

## “UNDERSTANDING THE RELATION BETWEEN NIDRA AND JATHARAGNI”

Dr. Amrit Kour<sup>\*1</sup>, Dr. Kavita Chambyal<sup>2</sup> and Dr. Narind Khajuria<sup>3</sup>

<sup>1</sup>P.G. Scholar, P.G Department of Kriya Sharir, R.G.G.P.G. Ayurvedic College and Hospital, Paprola, Himachal Pradesh, 176115.

<sup>2,3</sup>Lecturer, P.G Department of Kriya Sharir, R.G.G.P.G. Ayurvedic College and Hospital, Paprola, Himachal Pradesh, 176115

Article Received on  
30 May 2024,

Revised on 19 June 2024,  
Accepted on 09 July 2024

DOI: 10.20959/wjpr202414-33258



**\*Corresponding Author**

**Dr. Amrit Kour**

P.G. Scholar, P.G

Department of Kriya Sharir,

R.G.G.P.G. Ayurvedic

College and Hospital,

Paprola, Himachal Pradesh,

176115.

### ABSTRACT

*Ayurveda* puts emphasis on maintaining the health of a healthy individual. *Trayopstambha* i.e. *Ahara*, *Nidra* & *Brahmcharya* mentioned in *Ayurveda*, play an important role in maintaining health and long-life. *Nidra* is one of the important pillars of healthy life. Good and timely sleep is very important for proper functioning of *Jatharagni* (Digestive fire). Due to rapidly changing lifestyles (e.g. night shifts, late night studies, electronic gadgets exposure) our quality & quantity of sleep is disturbed. This leads to *Ratrijaagran* & *Divaswapana* and it ultimately disturbs the *Jatharagni*. Different *Acharya* have mentioned diseases due to *Asamyak Nidra* like *Agnimandhya*, *Ajirna* etc. *Samyak Nidra* is responsible for the proper functioning of *Jatharagni* and vice-versa. Gut and brain are interlinked through Gut – Brain – Axis. Present article emphasized on the role of *Nidra* in maintaining the proper functioning of *Jatharagni* and vice versa.

**KEYWORDS:** Ahara, Nidra, Jatharagni, Sleep.

### INTRODUCTION

*Ayurveda* is the ancient Indian System of life Sciences and Medicines, with its historicity going back to *Veda*. The main aim of *Ayurveda* is to maintain the health of healthy person and to cure the diseased one.<sup>[1]</sup> To fulfill this aim, *Tryopastamba* have a great place. These three *Upastamba* mentioned in *Ayurveda* are *Ahara*, *Nidra* & *Brahmcharya*.<sup>[2]</sup>

When our mind and *Indriya* get exhausted, they withdraw themselves from objects and then an individual sleeps.<sup>[3]</sup>

*Sukha* (Happiness), *Dukha* (misery), *Pushti* (nourishment), *Karshya* (emaciation), *Bala* (strength), *Abala* (weakness), *Klaibya* (sterility), *Vrishya* (Virility), *Gyana* (knowledge), *Agyana* (Ignorance), *Jivita* (life) and *Ajivita* (death), all are dependent on proper and improper sleep.<sup>[4]</sup>

*Jatharagni* is the metabolic fire responsible for digesting food and converting it into energy, which we need to perform vital life activities. *Ayurveda* considers balanced state of Agni as essential for good digestion and overall health.<sup>[5]</sup>

In *Charaka Samhita*, *Nidra* is considered as *Adhaarinaya Vega*.<sup>[6]</sup> *Acharya Charaka* has mentioned about *Tryopasthamba*. *Acharya Vagabhata* has also mentioned about *Tryopasthamba*.<sup>[7]</sup> In *Charaka Samhita*, definition of *Nidra*, effects of proper & improper *Nidra*, untimely & excessive sleep is also mentioned.<sup>[8]</sup>

*Nidra*, *Nidra Vikara* and their *Chikitsa* have been mentioned by *Acharya Vagbhata*.<sup>[9]</sup> *Jatharagni* is the main *Agni* that controls the functions of all other 12 *Agni* (7 *Dhatuagni* & 5 *Bhutagni*).<sup>[10]</sup>

