ORIGINAL ARTICLE e-ISSN: 2349-0659 p-ISSN; 2350-0964

Management of Complex Trans sphincteric Fistula in Ano with Distal Fistulectomy with Proximal Staged Fistulotomy using *Ksharasutra*: A Case Study

Esha Ebrahim*, Y. R. Meghani, Tukram Dudhamal

Abstract

According to *Sushruta Samhita*, *Bhagandar* is one of the *Ashta Mahagada*. Because of its recurrent nature, this condition is more challenging to cure. *Ksharasutra* has already demonstrated efficacy in treating fistula-in-Ano. In this case report, a 42-year-old male patient had complaints of pain at the perianal region, boil at the perianal region with pus discharge for 1 year. On examination, external opening is present at 3 o' clock position, and an internal opening is at 6 o'clock position. Induration palpated from 3 to 6 o' clock position. Transrectal ultrasonography (TRUS) revealed trans-sphincteric fistula-in-ano. Patient underwent partial fistulectomy with *ksharasutra* application under sadal block. After 2 weeks, two *Ksharasutra* placed in external fistulous tracts were removed when the track got healthy, and the one connected with the external opening was changed weekly once by the railroad method. Within 7 weeks, the wound was healed completely and without any recurrence.

Keywords: Ayurvedic management, *Bhagandar*, Fistula in Ano, *Ksharsutra*, Post-operative dressing

Asian Pac. J. Health Sci., (2025); DOI: 10.21276/apjhs.2025.12.3.06

Introduction

A fistula-in-ano is a chronic abnormal communication extending from the anorectal lumen to an external opening on the skin of the perineum or buttock.[1] It is considered a distressing disease entity due to its poor quality of life and propensity to recur after therapy.[2] Males are more likely to be affected, with a prevalence rate of 12.3/1,00,000 than females who have a rate of 5.6/1,00,000.[3] The primary cause of anal fistula is believed to be due to cryptoglandular infection.[4] Sedentary lifestyle, obesity, diabetes, smoking, and hyperlipidemia can all arise the likelihood of fistula.[2] Intermittent or continuous pus drainage, itching, discomfort, painful boil in the perianal region are the common presentation of fistula-in-ano.[5]

Under the title of *Bhagandara*, *Acharya* Susruta detailed fistula-in-Ano, including its types, symptoms, and treatment.[6] *Susruta* described *Bheshaja, Kshara,* and *Sastrakarma and agnikarma* in *Bhagandara* chikitsa.[7] *Kshara* is regarded as one of the most crucial parasurgical procedure because it can create excision, incision, scraping, and also pacify *Tridosa*.[8] *Susruta* addressed *Ksharasutra* in the context of *Nadivrana* treatment,[9] and chakrapani described how it was made.[10] *Ksharasutra* causes the fistula tract to cut and heal chemically and mechanically.[5]

Fistulectomy patients in complex fistula in ano experience longer hospital stays and wound healing times due to increased post-operative pain. It is because of more extensive tissue dissection and larger raw area left after fistula removal.[11] Also, conventional lay open technique often requires sacrificing some or whole part of sphincter muscle, which lead to impaired anal continence.[5] All these drawbacks can reduce by *ksharasutra* procedure, which involves threading a medicated seton through the fistulous tract, which induces scarring and closure of the tract after drainage.[12]

Even though *ksharasutra* therapy shows less recurrence of fistula, it takes a long time to cut the entire fistula tract, and the patient feels increased pain and burning sensation due to greater tissue exposure.[4] In this case, a modified way of *ksharasutra* procedure was done after distal fistulectomy.

Department of Shalya Tantra, Institute of Teaching and Research in Ayurveda, Jamnagar, Gujarat, India.

Corresponding Author: Esha Ebrahim, Third Year PG Scholar, Department of Shalya Tantra, Institute of Teaching and Research in Ayurveda, Opposite B Division Police Station Jamnagar-361008, Gujarat, India. E-mail: eshaebrahim96@gmail.com

How to cite this article: Ebrahim E, Meghani YR, Dudhamal T. Management of Complex Trans sphincteric Fistula in Ano with Distal Fistulectomy with Proximal Staged Fistulotomy using *Ksharasutra*: A Case Study. Asian Pac. J. Health Sci., 2025;12(3):29-33.

Source of support: Nil.

Conflicts of interest: None.

