



Review Article

**A REVIEW OF THE THERAPEUTIC EFFECT OF MUSLI IN (*CHLOROPHYTUM BORIVILIANUM*)
SUKRA ALPATA WHICH CORRELATES TO OLIGOSPERMIA**

Rajdeep Kumar^{1*}, Chitranjan Das¹, Sampurna Nand Tiwari²

¹MD Scholar, Department of Dravyaguna, ²Principal, Government Ayurvedic College, Patna, Bihar, India.

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ABSTRACT

Male infertility is one of today's most pressing issues, and the prevalence of this condition is rising owing to a change in lifestyle. Low sperm count denotes a lower-than-normal sperm count in the semen you produce during orgasm. Oligospermia is another name for low sperm counts. A zero sperm count is referred to as azoospermia. Oligozoospermia is a disorder associated with male infertility that is characterized by a low sperm count. Ayurveda, the Indian medical system's science, defined several terminologies linked to male infertility, including *Kshina shukra*, *Alpa Retasa*, and *Shukra dosha*, which are similar to disorders connected with oligozoospermia. Ayurveda also described several medications for treating oligozoospermia. *Musli* is the most widely used remedy for oligospermia. *Musli* is one of the well-known medications described in Ayurvedic texts. *Musli* has exceptional aphrodisiac and revitalizing qualities. It is beneficial to overall health development. In Ayurveda, *musli* is also known as *Talamuli*, *Suvaha*, *Talamulika*, *Deerghakandika*, and *Talapatri*. It is a *Rasayana* medication that is useful in *Ayurvedic Materia Medica* for vigor and vitality. *Sweta Musli*'s therapeutic value has long been praised and supported due to its aphrodisiac properties. *Samhita Sweta Musli* and *Krishna Musli* are the two main varieties of *Musli*. It works to treat impotence, and infertility, increase male potency, and has immune-modulating and adaptogenic qualities.

INTRODUCTION

God created the universe through the inspiration of *Karma*, which is still ongoing and whose achievement is dependent on the natural sexual mechanism. *Karma* influences sexual enjoyment and improved progeny to lead to a happy life, which is disrupted in its absence. Sex is regarded as the least boring and most delightful action. It is the most important aspect of human life for the preservation of species as well as for personal enjoyment. Through our sexual preferences, we express our most fundamental natures. Sexual expression produces pleasure, delight, and sharing. The normal human attribute of difficulty in discussing sexual things has contributed to the rise of unscrupulous sex therapists in India.

According to studies, most general practitioners spend very little time discussing their patients' sexual problems with them. Many medical school professors feel personally uncomfortable discussing sexual problems with their students, which has resulted in a large gap in understanding about sexual health, particularly fertility. In the classics, synonyms for heterosexual intercourse between active sexual partners include *Vyavaya*, *Gramyadharmā*, *Maithuna*, *Strisanga*, *Strigaman*, and others. Many variables influence good sex, including physical (Neuroendo-vascular system), psychological, and relational quality with the partner. Any disruption in these cause sexual dysfunctions, which lead to frustration, dissatisfaction, lower self-esteem, and fertility issues, lowering one's quality of life. It is one of the most tragic marital issues. Male infertility is referred to as '*Vandhya*' in Ayurveda, whereas female infertility is referred to as '*Vandhy*' (Ref: *Ayurvediya Sabdakosa*). More than 90% of male infertility cases are caused by oligospermia, poor sperm quality, or both. *Vjikanana* is an Ayurvedic branch that deals with the preservation and enhancement of a healthy man's sexual potency and conception of healthy progeny, as

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well as the management of defective sperm, disturbed sexual potency, and spermatogenesis, as well as the treatment of seminal-related disorders in man. *Vjikanana* increases sexual capacity and performance while also improving an individual's physical, psychological, and social well-being^[1]. *Musli* is one of many Ayurvedic medications that have been described for this purpose.

Drug Review^[2,3]

Musli (Chlorophytum borivilianum)

Musli is a common plant in traditional Indian medicine and belongs to a class of herbs known as "Rasayana" or adaptogens. It is generally thought to be very beneficial for increasing overall body immunity. Its aphrodisiac effects have proven to be quite beneficial in treating erectile dysfunction and increasing male potency. *Musli* has *Vajikanana* (aphrodisiac) and *Rasayana* (rejuvenating) properties, which aid to increase sperm count. *Sweta musli* and *Krisna musli* are the two types of *Musli* utilized for medicinal purposes, according to *Raj Nighantu*.

