



Review Article

A CONCEPTUAL STUDY OF AGYA CHAKRA AND ITS NEURO-ANATOMICAL CORRELATION IN MODERN SCIENCE

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ABSTRACT

This paper aims to illuminate the parallels between the *Agya Chakra*, the sixth energy center among the *Shad chakras* (six main *Chakras*) described in Yogic traditions-particularly its structures with modern neuro-anatomy. In Yogic philosophy, *Chakras* are the dynamic centers or vortices of *Pranic* energy, each located at specific points within the body. They regulate the flow of *Prana* (life force energy), thereby influencing both structural integrity and physiological processes. When activated through various Yogic practices, these *Chakras* help modulate psychophysiological functions. Each *Chakra* is traditionally associated with distinct neuronal plexuses and sub-plexuses, which correspond to specific internal organs and their physiological roles. Focusing on the *Agya Chakra*, located between the eyebrows, the study integrates classical yogic descriptions with contemporary anatomical knowledge. Based on the position, structure, and functional attributes described in Yogic literature, a strong correlation is observed between the *Agya Chakra* and the hypothalamic nuclei along with associated neural plexuses. To validate this correlation, a cadaveric study was conducted, which further supported the anatomical resemblance between the *Agya Chakra* and the hypothalamus and its neural networks. The findings suggest that the *Agya Chakra* can be interpreted as a symbolic representation of the hypothalamic region within the framework of integrative anatomy.

INTRODUCTION

The term *Chakra*, derived from Sanskrit, denotes a "wheel," "disc," or any structure characterized by a circular configuration or organization. Ancient scriptures and yogic traditions portray each of the seven primary *Chakras* as lotus blossoms, symbolizing their subtle energy dynamics and psycho-spiritual functions. These *Chakras* are depicted in a circular form, encircled by a specific number of petals, each petal often representing distinct vibrational frequencies, mental states, or Sanskrit syllables. The lotus motif underscores the unfolding of consciousness and the progressive awakening of spiritual awareness through each

energy center. The word *Chakra* also indicates movement. *Chakras* generate movement by transforming psychophysical energy into spiritual energy, facilitating the upward flow of consciousness. [1]

The network of psychological channels known as *Nadis*, which correlate to the nerves but are more subtly expressed, connects the *Chakras*, which are the nerve plexuses of significant nerves. These seven main *Chakras* are situated along the *Sushumna* (spinal cord) from the caudal to the cephalic end. The *Sushumna* functions as the central channel through which cosmic and spiritual energy flows, serving as the primary conduit for the upward movement of vital force. [2] *Pranayama* and meditation are examples of yogic techniques that awaken the brain's dormant areas by sustaining the flow of *Pranic* energy with the aid of *Chakras* and *Nadi*, or psychic conduits. [3]

The subtle body comprises seven principal chakras- *Mooladhara, Swadisthan, Manipur, Anahat,*

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Vishuddhi, *Agya*, and *Sahasrara*- each representing a unique center of energy associated with specific physiological functions, psychological attributes, and spiritual potentials. Through Sahaja Yoga meditation and the simple techniques, we use to balance our subtle system, these *Chakras* can open up and expand, enhancing these qualities within us. [4]

Agya Chakra

The *Agya Chakra*, is located between the two eyebrows, is the sixth of the seven *Chakras* or energy systems. From the perspective of regional anatomy, it is located in the glabellar region. This area is located on the frontal bone, right above the orbit's rim, between the eyebrows at the forehead. The elevated superciliary arches are on either side. [5] Compared to women, these are more noticeable in men. The glabella is a slightly depressed anatomical region situated between the superciliary arches, just above the nasal bridge. [6] The *Sthapani Marma* is also located here. The *Agya Chakra* is often regarded as the symbolic center of meditative consciousness, representing the faculty of inner perception and higher cognitive awareness. This is also the position where women wear *bindi*, and *Tilak* is typically used as a blessing symbol. In this area is the *Agya Chakra*, which is represented by the neural plexus. The *Agya Chakra* is displayed as a circle with two *Dala* (petals) that are the letters *Ksham* and *Ham*. Two white *Dalas*, or petals, are associated with the *Agya Chakra*, which is always associated with the comprehension of wisdom. [7]

