Effect of *Anutaila Pichu* in pain management in post operative patients of Fissure in Ano: A randomized controlled trial

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ABSTRACT

Postoperative pain in anorectal conditions is often severe and is described in Ayurveda as Shastrapatanat Vedana, primarily arising from Vata aggravation. Traditional management advocates Anutaila Parisheka, but for improved retention and patient comfort, the method has been adapted into Anutaila Pichu, involving localized instillation of medicated oil into the anal canal. This randomized controlled trial evaluated the analgesic efficacy of Anutaila Pichu compared with standard postoperative care using Xylocaine jelly in surgically managed fissure-in-Ano (Parikartika). Eighty-eight postoperative patients were randomly assigned to two equal groups: Group A received Anutaila Pichu, and Group B received Xylocaine jelly. Pain intensity was measured using the Visual Analogue Scale, and anal spasm was assessed clinically on days 0, 3, and 7.

Both groups showed an initial slight increase in pain at 4 hours post-anaesthesia, followed by a consistent decrease thereafter. By day 7, pain reduction exceeded 93% in both groups (93.18% in Group A; 94.13% in Group B). Anal spasm resolved completely in all patients by day 7. Intergroup comparison revealed no statistically significant difference in overall outcomes.

The findings indicate that Anutaila Pichu is nearly effective as Xylocaine jelly for postoperative management of fissure-in-Ano. In addition, Anutaila Pichu provided enhanced comfort, ease of application, and holistic benefits associated with its Vata-shamaka and Vedanasthapana properties. Thus, it may serve as a safe, effective, and economical alternative in postoperative care.

Keywords: Anutaila Pichu; fissure-in-Ano; postoperative pain; Vata-shamaka; anal spasm

INTRODUCTION

Pain is one of the most common and distressing clinical symptoms, serving as an essential protective response to tissue injury. Postoperative pain [1], particularly after anorectal surgery, remains a significant challenge and may impair recovery, prolong hospitalization, and reduce patient satisfaction. Fissure-in-Ano [2], a linear tear in the anoderm, is frequently associated with intense pain during defecation, and postoperative discomfort is often exacerbated by anal sphincter spasm and inflammation. Despite the availability of modern analgesics, the management of postoperative pain is often inadequate due to limited duration of action and potential adverse effects.

Ayurveda attributes pain Vedana [3] primarily to Vata vitiation. Classical texts, including the *Sushruta Samhita*, describe postoperative pain as *Shastrapatanat Vedana* [4] and recommend *Anutaila Parisheka* [5] for its relief. To enhance practicality and therapeutic retention, this traditional method has been modified into *Anutaila Pichu* [6], a localized instillation of medicated oil into the anal canal. Owing to its *Vata-shamaka* and *Vedanasthapana* properties, *Anutaila Pichu* is believed to offer sustained analgesia and improved postoperative pain [7] and comfort.

Given the limitations of conventional analgesics and growing interest in integrative approaches, evaluating the efficacy of Ayurvedic modalities in postoperative care is essential. This study was designed to assess the effectiveness of *Anutaila Pichu* in managing postoperative pain in fissure-in-Ano and to compare its outcomes with standard care using Xylocaine jelly [8] through a randomized controlled trial.

AIM: To study the effect of *Anutaila Pichu* in pain management in post operative patients of fissure in Ano.

a) Primary Objective

To compare the effect of *Anutaila Pichu* and Xylocaine jelly in pain management which is measured on VAS scale in post operative patients of Fissure in Ano.

b) Secondary Objective

To compare the effect of *Anutaila Pichu* and Xylocaine jelly in pain management by measuring gradation of Anal spasm in post-operative patients of Fissure in Ano.

Material and Methods

Study Design: Randomized controlled trial. Ethical clearance and consent obtained from IEC and BORS.

Study Setting: OPD and IPD of Shalyatantra department.

Participants: Postoperative patients of fissure in Ano, aged 18–60 years, irrespective of gender, religion, education, or socio-economic status.

Inclusion Criteria:

- Postoperative fissure in Ano patients.
- Age 18–60 years.

Exclusion Criteria:

- Postoperative fistulectomy or haemorrhoidectomy patients.
- Patients with anal/rectal pathologies (carcinoma, ulcerative colitis, proctitis).
- Uncontrolled diabetes, immunocompromised, portal hypertension.

Sample Size: Based on pre-post difference in anal spasm reduction (effect size 19%), 44 patients per group (total 88 subjects) were enrolled.

Sampling Technique: Simple random sampling from OPD/IPD. Data analysed using Microsoft Excel, Word, and STATA 14.0.