*Acharaya Sushruta* mentioned, that there is no existence of any other *Agni* in the body except *Pitta*.<sup>[11]</sup> *Acharaya Charaka* mentioned the importance of *Jatharagni*.<sup>[12]</sup> As *Ayu* (age), *Bala* (strength), *Varna* (color), *Swasthye* (health), *Utsaha* (zeal), *Upchya* (metabolism), *Prabha* (radiance), *Oja* (immunity), *Teja* (glow), *Agni* (digestive fire), *Prana* (life) all remain stable only when digestive fire is strong. If the digestive fire subsides then the person dies and if it gets vitiated then the person becomes sick.<sup>[12]</sup>

## AIM AND OBJECTIVES

1. To understand the importance of *Nidra*.
2. To analyze the role of *Nidra* in maintaining *Jatharagni*.

## MATERIALS AND METHODS

All relevant references regarding *Nidra* and *Jathargani* were collected and compiled from *Brihatrayi*, *Laghutrayi* and other commentaries. Relevant modern literature from Modern textbooks, journals and articles were also consulted and complied.

**Table No. 01: Classification of *Nidra* in different *Samhita*.**

| S.No. | <i>Charaka Samhita</i> <sup>[13]</sup> | <i>Sushruta Samhita</i> <sup>[14]</sup> | <i>Ashtang Samgrah</i> <sup>[15]</sup> |
|-------|--|---|--|
| 1.    | <i>Tamobhava</i>                       | <i>Tamsi</i>                            | <i>Kalaswabhawaj</i>                   |
| 2.    | <i>Slesmasamudbhava,</i>               | <i>Swabhaviki</i>                       | <i>Amayaja</i>                         |
| 3.    | <i>Manah-sarir srama saambha,</i>      | <i>Vaikariki</i>                        | <i>Manah – srama saambha</i>           |
| 4.    | <i>Agantuki</i>                        |   | <i>Sarir srama saambha</i>             |
| 5.    | <i>Vyadhi-anuvartini,</i>              |   | <i>Slesmasapranhavaj</i>               |
| 6.    | <i>Ratri-swabhava prabhava</i>         |   | <i>Agantuka</i>                        |
| 7.    |  |   | <i>Tamobhava</i>                       |

**Table No. 02: Classification of *Agni* on the basis of Intensity.**

| S.No. | <i>Charaka Samhita</i> <sup>[16]</sup> | <i>Dosha Predominance</i> <sup>[17]</sup> | <i>Relation with Nidra</i> |
|-------|--|---|----------------------------|
| 1.    | <i>Tikshna Agni</i>                    | <i>Pitta</i>                              | <i>Alpnidra</i>            |
| 2.    | <i>Mand Agni</i>                       | <i>Kapha</i>                              | <i>Atinidra</i>            |
| 3.    | <i>Visham Agni</i>                     | <i>Vata</i>                               | <i>Anidra</i>              |
| 4.    | <i>Sama Agni</i>                       | <i>Sama</i>                               | <i>Samyak nidra</i>        |

**Importance of *NIDRA***

When our mind and *Indriya* get exhausted, they withdraw themselves from objects and then individual sleeps.<sup>[3]</sup> *Sukha* (Happiness), *Dukha* (misery), *Pushti* (nourishment), *Karshya* (emaciation), *Bala* (strength), *Abala* (weakness), *Klaibya* (sterility), *Vrishha* (Virility), *Gyan* (knowledge), *Agyan* (Ignorance), *Jivit* (life) and *Ajivita* (death), all are dependent on proper or improper sleep.<sup>[4]</sup>

According to *Acharaya Charaka Sthaulaya* (obesity) and *Karshya* (emaciation) depends upon one's *Swapna* (Sleep) and *Ahara* (diet).<sup>[18]</sup>

*Nidra Vega Dharana* is mentioned in the etiology of *Karshaya*.<sup>[19]</sup> Taking proper *Nidra* is the *Chikitsa* of *Karshaya*.

According to *Acharaya Charaka*, *Ratrijagaran* increases *Vata Dosha* whereas *Divaswapna* increases *Kapha Dosha*.<sup>[20]</sup> According to *Acharaya Shushruta*, *Ratrijagaran* increases *Vata* and *Pitta Dosha*. *Divaswapna* leads to *Adharma & Saravdosha Prakopaka*.<sup>[21]</sup> So, due to *Ratrijagaran* and *Divaswapna* individuals are prone to 80 *Vataj Namatamaj Roga*, 40 *Pittaj Nanatamaj* and 20 *Kaphaj Nanatamaj Rogas*.

So, improper sleep leads to imbalance of *Dosha* and person become prone to many diseases. Proper and quality sleep is helpful in maintaining proper balance in *Dosha* and ultimately maintain overall health of the individual.