Taxonomical Classification^[4]

Kingdom	Plantae
Clade	Angiosperms
Order	Asparagales

Botanical Description^[11]



Plant roots are tuberous and roughly 4 inches long, with a bitter and mucilaginous taste. Straight, cylindrical, tuberous rootstock, 5-22cm long, 0.5-0.8cm thick, brownish surface with pronounced transverse wrinkles in the top basal half. It has a few sturdy lateral roots that are 5cm or longer in length. Lateral roots are dull white and spongy on the outside. The rootstock's freshly cut surfaces are starch-white and mucilaginous.

Sessile or short petiolate leaves with sheathing bases are 15-45 1.2-2.5cm long, linear or linear-lanceolate, membranous, glabrous, or sparsely softly hairy, and plicate in the bud. When the leaf tips come into touch with the soil, they establish roots and form adventitious buds. The inflorescence is axillary, scapose racemose, with the scape very small and hidden amid the leaf bases beneath, clavate, flattened, with the pedicels, bracts, and ovary hidden in the leaf sheaths.

Family	Asparagaceae
Sub-family	Agavoideae
Genus	Chlorophytum
Species	C. borivilianum

Synonyms^[5,6]

Musli, *Talamuli*, *Suvaha*, *Talamulikaa*, *Godhapadi*, *Hempushpee*, *Bhootalee*, *Varahi*, *Deerghakandikaa*, *Talapatrikaa*.

Properties^[7,8]

Rasa - Madhur

Guna - Guru, Snigdha

Virya - Sita

Vipaka - Madhur

Phytochemistry^[9]

Carbohydrates make up 42% of safed musli, followed by proteins at 8-9%, fibers at 3-4%, saponins at 2-17%, and alkaloids at 15-25%. Alkaloids and saponins are the primary therapeutic components. Over 25 alkaloid compounds, minerals, antioxidants, carbohydrates, proteins, steroids, polysaccharides, and other nutrients are abundant in *Sweta Musli*.

Dose: ^[10]

Churna: 3 to 6 gram

The lower, larger blooms on the scape are typically bisexual, while the top, smaller flowers are staminate. Flowers are bright yellow, epigynous, bisexual, or unisexual, with a lanceolate, membranous bract. The perianth is gamophyllous, rotate, and six-lobed, located at the top of a slender sterile long extension of the ovary through which the perianth is exposed above ground, perianth lobes similar, elliptic-oblong 1.2-1.6cm long, 0.2-0.3cm broad, outer lobes hairy on the back, inner lobes sparsely hairy along nerves.

Stamens are six in number, filamentous filiform, 2mm long, adnate to the base of the perianth lobes, and sagittate. Anthers are linear or linear-lanceolate, basifixed, and sagittate.

Ovary inferior, buried among the leaves, usually below ground, tri carpellary syncarpous, lanceolate, and trilocular with a rather long thin beak or protrusion of the stipe. A unique long funicle connects the multiple ovules in each cell. Style is 2mm

long and columnar, with a 3-lobed stigma. Lobes are long, upright, and appressed. The fruits are a 1.5-2cm long, 8mm broad, oblong, glabrescent capsule with a short beak and spongy septa. The seeds are rectangular, black, and glossy, with a crustaceous testa grooved deeply in wavy lines

Distribution^[12,13]

The plant is found in the subtropical Himalayas from Kumaon eastwards, as well as the Khasia hills,

Bengal, Assam, Konkan, Kanara, the Western peninsula, and Madras to Kanya Kumari.

Plants were found growing in patches in the pine forest of Ranikhet and the surrounding Kumaon hills. It is dormant from early winter till the end of the monsoon season.

Flowering takes place throughout August and early September.

Therapeutic Indication in Ayurvedic Nighantu Text^[14-18]