Interventions:

- **Group A:** *Anutaila Pichu* – Sterile cotton swab soaked in 5ml *Anutaila* applied postoperatively (4 hrs, 8 hrs after withdrawal of anaesthesia, 3rd & 7th days) after a 15-minute warm sitz bath.
- Readymade *Anutaila* manufactured by Dhootapapeshwar Company [9] was utilized. The formulation was selected in its prepared form to ensure standardization, consistency, and authenticity of the Ayurvedic medicated oil, thereby maintaining the reliability and reproducibility of the study outcomes.
- **Group B:** Xylocaine 2% jelly applied similarly.

Application of *Anutaila Pichu*

Prior to the procedure, a rectal examination was conducted with the patient in the lithotomy position [10] to assess sphincter tone through digital examination. Following a 15-minute sitz bath with warm water, a sterile gauze *Pichu* soaked in ***Anutaila*** was applied externally to the anal region using gloved fingers. The application was initiated postoperatively, beginning four hours after withdrawal of anesthesia, and was subsequently repeated at eight hours on the postoperative day, and then on the third and seventh days for follow-up evaluation.

Application Xylocaine jelly 2%

Lox 2% Xylocaine jelly was used in the study. A per rectal examination was done in the lithotomy position to assess sphincter tone using the jelly. After a 15-minute warm water sitz bath, Xylocaine jelly 2% was applied once daily, starting four hours postoperatively after anesthesia recovery, then repeated at 8 hours on the same day, and again on the third and seventh postoperative days for follow-up

Outcome Measures:

- **Subjective:** Pain (*Gudagata Shoola)* assessed by VAS [11] with gradation.

Table no.1- Parameters for assessment of *Gudagata Shoola* (Pain)

	***Gudagata Shoola* (Pain)**	**VAS Score**	**Grade**
1	No Pain	**0**	**0**
2	Pain at the time of defecation and subsides within 30 min	**1-3**	**1**
3	Pain at the time of defecation and persists for less than 30 min	**4-6**	**2**
4	Continuous unbearable pain which persists more than 1 Hour	**7-10**	**3**

Table no.2-Objective Parameter: Anal spasm grade [12]

Explanation	**Grade**
Normal (1 finger can pass)	0
Finger can be pass with severe pain	1
No finger can be passed	2

Follow-Up:
Assessment at 0thday -4th hrs, 8th hrs after withdrawal of anaesthesia, 3rd and 7th postoperative days.

Assessment Criteria:

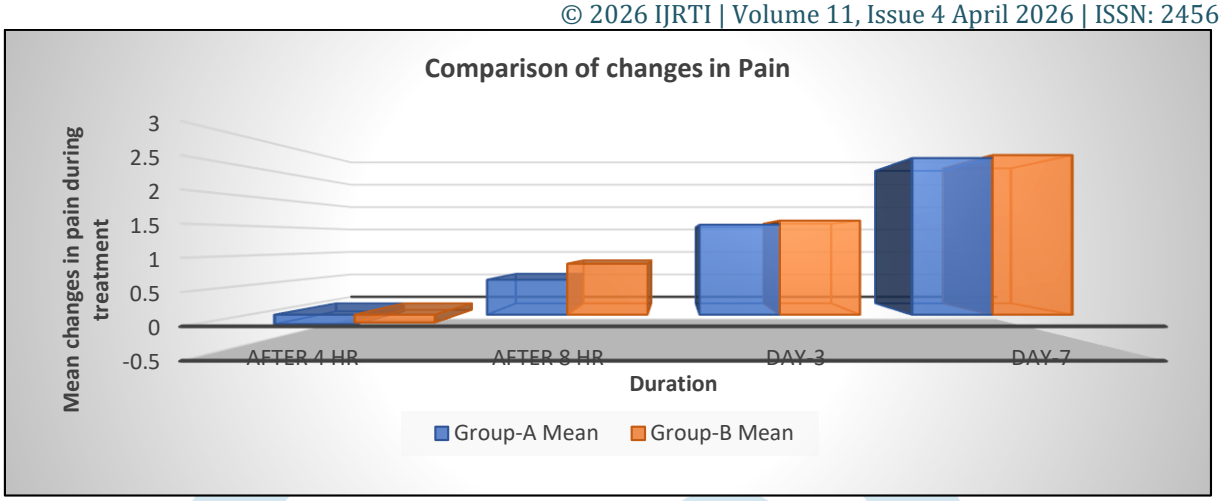
- Cured: 100% improvement
- Marked: 75–99%
- Moderate: 50–74%
- Mild: 25–49%
- No relief: <24%

Investigations:
CBC, RBS, HIV, HBsAg, BT, CT, ECG, SGOT, SGPT, Serum Creatinine.

Statistical Analysis:
Continuous data: Mean ± SD or Median & Range.
Categorical data: frequency, percentage; chi-square test.[13]
Subjective score comparison: Friedman ANOVA, Wilcoxon signed-rank test. P <0.05 considered significant.

Table no. 3 Comparison of change in **pain** at 4 hrs., 8 hrs. after withdrawal of anesthesia, day-3 and day-7 in between Group-A and Group-B.