### Importance of AGNI

By giving so much importance to the *Agni* in body, *Acharaya Charaka* clearly mentioned that if *Jatharagni* gets vitiated individual gets sick but if *Jatharagni* subsides, the person will die. So, *Ayu*, *Varna*, *Bala* etc. all are depends upon *Agni*.<sup>[12]</sup>

Balanced state of *Agni* contributes to the health of an individual.<sup>[22]</sup>

It is not only about the *Ahara* but also about the *Jatharagni* (digestive fire) that convert the non-homologous substances into homologous substances. If proper digestion of food will not occur, undigested food will not be able to provide proper nutrition to the body.<sup>[23]</sup>

### Relation Between *Nidra* (Sleep) & *Jatharagni* (Digestive fire)

#### Ayurvedic Review

*Nidra* benefits are mentioned in *Skandapurana*. *Nidra* taken on proper time as well as in proper quantity, increases the digestive fire of living being. Because of this increased digestive fire, individuals can take good amount of food, which helps naturally in increasing the strength of the body.<sup>[24]</sup> Many side effects occur due to the lack of *Nidra*. Due to lack of *Nidra*, food is not digested properly. Hence, the person doesn't feel hungry which leads to poor intake of food. So, the strength of body does not increases.<sup>[25]</sup>

*Swapnaviparyaya* (sleep disturbances – excessive awakening at night, day sleeping etc.) is one of the causative factor for indigestion mentioned by *Acharya Sushruta*. Other mental factors responsible for indigestion are *Eershya* (Jealousy), *Bhaya* (Fear), *Ludha* (Greed), *Chinta* (anxiety).<sup>[26]</sup> All these factors lead to *Vata* vitiation and this *Vata* vitiation leads to *Anidra*.

*Acharya Charaka* also mentioned different diseases due to *Asamyaka Nidra* (Improper Sleep) viz. *Agnimanda* (Diminuation), *Aruchi* (anorexia), *Gurugatarta* (heaviness in body) are among them.<sup>[27]</sup> *Rasashesha Ajirna*, this type of indigestion is caused by the remnants of small amount of indigested *Ahara Rasa*. *Chikitsa* of *Rasashesha Ajirna* mentioned by many *Acharya* is *Shayan*.<sup>[28]</sup>

#### Modern Review

Nervous system is one of the control systems of the body that control various activities of the body. When individuals are awake, sympathetic nervous system is activated but while sleeping parasympathetic nervous system starts working.

Both parasympathetic and sympathetic stimulation originating in the brain can affect gastrointestinal activity mainly by increasing or decreasing specific actions in the gastrointestinal intramural plexus.

Parasympathetic stimulation, increases the over- all activities of the gastrointestinal tract by promoting

- a). Peristalsis and
- b). Relaxing the sphincters

Thus allowing rapid propulsion of contents along the tract.

This propulsive effect is associated with simultaneous increases in rate of secretion by many of the gastrointestinal glands.

Normal sympathetic stimulation does not affect motility functions of the gastrointestinal tract. However, strong sympathetic stimulation inhibits peristalsis and increases the tone of the sphincters. Thus greatly slowed propulsion of food through the tract and sometimes decreased secretion of gastrointestinal glands, sometimes causing constipation.

### **Role of Hormones**

1). Melatonin is recognized as pineal hormone and is produced in response to darkness. Melatonin plays an important role in regulating sleep and circadian rhythm. Being exposed to light at night can block melatonin production. Melatonin is known to be involved in the regulation of GIT motility. It play an important role in the protection of mucosa against various irritants and healing of various GIT lesions such as stomatitis, esophagitis, gastritis & peptic ulcer. In disturbed sleep or lack of sleep, hormonal imbalance is seen.

2). In Stress full conditions the levels of hormones i.e. cortisol level increases. Increased stress can cause intestinal permeability and motility issues. Decreased mixing lead to food remaining undigested and decreased propulsive movements lead to stagnation and fermentation of food. This undigested and fermented food has the ability to alter gut microbiome and thus, in turn, affect Gut-Brain-Axis and cause an impact on whole health of an individual.

### **Gut-Brain-Axis**

It is a bidirectional communication between the Gut and the Central Nervous System. Gut microbes communicate with CNS through following signaling mechanisms.

