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Review Article

Anaesthesia and Pain Management

Concept of Sangyaharana (Anaesthesia) and Pain Management in Ayurveda: A Critical Review

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Abstract: Despite highly developed scientific studies, pain continues to be the leading cause of disability that affects a sizable portion of the global population. An integrated approach to pain management may alleviate the distress associated with treating this symptom, which can be present in various degrees. The Sushruta Samhita is the only complete work that addresses the difficulties of actual surgery and midwifery. Sushruta was a deeply skilled surgeon. Since the beginning, doctors have recognized the importance of anesthesia and have worked to create this pain-free surgical environment. Sushruta utilized Sangyaharana for painless surgery. The Sushruta Samhita is where we first see a systematic approach to organizing the surgical expertise of more experienced surgeons. Some dravyas, such as Madya (wine), have been described by Sushruta, while mohachurna has been discussed in Bhojaprabandha. According to Charaka, the tikshna sura should be administered to the patient before surgery. Some study experts have also detailed the use of Ayurvedic medications, including Vacha, Ashwagandha, Bramhi, Parijata, and Parasika yavani, postoperatively to reduce pain, edema, and anxiety in patients.A major herbal anesthetic is still needed, though. This review provides a historical overview of the Sangyaharana (Anaesthesia) practiced by ancient surgeons. This article highlights the concept of sangyaharana (anesthesia) and pain management in Ayurveda. The main objective of this article was to collect data from different articles and textual concepts and present it systematically. This review article covers a combination of all the drugs and ayurvedic herbal methods for sangyaharana and pain management. Most previous articles had very little information about the drugs and methods of sangyaharn, and the data was very discrete and in random order. This article covers all the details in a systematic and orderly manner. This article provides information regarding various Ayurvedic treatment modalities for pain management. It also shows the need for an effective Ayurvedic anesthetic drug having sangyaharan properties in the present era, and scientists and researchers have to work on this on a priority basis. The article concludes with how the sangyaharna was given in old times and old literature about sangyaharna and drugs that help pain management in pre-sangyaharna and their work in the modern era.

Keywords: Sangyaharana, shalya, Anaesthesia, pain management, madya, surgery.

