

## To explore the role of Guda Tvak Sandhan with Special reference to Gandakarna type of Sandhan Karma in Anal Stenosis: A Single case Study

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Date of Submission: 04-02-2026

Date of Acceptance: 14-02-2026

### ABSTRACT

**INTRODUCTION:** Anal stenosis is the narrowing of the anal canal result from either an acquired and congenital cause. While postoperative and idiopathic causes are more common, chemically induced anal stenosis following the application of traditional medicine for hemorrhoids is rare but of severe form. In modern era of surgical practice, anoplasty is employed to release stenosis and reconstruct the anal canal using local or regional flaps. ĀcāryaSuśruta, the father of plastic surgery has vividly described Sandhāna Karma, among which the Gandakarna type of Sandhāna karma which is identical with Rhomboid anoplasty of conventional system of medicine.

**OBJECTIVE-** To find out new modalities of treatment for anal stenosis based on the principles of Sushruta Samhita.

**METHODOLOGY:** A 34 year old gentleman who presented with a six month history of progressive difficulty in passing feces and flatus with abdominal distension. Notably, he had undergone traditional medicine application for hemorrhoidal treatment seven months prior, which initially resulted in ulceration and subsequently healed with scarring. The surgical technique was evaluated in the light of Suśruta's Gandakarna Sandhāna Vidhi, where tissue from adjacent healthy areas is mobilized and transposed to repair the defect. Postoperative wound healing and functional outcomes were assessed in terms of Śodhana, Ropaṇa and Sandhāna.

**RESULT:** The patient showed satisfactory wound healing, increased anal caliber and painless defecation within six weeks. The reconstructive method employed in anoplasty closely resembled the principle of Gandakarna i.e. utilizing a pedicled adjacent tissue flap for functional and anatomical restoration.

**DISCUSSION AND CONCLUSION:** Guda-tvakSandhāna serves as a practical clinical extension of Suśruta's Gandakarna Sandhāna Karma, demonstrating the timeless relevance of Ayurvedic

reconstructive principles. This case highlights how integration of classical surgical wisdom with modern anoplasty can optimize outcomes in complex anorectal disorders.

**Key words:** Guda-tvakSandhāna, Anoplasty, Gandakarna, Anal stenosis, Reconstructive surgery.

### I. INTRODUCTION

Anal stenosis or anal stricture is an uncommon but debilitating anorectal disorder characterized by abnormal narrowing of the anal canal. It manifests clinically as painful defecation, constipation, narrowed stool, tenesmus, abdominal bloating and in severe cases, obstructed defecation. Etiologically, anal stenosis may be classified into congenital, iatrogenic (post op haemorrhoidectomy, post op fissurectomy), traumatic, infectious, inflammatory, and chemical causes. Diagnosis mostly clinical and can be done with digital rectal examination (DRE), barium enema, sigmoidoscopy and Colonoscopy. Conservative management includes Dietary Changes like increasing fibre intake, green vegetables, staying hydrated, Stool Softeners and Laxatives. Mild to moderate cases treated with anal dilatation with a finger, dilator or balloon. While in severe cases Sphincterotomy, surgical excision remains the most frequent and chemically induced stenosis is occasionally reported. Anoplasty is the gold standard treatment for moderate-to-severe stenosis, involving excision of fibrotic tissue and mobilization of adjacent healthy tissue flaps to reconstruct the anal canal. Techniques such as rhomboid flap anoplasty, V-Y advancement flaps are routinely used. Stapling procedures using linear or circular staplers can be employed to excise and reconstruct the narrowed area. If left untreated, stenosis can lead to several complications like fecal impaction, chronic pain, infection, anal fissures, fecal incontinence. Ācārya Suśruta, father of plastic surgery described medical as well as surgical management for Sanniruddha Guda Sandhāna

*Karma* as one of the surgical principles in wound management in relation to SastiUpakrama. Specifically, the *Ganda-Karna* type of Sandhāna Karma (out of 15 types of Sandhan vidhi) where tissue from adjacent regions is mobilized and transposed to close defects which is resemble to rhomboid flap anoplasty. The present case illustrates how chemically induced anal stenosis can be effectively treated with rhomboid anoplasty, highlighting parallence with Suśruta's Gandha Karma type of *Sandhāna Vidhi*.

## II. METHODOLOGY

### Case Report

A 34-year-old male from Kokrajhar presented with complaints of progressive constipation, difficulty in passing faecal material & flatus, and abdominal distension for six months. History revealed that seven months prior, he had

applied traditional herbal cauterizing medicine locally for haemorrhoids without any documentation. This caused painful ulceration, which healed with scarring and resulted in progressive narrowing of the anal canal. There is no history of diabetes mellitus, Hypertension as well as other systemic diseases.