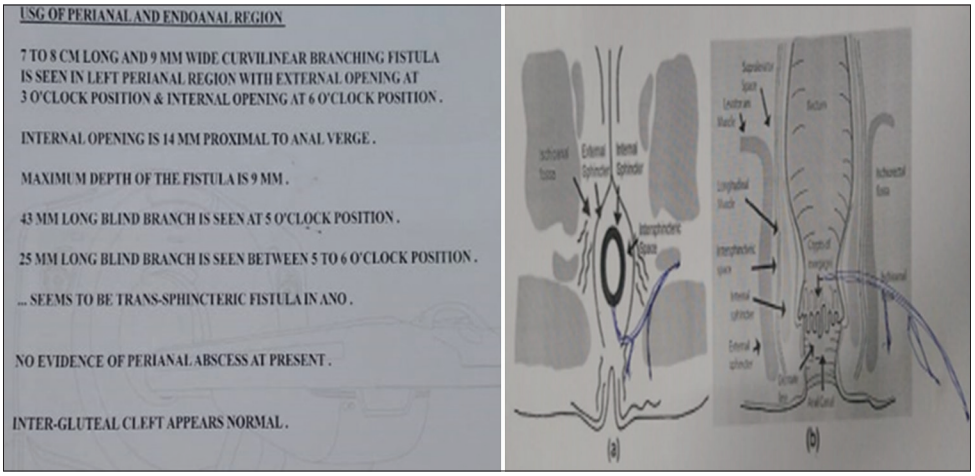
Received: 22/02/2025 **Revised:** 01/03/2025 **Accepted:** 16/04/2025

Patient-Particular

A 42-year-old male patient with complaints of a boil in the left perianal region associated with perianal pain and pus discharge for 1 year came to Shalya Tantra Opd. There was no history of perianal abscess drainage. He also had no history of any comorbidity, no any surgical or accidental history. There is no relevant family history.

Diagnostic Criteria

On inspection, the external opening is present at 3 o'clock position. On palpation, induration and tenderness present at 3–6 o'clock position. On per rectal examination, an internal opening is present at 6 o'clock position, just above the dentate line with mild induration and fibrosis. The external opening was located more than 3 cm from the anal verge, and its tract connected to the anal canal at the posterior midline, which perfectly adhering to Goodsall's rule.[13] The findings of TRUS, suggestive of trans-sphincteric fistula-in-Ano [Figure 1]. This condition can be considered as grade 3 according to the St James Niversit classification.[14] Hence, the patient was advised to admit to Shalya Tantra IPD for further management.


USG OF PERIANAL AND ENDOANAL REGION

7 TO 8 CM LONG AND 9 MM WIDE CURVILINEAR BRANCHING FISTULA IS SEEN IN LEFT PERIANAL REGION WITH EXTERNAL OPENING AT 3 O'CLOCK POSITION & INTERNAL OPENING AT 6 O'CLOCK POSITION.

INTERNAL OPENING IS 14 MM PROXIMAL TO ANAL VERGE.

MAXIMUM DEPTH OF THE FISTULA IS 9 MM.

43 MM LONG BLIND BRANCH IS SEEN AT 5 O'CLOCK POSITION.

25 MM LONG BLIND BRANCH IS SEEN BETWEEN 5 TO 6 O'CLOCK POSITION.

... SEEMS TO BE TRANS-SPHINCTERIC FISTULA IN ANO.

NO EVIDENCE OF PERIANAL ABSCESS AT PRESENT.

INTER-GLUTEAL CLEFT APPEARS NORMAL.

Figure 1: TRUS (16 March 2024)

Methodology

Pre-operative

Informed written consent of the patient and his relatives was taken prior to the procedure. Injection Tetanus Toxoid 0.5 mL intramuscular was given and Inj. Xylocaine intradermal sensitivity test was done. Patient was kept NBM (Nill by mouth) for 6 h before surgery. Part preparation was done, and a proctoclysis enema was given 2 h prior to surgery. All preoperative measures were adopted as per routine case of perianal surgery.