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1. INTRODUCTION

"A potent poison becomes the best drug on proper administration. On the contrary, even the best drug becomes potent if used badly". Charakacharya in Charak Samhita Sangyaharana-definition anesthesia as a "reversible loss of sensation." Since the beginning of time, surgeons have understood the value of anesthesia and have worked to provide a pain-free operating environment. As in other multicultural countries, healing spells and mantras replaced conventional treatment in India. The country's chief physician was a priest known as a Bhisag Atharvan, who was seen as having more social standing than a medical expert. The first recorded Aryan colonies in Punjab were frequently besieged by the dark, blind, primitive people who lived there. During the battle, the doctors routinely provided medical attention to the Aryan leaders and soldiers. The Rigveda thus relates how the Aryan warriors' legs were amputated and replaced with iron prosthesis, their injured eyes were removed, and how arrow shafts were retrieved from their bodily parts. Ayurvedic surgery has a long and fascinating history of development. In this article, we examine the historical background of the anesthetic Sangyaharana, which ancient Indian surgeons utilized during operations, as well as surgical methods and pain management.Sushruta has described the concept of sangyaharna as threefold karma (Three fold surgical management); Acharya Sushruta outlines three steps in surgical therapy in the fifth chapter of Sutra Sthana, the first compilation of Sushruta's writings. These three steps are Poorva, Pradhan, and Paschat Karma. Poorva, Pradhan, and Paschat Karma are the names of the first, second, and third steps, respectively. The preventative measure is called Poorva Karma. Poorva Karma is the term used to describe patients' physical and mental preparation for Pradhan karma (surgery or anesthesia). The following steps are included in this procedure: patient assessment, disease examination, history of prevalent diseases with treatment records, and equipment and operating room preparation. Acharya Sushruta mentioned 60 wound care techniques in Langhanadi Virekantam Poorvakarma Vranasya Chapter. Poorva Karma is the first stage of surgical case management. All three dosh are kept in the equilibrium stage, known as Samyavastha, when patients undergo these operations since the wound is treated both locally and systemically. These techniques make surgical treatments safe and effective. To do this, we take into account the following factors under "Poorva Karma": Regarding the patient, the course of treatment, the tools, the operating room, the relationship between the surgeon and the procedure, the relationship between the anesthetist and the anesthetics, and pre-anesthetic drugs. Therefore, it is clear that Sushruta was referring to shalya karma when he mentioned anesthesia (Surgical procedures).Madatyaya has four stages (Avasthas) that are very similar to anesthesia stages, according to Ayurvedacharyas. Sushrutacharya used the Guru Bhojana, followed by the Madyapan pattern, to achieve a state of anesthesia. Gurubhojana is a pre-anesthetic measure to ensure rapid action (due to Nidra adhikya), and Madya is the anesthetic drug. Pre-anesthetic drugs are now used, and anesthetic drugs have replaced Madya. Even when using a drug like Afim or Madya, the muscle relaxant action expected from an anesthetic drug can be observed (one of the signs of these drugs' third stage of action). Pain is described as "An unpleasant sensory and emotional experience arising from actual or potential tissue damage" by the International Association for the Study of Pain. Ayurveda has been the dominant practice in Indian society since ancient times for these concepts.[1] Advances in allopathy have broadened the therapeutic scopes in various diseases in the modern era. Acharya Sushruta first proposed the idea of reducing pain during surgery by drinking alcohol, and modern surgeons later expanded on this idea to formalize it as a distinct field of medicine called anesthesia [2]. An increasing number of patients are being admitted to hospitals for various surgical procedures. Most of these patients have invariably used Ayurvedic and herbal medicines to treat their current surgical problem or would have taken similar medications to treat other comorbid diseases. When these patients conceal their current treatment regimens, particularly their use of herbal medicines, the clinical scenario becomes more difficult. The general public perceives these medication profiles as these therapeutic agents that are completely safe. The use of complementary and alternative medicine has grown in popularity due to its purported benefits in cardiac, chronic, respiratory, and other disorders. We can take precautions by withholding herbal medicines for as long as is convenient in the preoperative period. Through media such as journals, newspapers, and health magazines, awareness of the potential interactions with anesthetic agents must be raised among surgeons, anaesthesiologists, and the general public. Currently, medical students receive no pharmacological or clinical training in complementary medicines. It does not prepare new doctors to practice medicine in the twenty-first century. This article highlights the concept of sangyaharana (anesthesia) and pain management in Ayurveda. The main objective of this article was to collect data from different articles and textual concepts and present it systematically.

1.1. The anesthetic effect of certain indigenous drugs in the Indian system of medicine.

Finding more helpful and effective anesthetic medications is the primary goal of scientific research in Indian medicine. Bhang (Cannabis sativa), Vacha[3] (Acorus Calamus), Jatamansi[4] (Nardostyachya Jatamansi), Sarpagandha[5] (Rauwolfia serpentina), and Parsik Yavani[6] were all used in the study to determine their anesthetic effects. All of those medications are well known for their sedative and analgesic effects. They are also employed in the treatment of mental illnesses (Manasik vikar), including Unmada, Apasmar, and Attwabhinivesh.[7] The procedure for operating on and removing the sick component had been used for a while. It's probable that they had to use anesthetic medication before the procedure. But regrettably, there are no mentions of this practice in the old Ayurvedic writings. According to Sushruta, patients should be given habit-forming substances like hitakar ahar and strong wine. The anesthetic effects of certain indigenous drugs in the Indian system of medicine are explained (Table-1) with their properties and Latin names.

Table 1: Indigenous drugs in the Indian system of medicine and their properties

S.No.	Drugs	Properties
1	Bhanga: (Cannabis sativa):	Like opium, the substance first stimulates the nervous system before decreasing crucial functions. In medicine, cannabis is used to reduce pain and promote sleep.
2	Vacha (Acorus calamus):	the aromatic rootstock is carminative and used as a tonic for dyspepsia and colitis.

3	Jatamansi: (Nardostyachaya jatamasi)	It enhances hair growth and blackness and helps with sleep, coughing, and chest pain. It also increases the luster of eves. Additionally, hysteria, convulsions, and epilepsy are all treated with it.
4	Sarpagandha (Rauwolfia serpentina)	It has clearly defined sedative characteristics. Given twice daily, 20-30 gm of the powdered root has sedative and blood pressure-lowering effects.
5	Parsik yavani': (Hyoscynanus niger)	Hyoscyamine is used for sleeplessness, palpitations, debility, and hysteria and has sedative, antispasmodic, and mydriatic (dilate pupil) properties.