This Chakra is the representation of Lord Shiva as *Ardhanarishwara*, extends up to the entire frontal lobe of the brain and sits above the middle of the two eyebrows. *Prana Vayu* remains here, and by focusing on this *Chakra*, Yogis are able to obtain knowledge of self-realization and manage *Vritti* (mental turbulence). Anatomically, the glabella is positioned behind the midpoint of the eyebrows, approximately corresponding to the region between the forebrain and midbrain within the cranial cavity. The third eye, *Guru Chakra*, *Triveni* (the meeting point of three rivers), *Gyana Chakshu* (the eye of wisdom), and the third eye of Lord Shiva are some of the other names that are used to identify this location. It's where *Manas* (psyche) should be. [8] The mind is considered the central functional aspect of this chakra, governing cognition, perception, and higher mental faculties. Perception and the sixth sense are developed here. The mind becomes stable, powerful and complete control over *Prana* is achieved when the *Agya Chakra* is awakened. This point functions as a vital bridge on the psychic plane, linking the spiritual and psychological realms, and

facilitating the integration of higher consciousness with mental processes. Consequently, *Agya Chakra* is in charge of supramental abilities like telepathy, clairvoyance, and clairaudience. [9]

The arousal of the *Agya Chakra* is traditionally associated with the capacity for mental communication and is viewed as a gateway to higher cognitive and spiritual realms. When the *Agya Chakra* is stimulated, all mental abilities, including intelligence, memory and focus, are developed. Stimulation of the *Agya Chakra* involves applying focused attention on the *Bhrumadhya* point, located between the eyebrows, which is believed to influence associated endocrine glands and activate higher centers of awareness. [10]

MATERIALS AND METHOD

Study Design

The objectives of this study were-

1. To study *Agya Chakra* in detail.
2. To identify the suitable position of *Agya Chakra* in the brain.
3. To establish a relation between neuro-anatomical structures of *Agya chakra* and its applied anatomy and physiology as described in Yogic and Ayurvedic literature.

MATERIALS

1. To elucidate the anatomical structure of *Agya Chakra* variety of references from *Upanishad*, *Ayurvedic*, *Yogic* and *Tantric* literature. Articles, journals, previous research papers, PG and PhD thesis, along with various databases with supportive references from Ayurved and modern anatomy.
2. To study the location of *Agya Chakra* six cadavers (4 adult males and 1 adult female) were dissected to recognize the relevant structures.
3. Complete dissection kit including bone cutter, chisel, saw, hammer, a pair of toothed and plain forceps, B.P. handles with scalpel and tray, gloves, brush and a digital camera.

METHOD

Literary Study

Remember the fundamental structures that may be involved in *Agya Chakra*, as well as the analytical and critical evaluation of the available ancient literature. Similarities have also been found between the *Agya Chakra* and the neural plexuses of the hypothalamic region.

Cadaveric Study

To accomplish the objective of this study, dissection of cadavers (4 male and 1 female) will be done in the hall of Rachana Sharir Department.

These regions are dissected step by step as per the guidelines given in the Cunningham's manual of practical anatomy, and Human anatomy by Dr. B.D. Chaurasia. [11] The cadaver was first marked to indicate the location of the *Agya Chakra* region at the front of the head and another spot for the vault's removal. Removing a vault or calvaria marking is also done in accordance with contemporary literature's guidelines. [12] A large screw with a handle was used to create a large hole after marking, and it was placed in the *Agya Chakra's* anteroposterior direction. Following all of the anatomical structures located in the *Agya Chakra* area was the aim of this operation. To establish anatomical correlations, meticulous dissections were performed to examine and identify relevant structures with precision. The necessary data was gathered through methodical dissection and compared with a number of contemporary and Tantric texts. [13]