Operative

The patient was taken to the operation theatre with stable vitals. Sadal block given with injection ropivacaine 10mg in a sitting position followed by lithotomy position. Painting with 10% betadine solution followed by draping with sterile cut-sheet [Figure 2]. To confirm the internal opening, a patency test was done with diluted hydrogen peroxide solution through external opening at 3 o'clock which not come out through the internal opening at 6 o'clock. A long metallic malleable probe with an eye was introduced through the external opening at 3 o'clock which passes through the blind track at 5 o'clock, which is 4 cm away from the external opening, and an incision was made to bring the tip of the probe outside. Another long metallic malleable probe with an eye was introduced through the internal opening at 6 o'clock and attempted to bring the tip of probe at anal verge posteriorly, at the tip of probe 3–4 cm vertical midline transanal incision made extending 2 cm distal to anal verge. After that, all the secondary tracts were widened, and unhealthy granulation tissues were scooped out. One more probe was placed from the external opening at 3 o'clock, and window made at 6 o'clock. The eye of all probes was gently withdrawn, so the tracts were threaded with medicated *Ksharasutra* [Figure 3]. Two externo-external and one externo-internal *Ksharasutra* were placed. Proper haemostasis was achieved and the wound was packed with gauze pieces soaked with betadine solution.

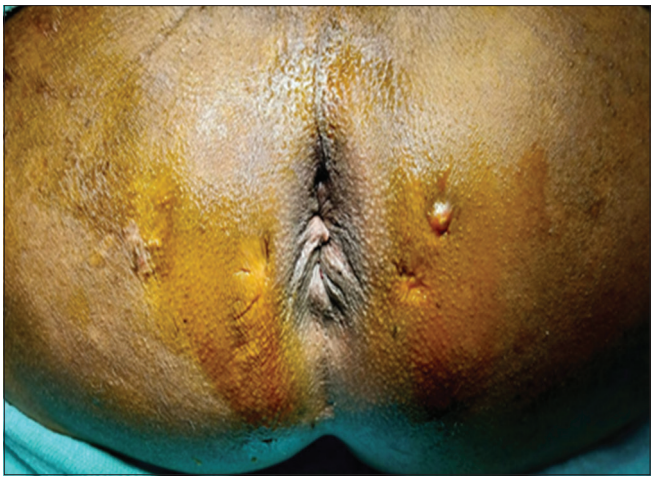


Figure 2: Pre-operative image

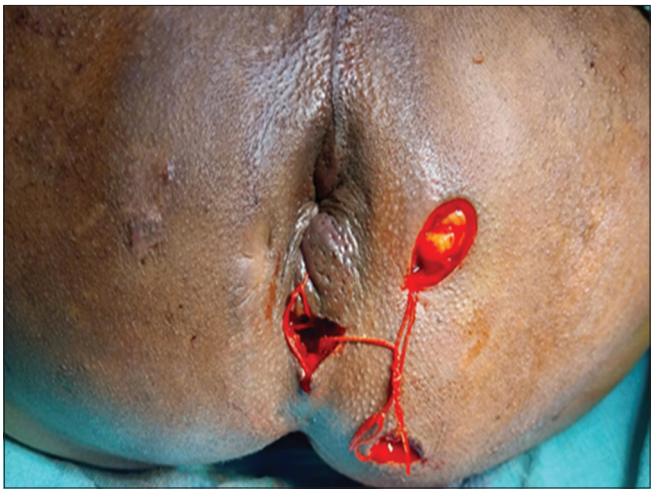


Figure 3: Post-operative image

Post-operative

The patient received antibiotic treatment. He was advised to take a daily sitz bath with *Panchavalkal Kwath* followed by aseptic dressing with *Panchavalkal Malhar* and orally 2 tablets of *Triphala Guggulu* thrice in a day with lukewarm water after meal for 2 months. *Ksharasutra* was changed by weekly interval by the railroad technique [Table 1].