According to the study, increasing doses of Bhanga Vacha and Jatamansi increased their induction and dullness tones, whereas Sarpagandha and Parsik Yavani had the exact opposite impact. It was a given that each of these medications looked to have sedative effects and induce sleep upon injection. [8]

2. HISTORICAL PERSPECTIVE

To lessen the discomfort of the operation, Madya-wine [9] has been recommended by Acharya Sushruta. It is prominently highlighted at the beginning of Sushruta Samhita's first chapter 3, where it is acknowledged as a major issue facing humanity. The Father of Surgery, Acharya Sushruta, performed a variety of surgical techniques, according to references. Without anesthetics, surgical operations like laparotomies and calculus extraction were not possible. As a result, they were renowned for their contributions to the science of anesthesia, which was the sole reason surgical procedures could be completed quickly. It's also accurate to say that this has yet to be discussed in depth, but the references show it exists. Sura, Madira, and Asava are recommended in Charaka Samhita [10] to lessen pain during the delivery of the blocked fetus. It also demonstrates the possibility that incredibly potent medicines existed in the past and contributed to sangyaharana's potent effects. Sammohan Churna was employed during King Bhoja's brain surgery, according to Bhojprabandh[11] (900 A.D.) (Mohchurnen Mohayet - Bhojaprabandha). The usage of Sanjivani for anesthesia recovery was also noted. But the makeup of these medications should be mentioned.The Balmiki Ramayana, which Vaidya Sukhena gave to Lakshmana to awaken him, also refers to Sanjivani [12]Ahiphen and Bhanga are described as analgesics in Bhava Prakash[13], a text on Ayurvedic pharmacognosy. Opium, or ahiphen, is the primary ingredient in narcotic analgesics. Opium is the source of most modern hypnotic analgesics. Tridosha and Nadi Vigyan are the foundation of this science of life. [14]The motor (Aagyavahi) and sensory (Sangyavahi) nerves are both extensively discussed in Ayurvedic scriptures. The topic of postoperative pain management is undergoing extensive investigation and innovative advancement. The value of Basti [15-17], and Virechana before surgery is recognized nowadays. Native substances such as Jatamansi[18], Ashwagandha[19], Brahmi[20], Vaca[21], Parsikyavani[22], and Shankhpushpi[23] are utilized as premedicated to induce trance and tranquilly before surgery. With the aid of this indigenous premedical, it is now feasible to experience the toxicity or side effects of modern anesthetics. Not only is the toxicity decreased, but the anesthetic doses are also decreased, potentiating the effects even more. Nirgundi[24], Rasna,[25] Erandamool[26], Bhringraj[27], and Parijata[28] afterwards. Triphalaguggulu [29, 30], and Shigru[31] are utilized as analgesics with anti-inflammatory properties. Some drugs are used in pain management, and also anti-inflammatory action are listed in the table below with their Latin name and with properties (Table-2).

Table 2: List of drugs used for anesthesia

S. No.	Name of the Drug used	Latin name	Anaesthetic use {Postoperatively for}
1	A hyphen	Papaver somniferum	reduce pain
2	Bhanga	Cannabis sativa	reduce pain
3	Erandmoola	Ricinus communis	anti-inflammatory action.
4	Vacha	Acorus calamus	achieve Tranquillizing effect
5	Parijata	Nyctanthes arbor-tristis	anti-inflammatory action.
6	Jatamamsi	Nardostachys jatamansi	achieve Tranquillizing effect
7	Brahmi	Bacopa monnieri	achieve Tranquillizing effect
8	Ashwagandha	Withania somnifera	achieve Tranquillizing effect
9	Rasna	Alpinia galangal	anti-inflammatory action.
10	Parasika yavani	Hyoscyamus niger	achieve Tranquillizing effect
11	Shigru	Moringa oleifera	anti-inflammatory action, analgesic properties.
12	Shankhapushpi	Convolvulus pluricaulis	achieve Tranquillizing effect
13	Nirgundi.	Vitex negundo	anti-inflammatory action
14	Bhringraja.	Eclipta prostrata	anti-inflammatory action

The main locally available anesthetic medications have yet to be fully investigated, but efforts are ongoing. We use allopathic anesthetic drugs based on Ayurvedic principles because Ayurvedic herbomineral-chemical anesthetic is not readily available. Western surgeons have advanced quickly in the area of reducing severe postoperative pain. Since its introduction in the West in 1846, anesthesia has advanced rapidly. Since that time, many advancements and improvements have been made. On October 16, 1846, W.T.C. Morton of Boston, Massachusetts, administered ether for the first time at the Massachusetts General Hospital. There are some facts of introduction, dates, and discoveries in the field of anesthesia. (Table -3)

