Physiological Concept Of Chakshuindriya W.S.R Visual Pathway

Shubham Shukla,¹ Rajesh Kumar Sharma,² Dinesh Chandra Sharma³

ABSTRACT: -
Ayurveda is an ancient health system of world which has been in practice since thousands of years. Its main aim is not only cure disease but also alleviate the humanity from all physical, mental, intellectual, or spiritual sorrow. According to Ayurveda soul which is born in a physical body in this world, Assume the world through the Indriya. Indriyas are the sadhana of Aatma. These are the tools of Aatma to gain or perceive knowledge. The Ayurveda recognizes 11 (ekadash) Indriyas, chakshurindriya is one of the most important Indriya as has been said “Chakshupradhamansarveshamindriyanam vidurvurdhah” and Acharya Charak also firstly start with Chakshuindriya in Sutra sthana. The word Chakshu means which illuminates or radiates the object and enlightens the mind about its details. These chakshurindriya are seated in two eye balls. Eyes are the windows to the mind. Chakshuindriya play a key function in our each day lives and are likely the maximum precious present we have. This global is seen to us due to the fact we're blessed with Chakshuindriya.

KEYWORDS: - Ayurveda, Indriya, Chakshuindriya, Roop Gyan

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INTRODUCTION

Ayurveda is a thousand years old Indian medical system. The word Ayurveda made of two words AYU and veda. Ayu means life span and veda means true knowledge. It has approached all aspect of life[1]. In Ayurveda indriya plays a vital role for a human life[2]. The actual wealth of an individual person is decided who have overcome and controlled own Indriya(senses)[3]. The word indriya literally means organ, sense, force, vigor. According to Shabdakalpadruma Indriya is defined as Atma or Ishwar (Creator). Ayurveda believes that the senses originated from a specialist physical organization marked as -panchbhautik Utapatti. The cognition and other activities are performed by the Indriyas only where Atma is considered as Indra. It is believed that the indriyas are perceived with the help of pratyaksha pramana (direct observation) knowledge, but they cannot be comprehended by pratyakshapramana. According to acharya Bagbhatt, the most dominant indriya is Chakshuindriya. Acharya Sushruta has given a detailed description of the Chakshuindriya in Uttar tantr[4].

Concept Of Indriya: -According to Ayurveda, Indriyas are the tools to receive the knowledge for Atma. Acharya Charak mentioned Indriya as an elemental instrument in differentiating the living and non-living subject [5]. Indriya is an ingredient that can be studied and learned, which is why they are called Prameya. Located in appropriate places, Indriya continues to function continuously with its usual functions, unless it is prone to deviations due to exacerbation or decrease in etiological factors. There are total eleven Indriya are mentioned in Ayurveda[6]. These are divided in three-parts i.e Gyanendriya, Karmendriya and Ubhayindriya. Gyanendriya also divide in five types these are Shrotrendriya, Sparshanendriya, Chakshurendriya, Rasanendriya, Ghranendriya[7]. Karmendriya also divide in five types Vaagendriya, Paani, Paada, Paayurand Upastha[8], while behavior that resembles both and exhibits a functionally dual nature is Udbhayendriya (Mana)[9]. Ayurveda believes that the senses created from a special physical organization marked as -panchbhautik Utapatti. Consequently, they participate only in the perception and perception of the corresponding Artha (object), the composition of which is the same. This is due to Samantuli Yonitva Indriya and the corresponding Indriya Artha. For example, Chaksurendriya (Eyeball and Visuals) can Rupa perceive only knowledge (sight) and not smell, taste, hearing or touch.

Concept Of Chakshuindriya: -
Chakshuindriya is a type of Gyanendriya. Ayurveda is deeply rooted in the process of learning or cognition, which mainly depends on the Indriyarthasannikarshi. The Chakshu Indriya, for a sense of objective knowledge, is shown here with many receptors for its functionality. The concept of Chakshuindriya and the learning process goes beyond the existing concept of receptors and neurochemistry. The specificity of receptors within the body with different morphologies and functions can be classified to understand the intellectual concepts of the Chakshu Indriya from rudimentary to subtle, such as Sukshma, Sukshmatara and Sukshmatama. It should be noted that Ayurveda considers a group of five ingredients very broadly, each of which has an independent meaning. This is built on the concept - Indriyapanchapanchak. As the name suggests, these are five sense organs, which include:
Indriya (five sense objects), Indriya Dravya (five sense substances), Indriyaadhishtana (five sense organs), Indriyaartha (five sense objects) and Indriya buddhi (five senses perception)\[10]\.

**Indriyapanchapanchak for Chakshuindriya:**

<table>
<thead>
<tr>
<th>Indriya</th>
<th>Indriyadravya</th>
<th>Indriyaadhishtana</th>
<th>Indriyaartha</th>
<th>Indriya Buddhi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chakshu</td>
<td>Agni</td>
<td>Netra (Eye)</td>
<td>Roop (Vision)</td>
<td>Roopa buddhi (Visual centers brain)</td>
</tr>
</tbody>
</table>

Ayurveda trust all Indriyaas made from particular bodily constitutional make up– Panchabhautik. The Akshigolak also originates from the Panchamahabhuta. these are following\[11]\:-

<table>
<thead>
<tr>
<th>Originate Mahabhuta</th>
<th>Part of Akshigolak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prithvi</td>
<td>Mansal part</td>
</tr>
<tr>
<td>Jal</td>
<td>Shwet part</td>
</tr>
<tr>
<td>Agni</td>
<td>Rakt part</td>
</tr>
<tr>
<td>Vayu</td>
<td>Krishan part</td>
</tr>
<tr>
<td>Akash</td>
<td>Ashrumarg</td>
</tr>
</tbody>
</table>