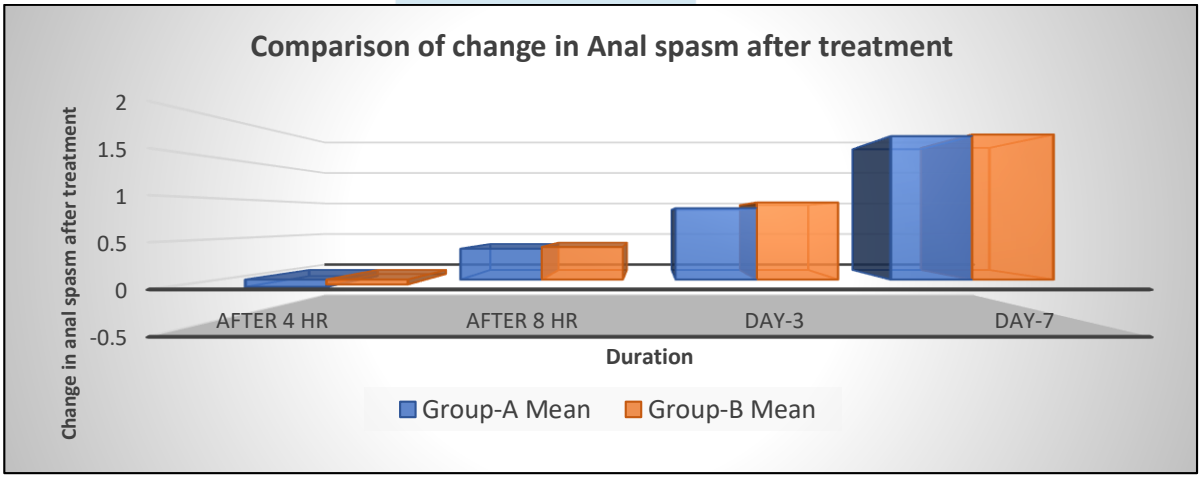
Change in pain after treatment	Group-A		Group-B		Z-value	p-value
	Mean	SD	Mean	SD		
After 4 hrs. (after withdrawal of Anesthesia)	-0.16	0.36	-0.13	0.34	0.299	0.7652, NS
After 8 hrs. (after withdrawal of Anesthesia)	0.59	0.58	0.86	0.34	2.506	0.0122, S
Day-3	1.52	0.59	1.59	0.54	0.499	0.6176, NS
Day-7	2.65	0.56	2.70	0.50	0.292	0.7702, NS



A slight increase in mean pain score was observed in Group A at 4 hours (−0.16), followed by a gradual reduction of 0.59 at 8 hours, 1.52 on the 3rd day, and 2.62 by the 7th day.

Table no.4- Comparison of change in **Anal spasm** after treatment at 4 hrs., 8 hrs. after withdrawal of anesthesia, day-3 and day-7 between Group-A and Group-B.

Change in anal spasm after treatment	Group-A		Group-B		Z-value	p-value
	Mean	SD	Mean	SD		
After 4 hrs. (after withdrawal of Anesthesia)	-0.09	0.29	-0.06	0.25	0.392	0.6953,NS
After 8 hrs. (after withdrawal of Anesthesia)	0.38	0.61	0.40	0.58	0.113	0.9103,NS
Day-3	0.88	0.53	0.95	0.48	0.651	0.5150,NS
Day-7	1.77	0.42	1.79	0.46	0.465	0.6418

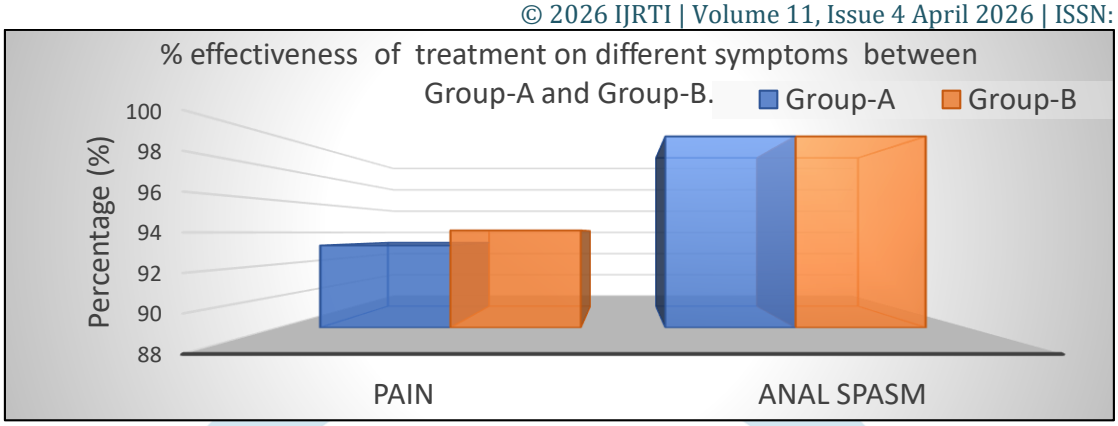


In Group A, the mean anal spasm score showed a gradual improvement of −0.09 at 4 hours, 0.38 at 8 hours, 0.88 on the 3rd day, and 1.77 by the 7th day

Table no.5 Percentage effectiveness

of treatment on different symptoms between Group-A and Group-B.