Table 1: Timeline

Date	*Procedure*	*Medication*
March 16 2024	Patient visited Shalya Tantra OPD, TRUS done	Orally 1 g *Triphala Guggulu* thrice in a day with lukewarm water after meal
March 18 2024	Patient admitted in IPD for further management Hematological and bio-chemical investigations- Normal.	
March 21 2024	Distal transanal fistulectomy with proximal staged fistulotomy using *Ksharsutra* done under sadal block	
1st post-operative day [Figure 4]	Wound was cleaned with *Panchvalakal Kwath* and packed with *Panchavalkal Malhara*.	3 *Ksharasutra* present 6–6 o'clock- externo internal 3–6 o'clock externo-internal 3–5 o'clock (external-external)
8th post-operative day [Figure 5]	Wound was healthy, 1 to 2 drops of pus were present on milking from the external opening at 6 and 5 o'clock	3 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal) - 5 cm 3–6 o'clock - 8 cm 3–5 o'clock - 10 cm
16st post-operative day	Wound was healthy, 1 to 2 drops of pus were present on milking from the external opening at 6 o'clock	1 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal)-4.2 cm Externo-external 2 KS removed and tracts were flushed with NS
24st post-operative day	The wound was healthy.	1 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal) - 3.6 cm All secondary tracts were flushed with NS
32st post-operative day	Wound was healthy.	1 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal) - 3 cm
40st post-operative day [Figure 6]	Wound was healthy.	1 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal) - 2.4 cm
48st post-operative day	Wound was healthy.	1 *Ksharsutra* changed 6 o'clock to 6 o'clock (externo internal) - 1.2 cm (cut through)
54st post-operative day	Wound healed completely.	
After 6 month of complete healing follow-up	Minimal scar mark present. No any sign and symptom of recurrence.	

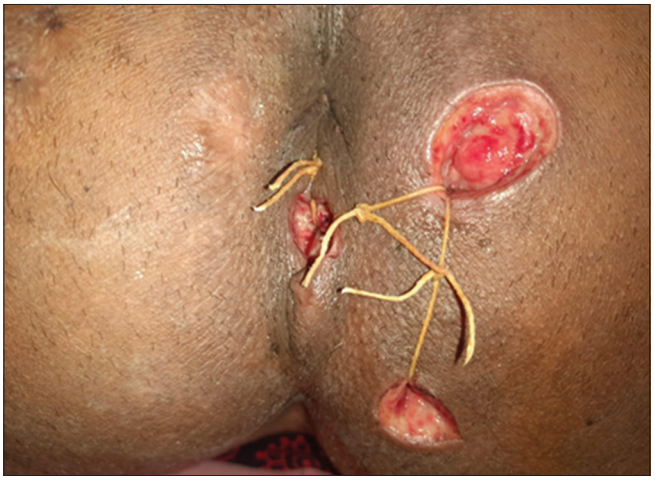


Figure 4: Post-operative day 01

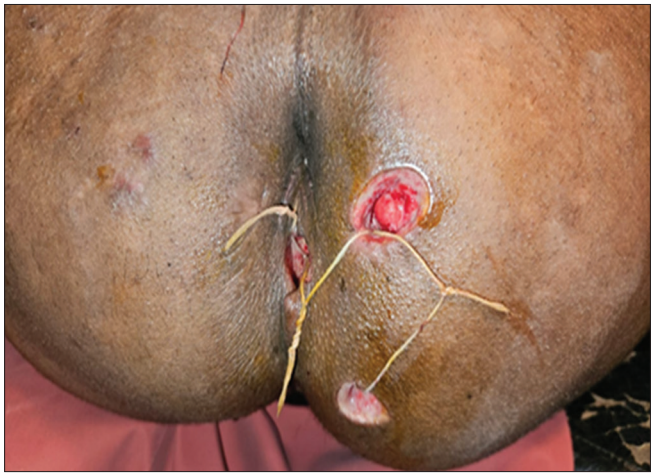


Figure 5: Post-operative day 08

Result

The postoperative wound, initially showing slough, progressed to healthy granulation tissue within 7 days with regular dressing [Figures 4 and 5]. By day 40, the wound showed substantial healing, with most areas closed except the 6 o'clock perianal region [Figure 6]. The fistula track was cut through within 48 days and the wound healed completely with minimum scar within 54 days, with no recurrence at follow up [Figure 7]. The Unit Cutting Time for Ksharasutra in this case was 9.6 days/cm. (UCT = Total number of days taken to cut through the tract/Initial length of the tract in cm).

Discussion

Anal fistulas are a frequent condition that can be devastating for patients and provide challenges for surgeon. A significant portion of these conditions worsen or recur when the appropriate surgical technique is not used. To address these challenges, this case report presents an integrated approach combining modern and ayurveda utilising *Ksharasutra*.

