gives off several cardiac filaments to the deep part of the cardiac plexus. As it ascends in the neck it gives off branches, more numerous on the left than on the right side to the mucous membrane and muscular coat of the esophagus; branches to the mucous membrane and muscular fibres of the trachea and some pharyngeal filaments to the Constrictor pharyngitis inferior.

**Ajna Chakra:** Ajna chakra is situated within Sushumna Nadi, between the two eyebrows. This point is known as Trikuti. Within this lotus dwell manas (subtle mind). Aum (Pranava) is the Bijakshara. The Sushumna goes along the spinal cord upto where the Brahmarandhra is situated. Thence by a certain flexure it goes to the right side of the Ajna lotus, whence it proceeds to the left nostril and is called the Ganges. The lotus which is situated in the Brahmarandhra is called Sahasrara. In the space in its center dwells the moon. From the triangular place elixir is commonly exuding. This Moon fluid of immortality unceasing flows through the Ida. Going to the left nostril it receives from the Yogis the name Ganges. From the right side portion of the Ajna Lotus and going to the left nostril flows the Ida. It is here called Varuna. The Pingala also comes in the same way from the left side portion of the Ajna lotus and goes to the right nostril and has been called Asi. The lotus which is situated in the Muladhara Chakra has four petals and in the space between them dwells

the Sun. From that sphere of the sun poison extrudes continuously.

That excessively heating venom flows full through the Pingala and goes to the right nostril and the moon fluid of immortality goes to the left. Rising from the left side of the Ajna lotus and going to the right nostril, this northward flowing Pingala has been called Asi. The presiding deity is called Sukla Mahakala. The presiding deity, Paramshiva is in the Hansa. There is Goddess Hakini(Sakti) , whose six faces are like so many moons. She holds a skull, a small drum, a rosary, a book , two other arms are lifted up in the gesture of dispelling fear and granting boons. The Yogis describe three more sacred stages situated in this Lotus. They are called Bindu, Nada and Sakti.

**Cavernous Plexus:** The cavernous plexus (plexus cavernosus) is situated below and medial to that part of the internal carotid artery which is placed by the side of the sella turcica in the cavernous sinus and is formed chiefly by the medial division of the internal carotid nerve. It communicates with the oculomotor, the trochlear, the ophthalmic and the abducent nerves and with the ciliary ganglion and distributes filaments to the wall of the internal carotid artery. The branch of communication with the oculomotor nerve joins that nerve at its point of division; the branch to the trochlear nerve joins it as it lies on the lateral wall of the cavernous sinus; other filaments are connected with the under surface of the ophthalmic nerve and a second filament joins the abducent nerve.

The filaments of connection with the ciliary ganglion arise from the anterior part of the cavernous plexus and enter the orbit through the superior orbital fissure; they may join the nasociliary branch of the ophthalmic nerve or be continued forward as a separate branch.

The terminal filaments from the internal carotid and cavernous plexuses are prolonged as plexuses around the anterior and middle cerebral arteries and the ophthalmic artery; along the former vessels, they may be traced to the pia matter; along the latter, into the orbit, where they accompany each of the branches of the vessel. The filaments prolonged on to the anterior communicating artery connect the sympathetic nerves of the right and left sides.

**Sahasrara chakra:** The word Sahasradala Padma denotes that this Chakra has 1000 petals; one thousand Yoga Nadis emanate from this centre. All the 50 letters of the Sanskrit alphabet are reported here again and again on all Yoga Nadis. It should be noted that the Sahasrara does not belong to the body and that it indicate a transcendent level. This Lotus has his head turned downward. Within the full moon , it sheds its ray in profusion and is moist and cool like nectar. In this place it's fulfilled the union of Shiva and Shakti. Inside the Chandra Mandala constantly shining is the triangle and inside this, again shines the great Void (Bindu).

Here is the Deva known to all as Parama Shiva. He is the Brahman and the Atma of all beings. Sahasrara is the abode of Lord Shiva. This corresponds to Satya Loka. When Kundalini is united with Lord Shiva at the Sahasrara Chakra, the Yogi loses his individuality in the ocean of Sat-Chit- Ananda or the existence knowledge Bliss Absolute and become one with the Lord or Supreme Soul. The wise Yogi speaks of it as the ineffable place of liberation.

**Pineal Gland:** The pineal body (corpus pineale ; epiphysis) is a small, conical, reddish gray body which lies in the depression between the superior colliculi. It is placed beneath the splenium of the corpus callosum, but is separated from this by the

tela chorioidea of the third ventricle, the lower layer of which envelops it. It measures about 8mm in length, and its base directed forward, is attached by a stalk or peduncle of white substance. The stalk of the pineal body divides anteriorly into two laminae, a dorsal and a ventral, separated from one another by the pineal recess of the third ventricle. The ventral lamina is continuous with the posterior commissure; the dorsal lamina is continuous with the habenular commissure and divides into two strands, the medullary striae, which run forward, one on either side, along the junction of the medial and upper surfaces of the thalamus to blend in front with the columns of the fornix.

#### DISCUSSION AND CONCLUSION

All the six chakras have been enumerated in their original form and an attempt has been made to understand them in the light of modern anatomy. In the first instance, these chakras were considered to be autonomic nerve plexuses and they work independently. Keeping in view the location and shape of the chakras as described in literature pertaining to Yoga, a humble attempt has been made to explain the chakras in the light of modern anatomy.

#### REFERENCES

1. Shatchakra Nirupanam- Goswami Pralhad Giri; Vedantkesari; Krishnadas Academy; Varanasi
2. Essentials of clinical anatomy- Ger R. Abrahams, P, Oslen TR; The Parthenon group, New York.
3. Anatomy for Surgeons Vol. I, II and III Henry Hollnshead Hoeber Medical Division, Hoeber Medical Division, Harper and Row Publishers, New York
4. Ashtang Shariram- Vaidyaratnam P. S. Warrior; Aryavaidyashala; Kottakal
5. Pratyaksha Shariram; Volume I, II, III and IV; Kaviraj Gananath Sen Saraswati, Krishndas Academy, Varanasi
6. Brihatshariram- P. S. Warrior; Aryavaidyashala; Kottakal
7. Clinically Oriented Anatomy Moore KL, Dalley AF Lippincott William and Wikins; Baltimore

#### CORRESPONDING AUTHOR

**Dr. Jadhav Viraj**

Associate Professor,

Department of Rachna Sharira,

Rani Dullaiya Smriti Ayurved P.G.

College, Bhopal, Madhya Pradesh, India

**Email:** drvirajjadhav@gmail.com

*Source of support: Nil*

*Conflict of interest: None Declared*