OBSERVATION

Anatomical Structures Resembling with the dissected part of the Cadaver

1. Fine dissection revealed that the hypophyseal fossa, thalamus, hypothalamic nuclei, suprachiasmatic nuclei, and pineal body were the components that the digging bar had punctured behind the *Agya Chakra* region.
2. *Agya Chakra* can be compared as follows: the pituitary and pineal glands are represented by the *Beejakshar*, the thalamus by the main circle, and the hypothalamus by the two petals.
3. This cadaveric study revealed the structural representation of the *Ajna Chakra's* petals along with its associated components, including relevant neural plexuses and specific hypothalamic nuclei.

Physiological Aspects of *Agya Chakra*

The *Agya Chakra* is frequently referred to as the "center of command," chief commanding center, or regulating center due to its physiological applications. Together with all of its related nuclei, the hypothalamus- which symbolizes the circle of the *Agya Chakra*- performs the role of a leader or can function as a governing personality over the majority of the body's and mind's physiological activity. The triangular convergence known as the *Triveni Sangama* is formed at the junction of the three primary *Nadis*- *Ida*, *Pingala*, and *Susumna*- serving as a vital center for the reception and transmission of information to various physiological and psychological components of the body. The major relay station, commonly referred to as the

thalamus, is represented by this *Triveni* point. [14] The hypothalamic supraoptic nucleus and suprachiasmatic nucleoli control the activity of the pituitary and pineal endocrine glands, which serve as two petals with *Beejakshar Ham* and *Ksham*, respectively. The preoptic area of the hypothalamus plays a crucial role in regulating autonomic functions, including thermoregulation, cardiovascular control, and hormonal modulation. By controlling and integrating the parasympathetic and sympathetic nervous systems, the hypothalamus symbolizes the might of Lord *Hakini Shakti*. [15]

DISCUSSION

On the basis of the observation, the hypothalamus mostly depicts the *Agya Chakra* as a big circle with its two petals. The major relay center of thalamus and its plexuses is comparable to that of *Triveni* or *Sangam*. The pineal and pituitary glands, as their *beejakshar*. The autonomic nervous system and endocrine system are controlled and regulated by the *Agya Chakra*, which acts as a "commanding center" that overrides and governs all physiological functions. For this reason, it is sometimes referred to as the center for concentration. [16] By regularly practicing *Pranayama* and *Dhyana* at this location, Yogi can cultivate self-control by controlling their autonomic nervous system in accordance with their willpower, primarily by strengthening their control over the hypothalamus, as the hypothalamus directly governs all of the attributes outlined in *Agya Chakra*. [17] This study and the descriptions of the *Agya Chakra's* functions and structure in various ancient text reveals that the *Agya Chakra* shares many similarities with the prefrontal cortex, thalamus, hypothalamus, and limbic system collectively, with the thalamus playing a significant role in the neural pathways that regulate pain perception, attention, and wakefulness. According to Acharya Damodara Sharma Gaud's book *Parishdham Shabdhartha Shariram*, which uses Ayurvedic anatomical terminology, *Chakras* are created by the communication of different *Nadis*, or neural fibers, which are components of the autonomic nervous system. [18] The hypothalamus receives regulatory input from the autonomic nervous system and functions as a central integrative hub, coordinating a wide range of autonomic activities to maintain internal homeostasis. The pituitary and hypothalamus secrete a variety of hormones and have several crucial relationships. Nearly every endocrine gland, including the pituitary, is regulated by the hypothalamus through the hypothalamo-hypophyseal connection. The hypothalamus secretes releasing or inhibiting hormones that act on the

pituitary gland, regulating the activity of all endocrine glands. In response, the pituitary gland releases a variety of hormones that stimulate several endocrine glands.^[19] All of these endocrine glands are located at the traditional *Chakra* locations, and their roles are strikingly similar to those of the *Chakras* as traditionally described. The body is energized by the *Agya Chakra*, just as the hypothalamus integrates and governs the autonomic nervous system's functions, which includes the contraction of cardiac and smooth muscles as well as the secretions of numerous glands. Parasympathetic and sympathetic nuclei in the brain stem and spinal cord receive axons from the hypothalamus. A key regulator of visceral functions, the hypothalamus also controls heart rate, oxygen consumption, and emergency response.