Despite having no intraoperative issues and a low rate of recurrence and incontinence, *ksharasutra* therapy has more post-operative problems, such as post-operative pain and burning sensation, long hospital stays, and causes a great deal of trouble for

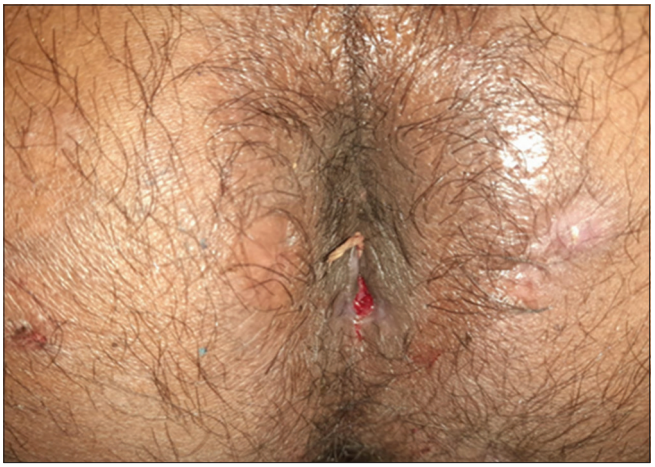


Figure 6: Post-operative day 40

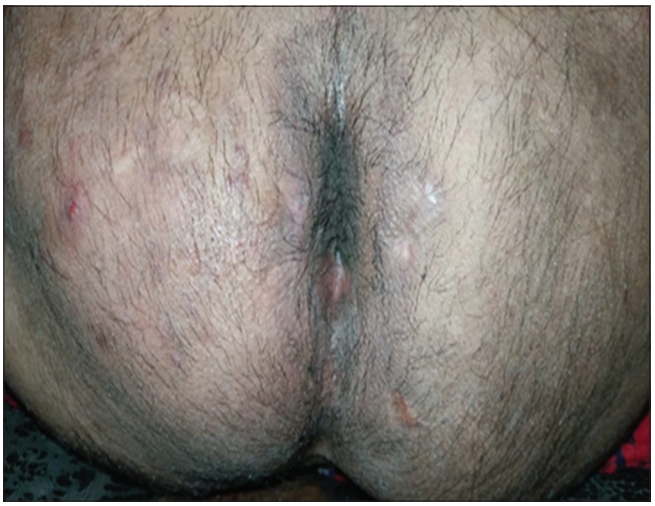


Figure 7: Post-operative day 84

the patient.[15] These challenges associated with *Ksharasutra* therapy can be mitigated by making minor adjustments to the treatment technique and ensuring consistent, proper wound dressing and care.

There are so many modified ksharasutra techniques, such as Interception of fistulous tract and application of ksharasutra (IFTAK) are used for fistula management. In IFTAK technique, there was less duration of therapy due to shortening of original length of track and only taking care of crypto glandular infection by providing proper drainage of pus by placing *ksharasutra* up to wound made near to posterior midline of anal verge. However, this method shows recurrence sometimes as the residual fistulous track was left untreated.[4] In this case, one *Ksharasutra* from 3 0′ clock to 5 o′ clock external opening and another *Ksharasutra* from 3 o'clock external opening to 6 o′ clock window was kept for drainage purpose. When drainage was ceased, both these *Ksharasutra* were removed from the track. To ensure complete healing and prevent recurrence, daily flushing of the tracts was continued until they collapsed. This approach led to rapid recovery and a successful outcome, with no recurrence of the condition.

The *Ksharsutra* was changed after every 7 days till the cut through of tract with complete healing was achieved. *Ksharsutra* will also act as seton to ensures complete drainage of pus collection. Medicine in *Ksharasutra* also facilitates the removal of unhealthy tissues that remain after debridement during the surgical procedure. As the heated metallic wire passes through the ice block simultaneously cuts through the ice and fills the resulting cavity, likewise, the *Ksharasutra* leads to cutting and healing of the tract at the same time, which create a small open wound and less discomfort to the patient.[12] Patient was followed for 6 months after the wound get healed and there was no any sign of recurrence. It indicates the efficacy of the integrated approach with *Ksharasutra* in the management of such complex fistula.

Triphala Guggulu has properties like anti-inflammatory, analgesic, and antibiotic which might have effect in proper healings.[16] *Panchvalkal Kwatha* was given for a sitz bath having predominantly of *Kashaya Rasa*. Hence, it helps in *Vrana Shodhana* and *Vrana Ropana*.[17] It also helps to maintain local hygiene of the perianal region, thus it prevents the chances of secondary infection. *Panchavalkal Malahar* having predominantly of *Kashaya Rasa* that helps to reduce the amount of exudates, and it acts with *Ropana* (healing) and *Shodhana* (cleansing) property.[18] By the property of *Vranaropan,* it helps to accelerate the wound healing.