Nighantu	indication
Shodhal Nighantu	<i>Vajikaran, Atisarnashani Agnivardhni, Vatapittahar sthryamardavdayini</i>
Madanpal Nighantu	<i>Brihan, Balya, Arshoghna, Vatashamak</i>
Kaiydev Nighantu	<i>Balya</i>
Raj Nighantu	<i>Vrishya, Pustibalaprada, Pita dah shramhara</i>
Bhavaprakash Nighantu	<i>Vrishya Brihan, Rasayana, Arshoghna, Vatshamak</i>
Saraswati Nighantu	<i>Arshoghni</i>
Rajbhallava Nighantu	<i>Rasayan, Vatshamak, Grahaniroghar</i>
Shaligram Nighantu	<i>Vrishya, Dhatuvarhdhak, Balya, Rasayana, Pitta dahahar, Raktadoshnashak, Shramhar</i>
Nighantu Adarsha	<i>Balya, Vajikar, diabetes</i>
Priya Nighantu	<i>Vrisya, Balya, Rasayana, Vatshamak</i>
Nighantu kalpdrum	<i>Vrishya, harmful to Pattik prakriti</i>
Hridyadeepak Nighantu	<i>Vataghna</i>
Dravyaguna Vigyan	<i>VPshamak, Balya, and Vrisya use in Mutrakrichchha, Puyameh, and Ikshumeh</i>

Action^[19]

Shramahara	Take away fatigue
Pittahara	Anti-bilious
Vrishya	Aphrodisiac
Rasayana	Tonic
Pustiprada	Nourishes body
Balaprada	Gives strength
Mutral	Diuretic
Shukral	Increase the quantity and improve the quality of the <i>Shukra dhatu</i>

Classical Review^[20-29]

Acharya Charak was originally cited in the treatment of respiratory illnesses (C.S.C.18/74) and was later quoted by *Sushruta* in the treatment of urolithiasis (S.S.CI.7/18) and chronic obstructive pulmonary disease (S.S.U.51/39). *Vagbhata* used the name *Musli* for the first time in the context of skin hyperpigmentation as an external application (A.H.U.32/21). *Musli* was listed by *Sarangdhara* in the *Vrsya* group of medications (Sa.Sam.Ma.Kha.4). *Raj Nighantu* classifies it as *Mulakadi Varga*. *Guduchayadi varga* by *Bhavaprakash Nighantu* describes it. It was stated by *Kaiydev Nighantu* under *Aushadhi Varga*. *Madanpala Nighantu* classifies it as *Shaka varga*.

Satpushpadi Varga is how *Priya Nighantu* describes it. It is described in *Shodhala Nighantu* under *Laksmanadi Varga*.

Shukradhatu^[30]

Shukra is regarded as the ultimate essence (*Sara*) of all tissue components (*Dhatu*).

Vyutpatti: *Shukra* is white pure excellent *Dhatu* of all.

Origine of word Shukra

Shukra derives from the Sanskrit root *Suk* source, which implies cleanliness.

Nirukti: *Retas-* The material that is expelled during coitus. *Shukra dhatu* is the body's final element,

according to *Ayurveda*. *Shukra Dhatu* is thought to be the *Sara* of all *Dhatu*s.

Shukra dhatu's paryayas are *Retas*, *Tejaha*, *Veeryam*, *Beejam*, and *Indriyam*. (amar6/2/62)

Shukravaha strotas^[31]

Shukravaha Srotas Sthan is *Vrushana* and *Shephach*, according to *Charak*. *Sushrut Sthano* and *Vrushno* say. According to *Sharangdhar*, the major *Sthan* of *Shukravaha Strotas* are *Viryavahishira* and *Vrushn*. To produce the *Shukravaha Strotas* system, two *Vrushan* means testis, two *Adhivrishanika* means epididymis, two *Shunkra vahini* denote vas deference, two *Shukra Prapika* means seminal vesicles, and *Medhra* means penis.

Utpatti of Shukra Dhatu

Shukradhatu is the final *Dhatu*. It is produced throughout intrauterine life. Food, like any other *Dhatu*, is used for growth and sustenance. After absorption, food is converted into *Rasa Dhatu*, which nourishes *Rakta* and eventually leads to *Shukradhatu*. This procedure takes around one month to complete.

Upadhatu of Shukradhatu

The only compendium to mention *Upadhatu* of *Shukradhatu* was *Sharangdhar*. According to him, *Oja* is the *Upadhatu* of *Shukradhatu*.

Mala of Shukradhatu

Because of its purity, the *Mala* of *Shukradhatu* is used by *Charak-Samhita* and *Sushrut Samhita*. *Asatang hridaya* states '*Oja*' as *Shukradhatu's Mala*.