1. **Nervous Mechanism** – Vagus nerve links the Gut & CNS.
2. **Endocrine Mechanism** – The Hypothalamo – pituitary – adrenal axis is one of the main neuroendocrine pathways that mediates gut brain communication.
3. **Neuro-Immune Mechanism** – The interaction between gut microbiota and the immune system is extensive. Immune cell chemical mediators called cytokines can also influence the activity of enterochromaffin cells and indirectly influence the vagal neurons.

The impaired gut microbiome axis is implicated in many diseases like irritable bowel syndrome, which is mainly triggered by immune system that is altered during chronic stress. Obesity neurodegenerative disorders, psychiatric disorders, anxiety, pain and many other diseases are associated with Gut Brain Axis dysfunction.

Improper diet and life style causes the indigestion and ultimately leads to the disturbances in Gut-Brain-Axis which also affect *Nidra*.

### Role of Neurotransmitter

These are the chemical substance which acts as a mediator for the transmission of nerve impulse from one neuron to the other through synapse.

- 1) Norepinephrine – Play an important role in awakening from deep sleep. Norepinephrine and epinephrine almost always inhibit gastrointestinal activity.
- 2) Serotonin or 5- hydroxytryptamine (5-HT) – Serotonin is produced by the enterochromaffin cells of the gastrointestinal tract, with 95% of body's serotonin stored in these enterochromaffin cells and enteric neurons and only 5% stored in CNS. Serotonin is an inhibitory substance. It is associated with the production of sleep. It helps to regulate digestive functions including bowel functions and appetite.

### DISCUSSION

As *Tridosha* are the main constituent of the body, similarly *Trayopstambha* i.e *Ahara*, *Nidra* and *Brahmcharya* play an important role for the proper stability of body. Among the three *Eshanas*, first one is *Prana Eshana*. A Person should avoid *Nidra Vega Dharana*, as *Vegasandharan* is *Anaarogyakaranam* (main factor responsible for ill health).<sup>[29]</sup> Nowadays, obesity is the major lifestyle disorder and is associated with hypertension, heart diseases, diabetes, high cholesterol, sleep and breathing disorders. It is already mentioned in *Ayurvedic Samhita* that *Swapna* (sleep) and *Ahara* (diet) are mainly responsible for *Sthaulaya* (obesity)

and *Karshya* (emaciation). Excessive *Nidra* and *Divaswapna* increases *Somya Bhava* (*Kapha*) and *Tamoguna* in *Shareer* that leads to *Sthaulaya*. Opposite to this, *Ratrijagaran* and less amount of *Nidra*, increases *Ruksha Guna* of *Vata* and *Rajoguna* which leads to *Karshya*.

*Shareer* is composed of *Panchmahabhuta* and *Ahara* is also *Panchbhautika*.<sup>[30]</sup> if someone is taking *Vata Vardhaka Ahara* in large quantity then *Vata Dosha* will increase in the body and the person is more likely to be prone to *Vataj Roga*. As the *Vata Dosha* increases, quality and quantity of *Nidra* will decrease. Excessive intake of *Tamsika Ahara* is associated with *Atinidra* whereas balanced intake of *Satvika* and *Rajasika Ahara* are responsible for *Samyak Nidra*. *Matra* and *Kala* of *Ahara* taken are equally important. *Atimatrassana* (excessive intake of food) is *Amapradoshahetunam* (leads to *Ama Pradoshaj Vikara*). *Kalabhajana* (timely food intake) *Arogyakaranam* (good health). *Gurubhajana* (heavy diet intake) is *Durvipakakaranam* (disturbed digestion).<sup>[29]</sup> So, *Ahara* taken in proper quantity and at proper time is responsible for proper functioning of *Jatharagni*.

Sleep is essential for recovery from daily fatigue and to re – energize the body. Due to today's very busy lifestyle, sleep is disturbed in terms of quality and quantity. One of the causative factor for indigestion is sleep disturbance.<sup>[26]</sup> As a result, vitiation of digestive fire & formation of '*Ama*' (indigested food) occurs and affects *Nidra*. Due to formation of *Ama*, quality of *Dhatu* formed will also be compromised due to *Srotoavrodh*. *Ama* is the root cause of all kind of illness. Toxins build up in the body and number of GIT issues like GERD, gastritis, peptic ulcers, IBS etc. are seen. According to W.H.O the duration of sleep in infants upto three months is 14 to 17 hours.<sup>[31]</sup> This clearly shows that sleep is essential for growth and development of neural tissues.

Sleep allows the brain to clean itself off toxins and waste products that are produced in the brain tissues during the period of wakefulness. During sleep, body is at rest but nervous system, especially Parasympathetic nervous system is activated and working in order to repair the body to be ready for the next day activities.