There is a social stigma associated with anorectal disorders, which often makes the treatment delayed. Early diagnosis is also essential for its complete cure. This is also mandatory for avoiding complications.

Conclusion

These results suggest that the Ayurveda can provide minimal invasive management in fistula-in-ano, which helps in the improvement of the quality of life of patients with no recurrence and any complications. While this case report demonstrates promising results, further research and analysis of multiple cases are necessary to scientifically validate this method.

Patient Consent

Consent was taken from the patient before starting the treatment protocol as well as prior to publication of the case details and pictures without disclosing the personal identity.

Acknowledgments

Not Applicable.

References

1. O'Connell PR, McCaskie AW, Sayers RD. Bailey and Love's Short Practice of Surgery. 28th ed., Ch 80. Boca Raton: CRC Press, Taylor and Francis Group; 2023. p. 1436.
2. Ghosh NK, Kumar A. Chronic fistula in Ano associated with adenocarcinoma: A case report with a review of the literature. Ann Coloproctol 2024;40 Suppl 1:S1-5.
3. Carr S, Velasco AL. Fistula-in-Ano. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2025.
4. Sherkhane R, Meena P, Hanifa N, Mahanta VD, Gupta SK. IFTAK technique: An advanced Ksharsutra technique for management of fistula in Ano. J Ayurveda Integr Med 2021;12:161-4.
5. Jimenez M, Mandava N. Anorectal fistula. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2025.
6. Srikantha Murthy KR. Sushruta Samhita. Nidan Sthan. Ch. 4. Varanasi: Chaukhamba Orientalia; 2017.
7. Srikantha Murthy KR. Sushruta Samhita. Chikitsa Sthan. Ch. 8. Varanasi: Chaukhamba Orientalia; 2017.

8. Srikantha Murthy KR. Sushruta Samhita. Sutra Sthan. Ch. 11., Sloka. 3. Varanasi: Chaukhamba Orientalia; 2017.
9. Srikantha Murthy KR. Sushruta Samhita. Sutra Sthan. Ch. 17., Sloka 29. Varanasi: Chaukhamba Orientalia; 2017.
10. Sharma PV. Chakradutta. Vol. 2. Varanasi: Chaukhamba Sanskrit Sansthan; 2007. p. 87.
11. Hiremath SC, Patil R. Fistulotomy versus fistulectomy for fistula-in-Ano: A randomized prospective study. Surg J (N Y) 2022;8:e336-40.
12. Hariprasad CP, Kumar A, Kumar M, Kumar M, Paswan SS, Rohit G, *et al*. The efficacy of ksharsutra, fistulectomy and ligation of intersphincteric fistula tract (LIFT) procedure in management of Fistula in ano a prospective observational study. BMC Surg 2023;23:70.
13. Das S. A Concise Text Book of Surgery. 6th ed., Ch. 46. Calcutta: Dr.S.Das; 2010. p. 956.
14. Garg P. Assessing validity of existing fistula-in-ano classifications in a cohort of 848 operated and MRI-assessed anal fistula patients - cohort study. Ann Med Surg (Lond) 2020;59:122-6.
15. Kumar A, Sharma A, Gupta SJ, Verma A. Complex Anal fistula treated with IFTAK (Interception of fistulous track with application of ksharsutra) technique- A case report. J Ayurveda Integr Med 2023;14:100686.
16. Mishra SN, editor. Commentary Siddhiprada on Bhaishajya Ratnavali. Ch. 47., Ver. 49. Varanasi: Chaukhambha Surbharati Prakashan; 2016. p. 824.
17. Dhurve VA, Dudhamal TS. Formulations of panchavalkala as vrana shodhana and vrana ropana: A brief review. Indian J Ancien Med Yog 2020;13:17-22.
18. Bhavamishra S. Bhavprakasha, Poorva Khanda. In: Mishra SB, Vaishya SR, editors. Mishraprakaranam, 6/202. 8th ed., Vol. 1. Varanasi: Chaukhambha Sanskrit Bhawan; 2012. p. 189.

Copyright and Permission Statement