### Clinical Examination

**Inspection:** Perianal area revealed post-inflammatory scarring with narrowing of the anal verge.

**Digital rectal examination (DRE):** demonstrated a constricted lumen with fibrous tissues / bands, preventing index finger introduction. Only a small calibre tube of less than 5 mm can be passed through anus.

**Proctoscopy:** was not possible due to severe narrowing.

**Diagnosis:** *Sannirudhha Guda* (Anal Stenosis)

### Investigation

TC	8300/cumm
ESR	20mm(after 1hr)
Blood sugar f & PP	110mg/dl and 140mg/dl
Blood Urea	20 mg/dl
Serum creatinine	1.2 mg/dl
BT	2 min 30 sec
CT	5 min 45 sec
Viral Profile(HIV,HBsAg, Anti HCV)	Negative
Serum Bilirubin	0.9 mg/dl
TSH	4.9 uIU/ml
ECG	WNL
CXRPA	WNL

### SURGICAL PROCEDURE

#### Pre operative Management

Nill by Mouth 8 hours before surgery

Inj Tetanus toxoid 0.5 ml

Part preparation

Neotonic enema

Prophylactic antibiotic and proton pump inhibitor

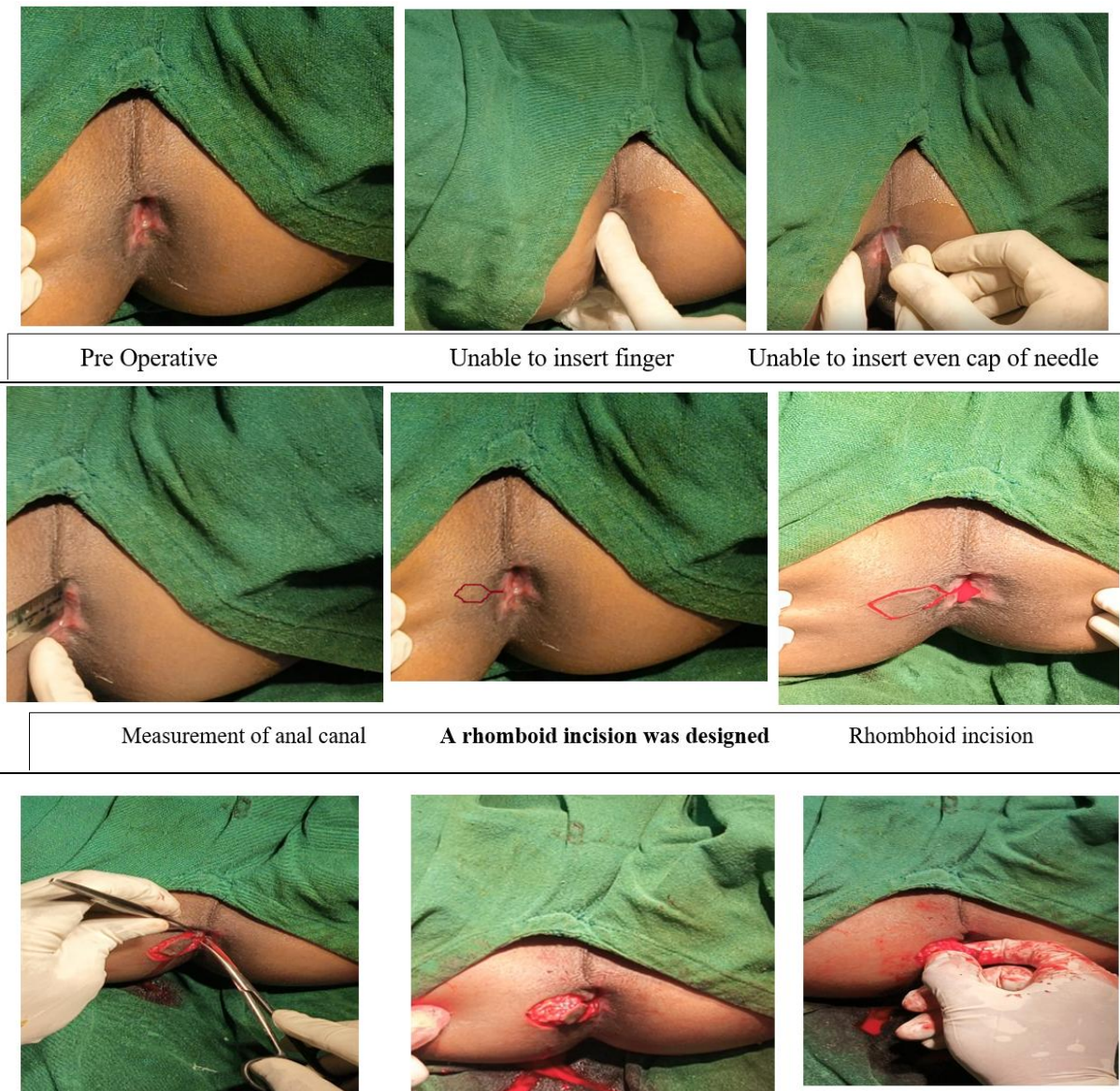
#### OPERATIVE PROCEDURE

Informed consent was taken. Under spinal anaesthesia, the patient was placed in the lithotomy position, painted and draped following standard aseptic protocols. Examination findings were