Table 3: Important Dates

S. No.	INTRODUCTION	BY	DATE
1.	I.P.P.V. endotracheal intubation		1910
2.	Portable ether inhaler	Clover.	1877
3.	Lumbar puncture	H.I. Quincke of Kiel in Germany and Essex Wynter in England	1891
4.	Successful spinal analgesia	Augustbier	1898
5.	Extradural caudal injections	Sicard	1901
6.	Barbiturate	Email Fischer and Van Mering of Munich	1903
7.	Laryngoscope, positive pressure respirators		1938 to 1943
8.	Short-acting muscle relaxant	Paton and Zaimis	1949
9.	'Neuroleptic analgesia'	De Castro and Mundeleer	1959
10.	Ketamine	Corssen and Domino	1970
11.	Critical Care Medicine		1970

3. AMERICAN SOCIETY OF ANAESTHESIOLOGIST GUIDELINES AND AYURVEDA

Ayurveda is regarded as complementary and alternative medicine in the United States (CAM). Herbs do not adhere to the same rules and standards as the pharmaceutical business because they are regarded as nutritional supplements. The use of herbal medications in the perioperative situation is extensively covered in the July 2001 issue of JAMA. [32] The American Society of Anaesthesiologists (ASA) noted the possibility of adverse reactions from herbal medications and advised patients to "stop taking all herbal medications two weeks before surgery." [33] For the benefit of patients, the ASA has also released a notice titled "What You Should Know About Herbal and Dietary Supplement Use and Anaesthesia." [34] Most preoperative exams are performed just a few days before the surgery, making it challenging to implement these suggestions. Since most preoperative exams take place just a few days before surgery, following this advice could be challenging. Some Ayurvedic preparations have been demonstrated to improve patient outcomes when used during the perioperative period. Therefore, the patient may not always benefit from the ASA's cautious approach. To make recommendations that are more focused, more scientific research is required. Few randomized, double-blind controlled trials are available to support the claim and investigate the possible risks of herbal medications. Overdose, contamination, or incorrect medicinal herb use can all have negative effects. There is a review article that gives a detailed summary of the regularly used ayurvedic medications, including Amla, curcumin, garlic, giloe, ginger, ginseng, guggul, and tulsi, and their properties and modes of action with beneficial effects on both contemporary sciences.[35] This means that the ASA's cautious decision to stop taking herbs two weeks before surgery cannot be justified. As a result, two weeks before surgery, anaesthesiologists avoid interacting with the patient. The majority of the time, ayurvedic remedies are regarded as secure. Guggul, amla, and giloe are a few cardioprotective herbs. Why should amla be stopped two weeks before surgery if statins may be used during the perioperative period and have shown to be effective in reducing all of the risk factors for myocardial ischemia, including hypercholesterolemia, inflammation, and immunity? Giloe, Tulsi, and turmeric have all been shown to improve wound healing. Giloe is also good for people with cirrhosis and obstructive jaundice. The ASA recommendations must therefore be changed in light of these clinical investigations. Many indigenous herbal medicines mentioned in Ayurvedic literature have previously undergone clinical trials on human patients as pre-anesthetic treatment, including Brahmi, Sankhapushpi, Mandukparni, and Jatamansi. The same Vacha (Acorus calamus), used in clinical trials as an Ayurvedic premedicant, has also been shown to be effective in treating nervous and mental diseases. It is because Vacha regulates raised body temperature, produces effective sedation, and may be helpful in patients with preexisting hyperthermia. It doesn't cause any respiratory depression or C.V.S. [36]A difficult notion in patient preoperative treatment is preoperative anxiety. Anxiety is a common side effect after elective surgery and is generally recognized as normal. So, treating preoperative anxiety becomes the responsibility of the anesthesiologist. Many medications have been used to treat preoperative anxiety, but none are without negative effects. Only a few medications described in Ayurvedic literature might be helpful and meet the current demand for premedication. When using dissociative anesthesia, the medicine Tagara (Valeriana jatamansi Jones) root is utilized as a premedication. It has been labeled as an analgesic, a sedative, an anticonvulsant, an anti-anxiety agent for stress and strain, and a central nervous system stimulant (vedanasathapana). [37] As a premedication for preoperative anxiety, tagara is compared to modern medicine. The evidence suggests that tagara has many anxiolytic qualities because it significantly lowers heart and respiration rates without changing blood pressure. There were no unfavorable consequences found. Therefore, Tagara, the trial drug, is a proven effective and safe premedication drug that can be used safely as a premedication agent before surgery, particularly when patients are anxious and apprehensive. [38]