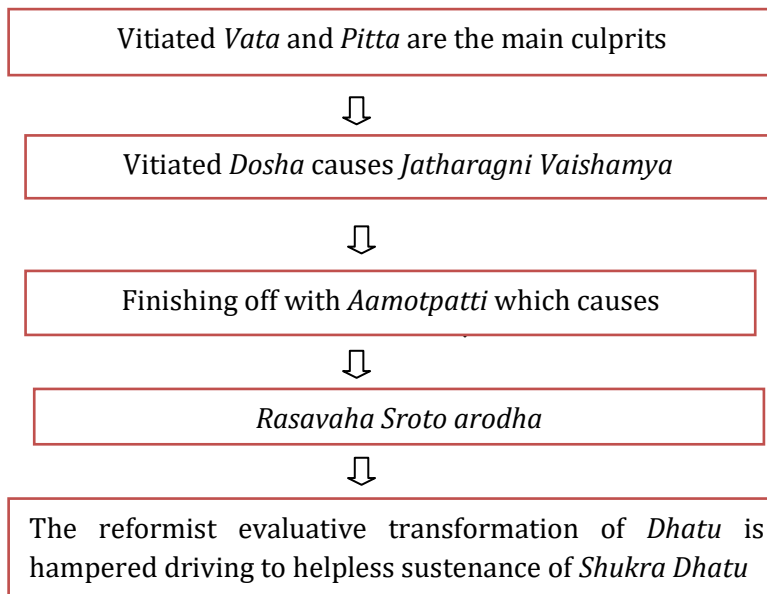
Shukra Alpata^[32,33]

Means a decrease in the quality or quantity of *Shukradhatu*, or a hampered output. Those who suffer from grief, anger, fear, intense mental work, envy, *Samprapti*^[34]

curiosity, agitation, and excessive use of dry foods and medications, particularly emaciated and disabled people, suffer from *Shukra Alpta Lakshanas*. Inadequate food habits lead to decreased development of *Ras Dhatu*, which leads to decreased creation of *Rakt Dhatu*, which leads to decreased formation of *Shukra Dhatu*. If a person continues to have excessive intercourse in this situation of diminished *Shukra Dhatu*, he may develop ailments such as *Yakshma* or possibly die. As a result, everyone seeking good health should pay special attention to *Shukra*. *Acharya Charak* writes in *Chikitsa Sthana* that *Shukra* is lessened by old age and anxiety, heavy work, and excessive sexual indulgence.

The following are the broad reasons for *Shukra Dhatu Kshay*:

1. Being a *Shukra Dushti*, *Shukra Dushtikar Aaharas* and *Viharas* can be considered the primary cause.
2. *Shukra* is the *Sara* of *Sapta Dhatus*, hence the elements that cause *Dhatu Kshay* might be examined in the *Hetus*.
3. The variables that contribute to the *Shukravaha Strotas Dushti* play an important part in the production of *Kshin Shukra*.
4. Because the doshas involved in *Shukra Alpta* are *Vata* and *Pitta*, the causes of vitiation of *Vata* and *Pitta doshas* might be considered.
5. *Shukraalpta* is predisposed to disorders such as *Sthaulya*, *Prameha*, and others. As a result, these *Nidanarthkar Vyadhis* are likewise included in the etiology.
6. *Shukralpta* can be caused by the use of medications such as *Kshara*, *Lavana*, and others.



Lakshanas

Weakness, dry mouth, anemia, body ache, weariness, impotence, and delayed seminal ejaculation are all symptoms. According to *Sushrut, Shukrakshay Lakshanas* include penile pain, scorching sensations, a pricking feeling in the scrotum during sexual intercourse, and semen ejaculation with blood.

DISCUSSION

India is the home of the exotic herb *Musli*. In conventional medical systems, it is used. In Ayurveda, it is also known as "white gold". Along with improving sexual function and boosting vitality, this plant has long been used to treat diseases such as diabetes, cancer, rheumatism, and other illnesses. The plant is typically harmless as long as it is utilized properly. Because of *Sweta Musli's* widely recognized spermatogenic potential, sperm production in individuals with oligospermia can be increased. Additionally, it boosts the quantity, density, and motility of sperm. When coupled with other herbs like *Shatavari, Gokshur,* and others, it is claimed to be beneficial. Male infertility is largely attributed to erectile dysfunction. *Sweta musli* fortifies your penile tissues, extending your lifespan and enhancing the hardness of your penis as required. Additionally, it increases sperm count and testosterone levels. *Sweta musli* has high levels of proteins, alkaloid substances, saponins fiber, and carbohydrates. These crucial elements support the development of immunity. Furthermore, *Sweta musli's* aphrodisiac properties are entirely natural, therefore there is no chance of long-term negative consequences. The reproductive system is often revitalized with *Sweta musli*.