confirmed, the anal canal was severely stenosed, not allowing even the examiner's little finger. Pre-operative marking of the anal opening was done, which measured 1 cm in diameter. The patient underwent Gandhkarma type of Sandhan karma. A rhomboid incision was designed. A horizontal incision was made at the 9 o'clock position, extending from the distal to the proximal extent of the circumferential scar, approximately 2-3 mm distal to the dentate line. A hexagon-shaped house advancement flap was designed, ensuring the flap length was twice its base width and adjacent healthy perianal tissue was mobilized to create a flap. Vrana

chedana Śodhana (excision of fibrotic tissue) at the anal verge was done and the flap was meticulously developed to preserve vascular integrity. Sandhan (rotation) was done into the anal defect, ensuring preservation of vascularity. The flap base was sutured to the rectal mucosa using 2-0 absorbable polyglactin 910 sutures, while its lateral edges were secured to the anoderm and perineal skin and wound closure was achieved without undue tension. The

distal wound beyond the apex of the flap and skin closure of incisions beyond the apex was also closed by 2-0 absorbable polyglactin 910. The diameter of the anal opening increased up to the index finger loose. A significant increase in the size of the anal opening was noted post-operatively, compared to the pre-operative diameter. Dressing was done Panchvalkal patch and bandaging done.





Sodhana of Fibrotic tissue



Gandhakarna flap



Tension free Flap



After releasing fibrotic tissue



Sandhan of Guda Twak with rectal mucosa



Sandhan of lateral edges



Application of Panchavalkal patch



Compilation of procedure with instrument





Day 2 Post Op Gandhakarna



Day 4 Post Op Gandhakarna



Day 6 Post Op Gandhakarna



Day 7 Post Op Gandhakarna



Day 6 Post Op Gandhakarna



Day 15 Post Op Gandhakarna



Day 15 Post Op dilatation with little finger



Day 15 Post Op dilatation with index finger



After 1 month easy induction of index finger



After 1 month – wound heal

### Postoperative Care

- Standard post operative procedure followed as per protocol and in accordance with the need of spinal anaesthesia.
- Sitz baths with lukewarm water advised for local hygiene.
- Liquid-to-soft diet maintained for 1 week.
- TriphalaChurna
- Regular wound inspections and dressing changes were performed with Panchavalkal Patch.

### III. RESULTS

Wound healing was uneventful. By the end of the 1st week, the patient reported painless defecation with soft stools. By the end of 2 weeks, all symptoms had improved, and the patient was advised to perform anal canal dilation twice daily with **Jatyadi Taila**. By the 4th week, the anal caliber had increased significantly, allowing normal passage of feces without straining. No evidence of flap necrosis or wound dehiscence was observed. Functional satisfaction was high, with relief of abdominal distension and return to daily activities.

### IV. DISCUSSION

Anal stenosis is a complex condition with profound implications for quality of life. While surgical excision is a common cause, the present case demonstrates a less frequent etiology—chemical injury from traditional medication. Scar tissue contraction following ulceration is the key pathological mechanism. This case highlights the convergence of ancient Ayurvedic surgical wisdom with modern reconstructive techniques. *Sanniruddha Guda* (anal stenosis) described by Suśruta corresponds to anal stenosis of current medical practice. Suśruta advocated *Śastra Karma* (surgical intervention) for severe cases, followed by

*Śodhana* and *Ropana* measures with medicated ghrtas and oils.

The GandakarnaSandhāna Karma, in which tissues from adjacent areas are transposed for closure, is conceptually identical to the rhomboid anoplasty performed in modern surgery. This demonstrates the foresight of ĀcāryaSuśruta in plastic and reconstructive surgery. Rhomboid anoplasty remains a reliable technique for severe cases, as it provides both anatomical correction and functional relief. Its design allows tension-free closure with preserved vascularity, minimizing recurrence.

Integration of classical Ayurvedic principles into modern surgical practice may optimize outcomes, reduce recurrence, and support holistic recovery.

### V. CONCLUSION

Suśruta's *Guda-tvakSandhāna* principles provide a time-tested foundation for reconstructive anorectal surgery. GandakarnaSandhāna Karma aligns with rhomboid anoplasty and demonstrates the classical relevance of Ayurvedic surgical wisdom. This case validates the efficacy of blending traditional principles with modern techniques in managing complex anorectal disorders like anal stenosis.

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