*Mansik Bhava* like *Bhaya*, *Eershya*, *Lobha* etc. decreases *Jatharagni* and affect *Ahara Paka*.<sup>[26]</sup> During these situations, Sympathetic Nervous System is over excited and *Vata* is also vitiated and leads to the release of neurotransmitters like Norepinephrine which decreases secretion of digestive Juices. Level of serotonin decreases in these conditions,



which produces sleep and regulate digestive functions. *Ratrijaagran* inhibit release of melatonin hormone and thus affect the motility of Gastrointestinal tract. *Ratrijaagran* or *Divaswapna*, causes *Agnimandya*, *Aruchi* and *Gurugatarta*. This clearly indicates that due to improper sleep digestion is affected badly. So, overall health is affected due to disturbed sleep & improper digestion.

## CONCLUSION

“ Early to bed and early to arise makes a man healthy, wealthy & wise”. This proverb holds a great significance in today’s scenario. When *Nidra* (sleep) is proper, hormones like melatonin, cortisol will be stable and *Jatharagni* (digestive fire) will function properly. When the parasympathetic nervous system is operating during sleep, there is a concept of ‘Relax & Digest’. This leads to overall growth, development & nourishment of body and keeps body disease – free and healthy. Thus, a *Samyaka Jatharagni* – which fulfills the digesting and nourishing capabilities – is directly linked with *Samyaka Nidra* – a good quality and quantity of sleep due to a close interrelation between Gut- Brain-Axis.

## REFERENCES

1. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse, 30/26, page 587, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
2. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 11/35, page 227, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
3. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/35, page 416, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
4. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/36, page 418, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
5. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sutrasthana 15/48, p.84, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
6. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 07/23, page 157, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
7. Vagbhata, Ashtanga Hridya edited by Bramhananda Tripathi, Sutrasthana verse 07/ 52, p.129, Delhi: Chaukhamba Sanskrit Patishthana, 2015.



8. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/35-38, page 416 - 418, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
9. Vagbhata, Ashtanga Hridya edited by Bramhananda Tripathi, Sutrasthana verse 07/ 53-65, p.130-131, Delhi: Chaukhamba Sanskrit Patishthana, 2015.
10. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.2, Chikitsasthana, verse 15/39-40, page 459, Varanasi, India: Chaukhambha Bharti Academy, 2018; Reprint year.
11. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sutrasthana 21/09, p.114, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
12. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.2, Chikitsasthana, verse 15/03-04, page 452, Varanasi, India: Chaukhambha Bharti Academy, 2018; Reprint year.
13. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/58-59, page 422, Varanasi, India :
14. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sharir sthana, verse 04/32, p.44, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
15. Harishastri Paradakara Vaidya, Ashtanga Samgrah, Sutrasthana, Chapter 9, Sutra 48, Chaukhamba Orientalia, Varanasi, 2005.
16. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol. 2, Chikitsasthana, verse 15/50-51, page 461, Varanasi, India: Chaukhambha Bharti Academy, 2018; Reprint year.
17. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Vimanasthana, verse 06/12, page 719, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
18. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/51, page 420, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
19. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/11, page 411, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
20. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/50, page 420, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
21. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sharir sthana, verse 04/37, p.45, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.

22. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sutrasthana 15/48, p.84, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
23. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.2, Chikitsasthana, verse 15/05, page 453, Varanasi, India: Chaukhambha Bharti Academy, 2018; Reprint year.
24. Skandapurana, Vai.Su.Sa.21/11.
25. Skandapurana, Vai.Su.Sa.21/19.
26. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sutrasthana, verse 46/507-508, p.287, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
27. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 21/46-49, page 419-420, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
28. Vagbhata, Ashtanga Hridya edited by Bramhananda Tripathi, Sutrasthana verse 08/29, page 140, Delhi: Chaukhamba Sanskrit Patishthana, 2015.
29. Charaka Samhita – Savimarsha ‘Vidhyotini’ Hindi Vyakhya, Vol.1, Sutrasthana, verse 25/40, page 468-469, Varanasi, India: Chaukhambha Bharti Academy, 2017; Reprint year.
30. Sushruta Samhita, edited with Ayurveda-Tattva-Sandipika Hindi Commentary on Sutrasthana, verse 46/533, p.290, Chaukhambha Sanskrit Sansthan, Varansi, India, 2019; Reprint year.
31. [https:// www.who.int](https://www.who.int)