CONCLUSION

Musli stands for *Snigdha, Guru, Guna* and *Madhura Rasa., Madhura Vipaka* and *Shita Virya*. While it is cooling efficacy and sweet metabolic flavor balance the *Pitta Doshas*, its thick and unctuous texture calms the *Vata Doshas*. It typically results in an aggravation of the *Kapha Dosha* levels, though. Due to its inherent qualities and *Doshas*, the plant has a favorable effect on the *Dhatu Rasa, Rakta, Mamsa, Asthi, Majja,* and *Shukra*. It can be used to treat a range of therapeutic diseases, including oligospermia, impotence, infertility, and sexual harassment. It fosters arousal, lessens fatigue, maintains sexual satisfaction, delays early ejaculation, and fosters sperm development. Before and after sexual excitement, sexual activity, and seminal discharge, the body's environment changes, returning to normal without deteriorating. Long-term connection and enjoyment are preserved and improved. The risk of conception is increased during a year of frequent sexual activity. It slows down the aging process by maintaining antioxidant, hormone, vitamin, and nutritional levels and acting as an adaptogen for shifts in the natural environment.

REFERENCES

1. Acharya Rajeshwar Shastri, Upadhyaya, Pandeya, Agnivesha, Charaka Samhita Part 2, Chikitsasthan 2,4/51, Varanasi, Chaukhamba Surbharati Prakashan, edition reprint 1998, Pg no .92
2. Prof.P.V.Sharma, Dravyaguna Vijnana vol II, Chaukhambha Bharati Academy, Varanasi, edition. 2013, p-560
3. Dr. Indradeva Tripathi, Raj nighantu of Pandit Narahari, Chowkhamba Krishnadas Academy Varanasi, edition-2006, p-209
4. Prof. Priyavrata Sharma and Dr. Guru Prasada Sharma, Kaiyadeva- Nighantu (Pathyapathya Vibodhakah), Chaukhambha orientalia Varanasi, edition-2006, p-642
5. Dr.J.L.N.Sastry, Ayurvedokta Oushadha Niruktamala, Chaukhambha orientalia Varanasi, edition-2001,p-87.
6. Chauhan NS, Sharma V, Thakur M and Dixit VK (2010) Curculigo Orchioides The black gold with numerous health benefits. Journal of Chinese Integrative Medicine
7. Sharma Prof.Priya Vrat., (vrisyadi varga). Varanasi; Chaukhamba Surbharti Prakashan; 2011. p. 559
8. Vaidya Bapalal G. Nighantu Adarsa (laghu-gokshuradi varga) Vol.-1. Varanasi; Chaukhambha Bharti Academy; 2018. p. 210
9. https://www.researchgate.net/publication/323572424_Phytochemical_Pharmacological_and_Nutritional_Profile_of_Chlorophytum_tuberosum_Roxb_Baker_Safed_musli_a_Review
<https://shodhganga.inflibnet.ac.in/bitstream/10603/401917/8/chapter-3.pdf>
10. Prof. Priyavrata Sharma and Dr. Guru Prasada Sharma, Kaiyadeva- Nighantu (Pathyapathya Vibodhakah), Chaukhambha orientalia Varanasi, edition-2006, p-559
11. Curculigo orchioides Gaertn. shodhganga.inflibnet.ac.in
12. K.Raghunathan and Miss. Roma Mitra, Pharmacognosy of Indigenous Drugs Vol II, Central Council For Research In Ayurveda And Siddha, New Delhi, edition-1999, p-668.
13. Prof.K.C.Chunekar, Bhavaprakasa Nighantu of Sri Bhavamisra, Chaukhambha Bharati Academy Varanasi, edition-2013, p-376
14. Tripathi Indradev (1992). Chakradatta, Vaidya Prabha Hindi Commentary, Chowkhambha Sanskrit Sansthan, Varanasi, 1st edition, pp. 5.49, 52.41, 57.58
15. Goshwami N.K. (1996). Vangsen Samhita, Bharat Darpan Press cotton street Kolkata 1st edition, pp. 85, 106.