**Process Of Roopalabdhi:**

As the sun rays are connected with sun, in the same manner Chakshuindrya connected with their srotas indriyabuddhi also present in sira. Indriya has become important because of its specificity, since each indriya is able to receive and communicate only with its corresponding object, such as: Chaksurendriya with Rupa, Sparshanendriya only with Sparsha, etc. This specificity is accompanied by a similarity in the elemental composition of the cause. how to compare Indriya and effects (Artha and Indriya system). Along with this, the influence of two other factors arises, according to the archives of Ayurveda, namely: svabhavat means one's own prakriti, indriya prakriti has a relationship with the corresponding indriyaartha. the body, and is always in contact with Mana, is more than connected with the Atma to perceive or experience knowledge through the perception of objects in the external environment. Along with Chakshuindriya, mana is an important key factor in gaining or acquiring knowledge. There are certain criteria according to which even the presence or presence of an object or stimulus does not allow direct perception of knowledge. The criterion for the presumption of knowledge is the Sannikarsha (affirmation or association of a sense object) between the Atmaindriya-manaartha \[12]\.

Perception of rupa implies a point of contact between the Chakshuindriyas (senses) and their respective Arthas (objects). However, the ancient philosophical origins of India refer to six types of contact between the objects of the senses, namely: Samyoga (association), Samyukta Samavaya (connection with what one was in contact with), Samyukta Samavet
Samavaya (connection with what one was in contact with), Samavaya (internal), Samaveta Samavaya (attached to what is) and Visheshana Visheshyabhaava (linking an attribute with a noun) [13]. The Sannikarsha here offers a point of contact between the recipients and their respective stimuli, this is related from Chakshuindriya to the five senses, but this also requires approval and sannikarsha stimulus transmitted in the form of an impulse to this area. The corresponding integrated area is located in the brain that provides cognitive satisfaction. The complex process of perception, followed by perception, includes all of the following stages.

➢ The point of contact of Chakshuindriya and his Artha.
➢ Parallel union of Chakshuindriya with Mana for further connection with Atma.
➢ Suppose the conclusions drawn from the integration and analysis of the stimulus are perceived as impulses with mana, taking into account its pros and cons on a psychological level.
➢ At the same time, the above-mentioned subtle and complex process takes place in parallel with

(?) Conduction of impulse:

- Reflection of light rays from a object on eye ➔ Refraction of light rays in eye ➔ Visual receptor in retina ➔ First order neurons bipolar cells in inner nuclear layer ➔ Second order neurons Ganglionic cells in ganglionic cell layer ➔ Optic radiation ➔ Visual cortex ➔ Optic Nerve ➔ Optic tract ➔ Optic chiasma

Visual pathway of eye [14]: - The retinal impulses are carried to visual center in cerebral cortex by the nervous pathway called visual pathway. Its process has following step.

(१) Conduction of impulse. (२) Confirmation of impulse into sense
Confirmation of impulse into sense:
Impulse receives in brain i.e visual cortex. Visual cortex converts this impulse into sense. Visual cortex has three area related it. These are following:
(a) primary visual area = area 17
(b) Visual association area = Area 18
(c) Occipital eye field = Area 19

Function of area:
Area 17- Perception of visual impulse
Area 18- Interpretation of visual impulse
Area 19- Concerned with movements of eye

DISCUSSION
Ayurveda has deep roots withinside the system of mastering which in particular relies upon the Indriyarhasannikarsha. Indriya, for the experience of goal understanding, right here are justified with style of receptors in phrases in their useful capacities. Specificity of receptors in the frame with numerous morphological and useful obligations may be graded to recognize the highbrow standards of Indriya from gross to diffused level, such as Sukshma, Sukshmatara and Sukshmatama. According to Acharya Bhel, the Pitta found in Chakshuindriya imparts knowledge of form in two ways. These names are chakshuvaisheshik pitta and buddhivaisheshik pitta. Further acharya bhel elaborate process of Roopgyan in blind person and foolish person according these pitta. He said that loss of Alocak Pitt in a blind person does not lead to the achievement of the form so he cannot see but in a foolish person appearance is not achieved due to loss of Budhiveshshik pitta.

CONCLUSION
The concept of Indriya and enlightenment learning process is much more beyond the present concept of receptors and neural biochemistry. Understanding concept of indrya is an important step of learning of kriya sharir. It enables scholars to learn normal physiology of Ayurveda to diagnosis any illness related to it. Ayurveda have without a doubt highlighted the significance the Indriya in its diverse Ayurvedic scripture from time to time. Cognition and notion of information are very tightly associated phrases however fluctuate via way of means of the real system taking place to reap the same. the system of obtaining information through idea system, reports, on the whole via way of means of edition toward sensory and motor events, while the notion of information comes through the translation and evaluation of impulses feed to mind withinside the shape of sensory enter and can additionally uproot from the reports saved withinside the shape of reminiscence at unconscious stage of mind. This is suitable and authentic in feel of know-how associated with many current streams like – biology, physics, chemistry at preliminary state; later can also be understood in phrases like – Neurochemistry, Neurobiology, Neuroendocrinology and lots of more.

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REFERENCES
Sutrasthana; arthe dashmhamuliyAdhyay: Chapter8, verse 8. Varanasi: Chaukhambha Vishvabharti Prakashana, Reprint 2014; page no119
15. Mookerjee M, editor, Sanskrit commentary of Bhel Samhita, Sharirsthana; Athathah purushnichayam Adhyay : Chapter 4, Verse 4, Calcutta: University of Calcutta, Print 1921, Page no.81