CONCLUSION

Based on the preceding discussion, the *Agya Chakra* exhibits notable anatomical proximity to key neural and endocrine structures: the triangular core of the chakra aligns with the thalamic region, the circular component corresponds with the hypothalamus, and its two petals- each associated with a *Bijamantra*- are correlated with the pituitary and pineal glands, respectively. Its application is also similar to the hypothalamus along with the pituitary and pineal glands, and Yogic practices regulate psychophysiological activities (regulated by the autonomic nervous system) in accordance with the will of the individual.

REFERENCES

1. Harish Johari- Chakra energy centres of transformation, Revised and expanded version of the best-selling classic Harish Johari, Destiny Books, Rochester, Vermont; 2000.
2. Shyam Sundar Goswami, Layayoga- The definitive guide to the chakras and Kundalini, Inner Traditions Rochester, Vermont; 1999.
3. Uddupa K.N. A Manual of Science and philosophy of Yoga. Varanasi, UP, India: Sarvodaya Sahitya Prakashan; 1995.
4. Sahaj Yoga –An Introduction, Editor: Sahaja Yoga Austria E.V.
5. Swami Sivanand. Kundalini Yoga. 6th ed. Tehri-Garhwal, UP, Himalaya: The divine life society publication; 1971.
6. Chaurasia's BD. Human Anatomy. 6th ed. New Delhi: CBS Publication; 2013.
7. Nityabodhananda R. Ajna Chakra. Munger, Bihar, India: Yoga publication trust; 2010.
8. Asana, Pranayama, Mudra, Bandha. Ajna Chakra [Internet]. 2019 [Cited 2019 Feb 20]. Available from: <http://www.energyenhancement.org/chakras/Chakra>.
9. Veeraswamy K. The Bhagavad –Gita: Translation and commentary. New York Lincoln Sanghai: Writers club press; 2002.
10. Agya Chakra [Internet]. 2019 [Cited 2019 Jan 12]. Available from: www.sivasakti.com/yoga/chakras/seven-gates-towardsthe-universe-sixth-gate-ajna-chakra.
11. Cunningham's manual of practical anatomy. London: Humphrey Milford, Oxford University Press; 2010.
12. Chaurasia's BD. Human Anatomy. 6th ed. New Delhi: CBS Publication; 2013.
13. Motoyama H. Theories of Chakras- Bridge of Higher Consciousness. New Delhi: New age books; 2014.
14. Ajna center, Ajna Door [Internet]. 2019 [Cited 2019 Jan 12]. Available from: http://www.beezone.com/ajna_chakra.html.
15. Athwale PG. Drishtartha Shariram Uttam angiyashariram. Rohtak: Nath Pustak Bhandaar; 2012.
16. Joshi BC. Neurology in ancient India: Muladhara Chakra – A physiological reality. Indian J Hist Sci. 1986; 2: 148-78. [PMID:11612348]
17. Nupur Tiwari, Michelle Sutton, Matthew Garner, David S Baldwin. Yogic breathing instruction in patients with treatment-resistant generalized anxiety disorder: Pilot study. Int J of Yoga. 2019; 1: 78-83. [PMID:30692788]
18. Gaud Damodara Sharma. Parishdham Shabdhartha Shariram. 2nd edi. Nagpur: Shree Vaidhyanath Ayurved Bhawan Ltd.;1979.
19. K Sembulingam, P Sembulingam. Essentials of Medical Physiology. 7th edition. New Delhi: Jaypee Brothers Medical Publication; 2016.

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