16. Tripathi Indradev, Gada Nigrah. (1994). Chowkhambha Sanskrit Sansthan, Varanasi, 3rd edition, pp. 4.126, 28.146, 36.261
17. Srivastava Shailija. (2009). Sharangdhara Samhita, Jivanprada Hindi Commentary, Chowkhambha Orientalia Varanasi, reprint edition, pp.33, 193, 199, 311.
18. Vaidya Shastri Laxmipati. (1993). Yogratnakar, Vidyotini Hindi Commentary Chowkhambha Sanskrit Bhawan Varanasi 5th edition, pp.242, 482, 484, 485.
19. Mishra Sidhi Nandan. (2012). Bhaisajya ratnawali, Sidhiprada Hindi Commentary Chowkhambha Subharti Prakashan Varanasi edition, pp.355
20. Pt.Kashinath Pandey and Dr.Gorakhnath Chaturvedi, Charak Samhita vol.2, Chaukhamba Bharti Academy Varanasi, edition-2009, p-541
21. Kviraja Ambikadutta shastri, Susruta samhita of Maharshi Susruta, part-1, Chaukhamba Sanskrit Sansthan Varanasi, edition-2011, p-53
22. Kaviraja Ambikadutta shastri, Susruta Samhita uttartantre of Maharshi- Susruta, Chaukhambha Sanskrit Varanasi, edition-2010, p-484.
23. Yadunandana Upadhyaya, Astang Hridaya of Maharshi Vagbhata, Chaukhambha Prakashan, edition-2014, p-698.
24. Dr. Smt. Shailaja Srivastava, Sharngadhara Samhita of Acharya Sharngadhara, Chaukhambha Orientalia Varanasi edition-2005, p-311.
25. Dr. Indradeva Tripathi, Raj nighantu of Pandit Narahari, Chowkhamba Krishnadas Academy Varanasi, edition-2006, p-209.
26. Prof. K.C.Chunekar, Bhavaprakasa Nighantu of Sri Bhavamisra, Chaukhambha Bharati Academy Varanasi, edition-2013, p-376
27. Prof.Priyavrata Sharma and Dr.Guru Prasada Sharma, Kaiyadeva- Nighantu (Pathyapathya Vibodhakah), Chaukhambha orientalia Varanasi, edition-2006, p-642.
28. Prof.Gyanendre Pandey, Madanpala Nighantu, Chaukhamba Orientalia Varanasi, edition-2012, peg. 559.
29. Prof. Priya Vrat Sharma, Priyanighantu, Chaukhamba Surbharati Prakashan Varanasi, edition-2004, p-95. Prof.(Dr.) Gyanendre Pandey, Sodhala Nighantu, Chaukhamba Krishnadas Academy Varanasi, edition. 2009, p-629.
30. Anna Moreshwar Kunte and Krsna Ramachandra Shastri Navre, edited by Pt. Hari Shastri, Ashtangahrdaya of Vagbhata, with the commentaries: Sarvangasundara of Arunadatta and Ayurvedarasyana of Hemadri, Sutra Sthana, 11th chapter, verse 20, Chaukhambha Sanskrit Sansthan, Varanasi, Reprint 2018
31. Vd Yadavji Trikamaji Acharya, Agnivesha, Charaka Samhita, with Ayurveda Dipika Commentary by Chakrapani, Chikitsa Sthana, Vajikaran Adhyaya, Chapter 2/1, shloka 16-17, Chaukhamba Publication New Delhi. Reprint 2018, Pg. No – 391.
32. Sushrut, Sushrut Samhita, with Nibandhasangraha of Dalhanacharya and Nyaychandrika Panjika of Gayadasacharya edited by Vaidya Yadavji Trikamaji Acharya, Sutrasthana, chapter 15, shloka 4(1), Chaukhamba Surbharti Prakashan.
33. Vd Yadavji Trikamaji Acharya, Agnivesha, Charaka Samhita, with Ayurveda Dipika Commentary by Chakrapani, Chikitsa Sthana, Vajikaran Adhyaya, Chapter 2/1, shloka 16-17, Chaukhamba Publication New Delhi. Reprint 2018, Pg. No – 391.
34. Sushrut, Sushrut Samhita, with Nibandhasangraha of Dalhanacharya and Nyaychandrika Panjika of Gayadasacharya edited by Vaidya Yadavji Trikamaji Acharya, Sutrasthana, chapter 15, shloka 4(1), Chaukhamba Surbharti Prakashan.

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***Address for correspondence**

Dr. Rajdeep Kumar

M.D. Scholar

Department of Dravyaguna

Government Ayurvedic College

Patna, Bihar

Email: drdeep315@gmail.com

Mobile No: 9334043331

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