4. THE CONCEPT OF PAIN IN AYURVEDA

Numerous names, including Ruk, Ruja, Vedana, and School, are frequently used in Ayurvedic writings to describe pain; nevertheless, School is perhaps the most appropriate term among all of them, as it is defined as the sensation of putting a nail into one's body [39]. Terms like School, Ruja, Vedana, and Ruk in the classical Ayurvedic literature Sushrut Samhita explain the condition of Pain. Similarly, Shoolprashaman & Vednasthapak Mahakashaya are listed in Charak Samhita Angmardprashaman (10 medications used to treat Body discomfort). [40,41]. It has also been explained that, among the Tridoshas, vitiated "Vata" is the primary culprit behind all painful ailments. [42] Both Dhatukshya janya Vata prakop and Margavarodh janya Vata prakop are examples of this vitiation of Vata. [43] Similar to this, the key contributors to the expression of pain are Vata's "Ruksha" and "Chala" Gunas (characters). Ayurvedic classification of pain specifically

examines the several varieties of schools that signify colic. The Sushrut Samhita categorizes school children into 13 groups based on where their visceral organs are located. According to Doshas, there are 16 different types of schools listed in Madhavnidan (8 types according to Doshas plus 8 types of Parinaam schools according to Doshas), 8 types in Yogratnakar, and 4 types in Kashyap Samhita. [44-48] Jalaukaavcharan (leech therapy), Lepa (medicated paste), Snehan (oleation), Vedhankarma (needle puncturing), Agnikarma (heat burn therapy), Bastikarma (enema) and Swedan (fomentation) are just a few of the treatment techniques listed in Ayurveda about pain management. This essay examined many methods for treating pain in depth, including their mode of action, how they affect the body, and their relevance today. [49] The Charak Samhita refers to ayurvedic remedies, including Angamarda, School Prashaman, and Vednasthapak Mahakashaya. Dhatukshaya and Margavrodhjanya vataprakop accept the Angamarda Mahakashaya as a treatment for angamarda (body ache). While Vednasthapak Mahakashaya has Kashaya Rasa and Sheeta virya can be utilized effectively in pain management owing to traumatic situations, Shoolprashamiya Mahakashay contains Ushan properties, which makes it excellent for stomach colic. Additionally, treatments for Udarshool include Ajmodadichurna, Shankhvati, Rasonadivati, Agnitundivati, Hingvadi churna, etc. Meanwhile, Guggul Rasna, Dashmool Haridra, Shallaki, Shuntthi, Rakta, Chandan, Ashwagandha, and Aam Vateshwar-Vatachintramani Rasa are effective treatments for various other painful conditions with varied prognosis. There are many analgesics available to manage pain following surgery. Ayurveda acharyas have cited four stages (Avasthas) of Madatyaya that are similar to anesthesia stages. Sushrutacharya used the Guru Bhojana, followed by the Madyapan pattern, to achieve the state of anesthesia. Gurubhojana can be considered a pre-anesthetic measure to ensure quick action (due to Nidra adhikya), and Madya is the anesthetic drug. Drugs are now used as pre-anesthetic medicine, and anesthetic drugs have replaced Madya. The muscle relaxant action expected from an anesthetic drug can be observed even when using a drug such as Afim or Madya (one of the signs of these drugs' third stage of action). However, every painkiller on the market has negative effects, and none can completely relieve post-operative pain. In a study, Shigru (moringa oleifera lam) seed was chosen as the control group to find an indigenous medication for post-operative pain. [50] This demonstrates the test drug Shigru in the form of Ghansatva possesses analgesic and anti-inflammatory qualities similar to those of the prescription drug Diclofenac sodium tablet. Furthermore, when administered as intended, Shigru had virtually no noticeable side effects and was nearly as effective as the control medicine.

5. DISCUSSION

Any surgery entails pain, and unless the surgeon can carry out his procedures without any discomfort, the patient will not tolerate the agony. To lessen the discomfort of the operation, Madya-wine [51] has been recommended by Acharya Sushruta. The study looked into the anesthetic effects of Bhang (Cannabis sativa), Vacha (Acorus Calamus), Jatamansi (Nardostyachya Jatamansi), Sarpagandha (Rauwolfia serpentina), and Parsik yavani (Hyoscyanus niger). All of these medications are well known for their analgesic and sedative effects. They also treat psychological disorders (Manasik vikar), such as Unmada, Attwabhinivesh, and Apasmar[52.] The technique of operation and removal of the diseased part had been used in the past. It is possible that they used anesthetic medicine before the operation. However, we do not have any direct references to this practice from the past. Texts from the Ayurvedic tradition. According to Sushruta, the patient should be given habituated hitakar ahar and strong wine.[53] Because of the wine, the patient will not feel any pain during the operation. Sushruta described the gunas of madya and vusha as laghu and ruksha, opposite to oja guna, so the patient progressed to the murcha stage[54]. Sura, Madira, and Asava are recommended in Charaka Samhita [55] to lessen pain during the delivery of the blocked fetus. Today, anesthesia is a rapidly expanding field of medical study. It has been shared in several sub-branches, such as pain management for critically ill patients and intensive care units. In Charaka and Madyenamohayitwa, references to sangnaapanayana dravyas may be found (Induce anesthesia with madya afore surgery). *Vatadosha* is the primary cause of *Vedna*, and Tagara aids in reducing it. Some terms such as Ruja, Shool, Ruk, and Vedana reveal the condition of Pain in the classical Ayurvedic text Sushrut Samhita. Similarly, Shoolprashaman and Vednasthapak Mahakashaya are mentioned in Charak Samhita Angmardprashaman (10 drugs used to treat body aches). [56.] This article elaborates on various Ayurvedic treatment modalities for pain management. Additionally, Vatadosha can be controlled by Snigdha Guna, which Tagara possesses.[57] Vatadosha, one of the main factors in the pathophysiology of Chittodvega, is controlled by Tagara. Kashaya, Tikta, and Katu Rasas are all owned by Tagara, along with Snigdha Gun .[58]With the exception of one or two instances like this, an Ayurvedic surgeon performed all surgeries while holding the patient either by himself or with the assistance of four or five attendants. Due to this gap, ayurvedic surgeons perform surgery with the care of anesthesia. Although certain Ayurvedic scholars have shown evidence that local anesthesia with Tagara and spinal anesthesia with sarapunkha may be produced, these remedies still need to be improved or commercialized. The vitiated Vata Dosha must be corrected as the primary goal of palliative care *(Shaman Chikitsa)*. Furthermore, Madhur, Amla, and Lavan Rasa (taste) herbs are advised to alleviate this Vata imbalance and pain. [59] Understanding the receptors on cells mediating taste and pain will help better understand this idea. G-Protein Coupled Receptors function as emotional pain signaling devices. [60] In a nutshell, the GPCR's role in taste and pain mitigation helps to explain how Madhur, Amla, and Lavan Rasa are used to treat pain. [61] It would be a major advance for Ayurvedic surgery if someone took on this topic and discovered local and general anesthesia and Ayurvedic principles.

6. CONCLUSION

In emergencies like Baddhgudodara (intestinal obstruction), Chhidrodara (intestinal perforation), Ashmari (urolithiasis), Sadyo Vrana (traumatic wound), etc., Acharya Sushruta was the world's first surgeon to perform complicated surgery. These procedures are still performed today with some improvements. The concept of anesthesia, which has made surgery less painful and easier, must have been used in every procedure carried out in the past. It is still difficult for Ayurvedic surgeons to obtain a reliable anesthetic for usage during surgery. The Ayurvedic medications discussed here have only been used to relieve postoperative pain, induce tranquility following surgery, and manage postoperative

discomfort. The hunt for an effective Ayurvedic anesthetic drug should be pursued vigorously by scientists and researchers.

7. AUTHORS CONTRIBUTION STATEMENT

Dr. Shivam Sharma has made a substantial contribution to the concept of the article and its need also analysis and interpretation of data for the article. Dr. Shivam Sharma has Drafted the article and revised it critically for important intellectual content. Dr. Sheetal Asutkar has reviewed and approved the final version of the manuscript. Both Of authors agreed to be accountable for all aspects of the work in ensuring that questions related to the integrity of any part of the work are appropriately investigated and resolved.

8. CONFLICT OF INTEREST

Conflict of interest declared none.

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