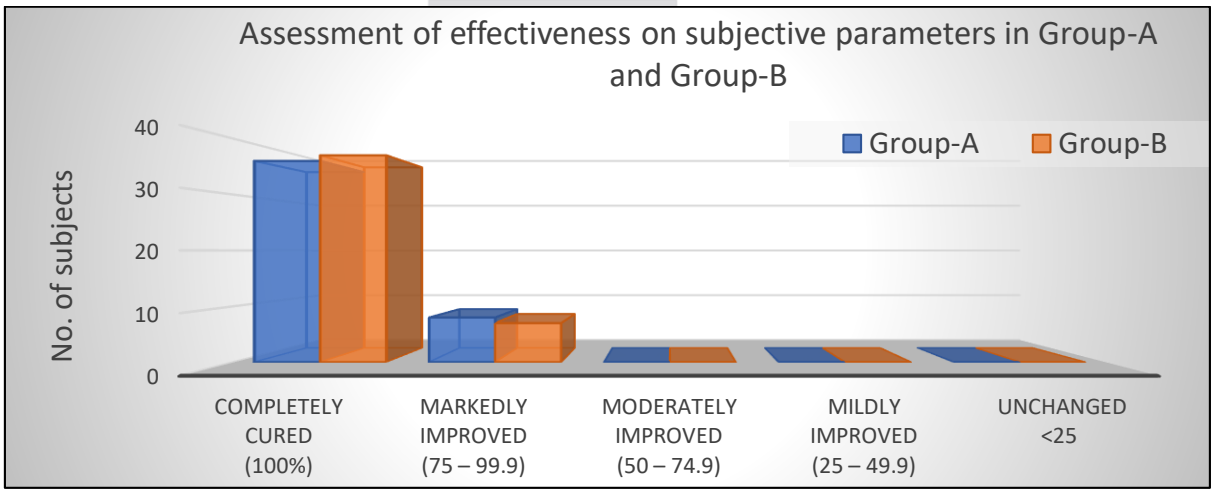
Symptoms	Group-A	Group-B	Z-value	p-value
Pain	93.18 %	94.13 %	0.319	0.7494, NS
Anal Spasm	100 %	100 %	--	--



The percentage effectiveness of treatment for pain was 93.18% in Group A and 94.13% in Group B, while for anal spasm, both Group A and Group B showed 100% effectiveness.

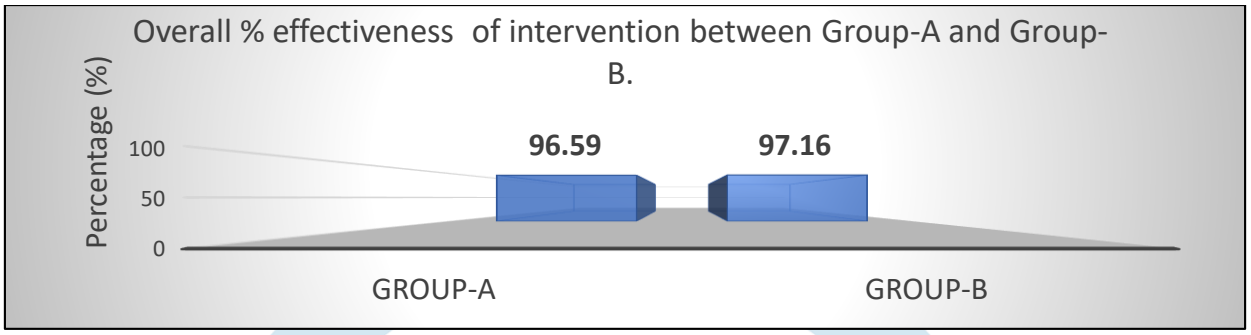
Table no.6- Assessment of effectiveness on subjective parameters in Group-A and group-B.

Assessment criteria	Group-A		Group-B	
Completely cured (100%)	36	81.82 %	37	84.09 %
Markedly improved (75 – 99.9)	8	18.18 %	7	15.91 %
Moderately improved (50 – 74.9)	--		--	
Mildly improved (25 – 49.9)	--		--	
Unchanged <25	--		--	



It shows that assessment of effectiveness on subjective parameters in Group-A was 81.82 % and group-B was 18.18 %.

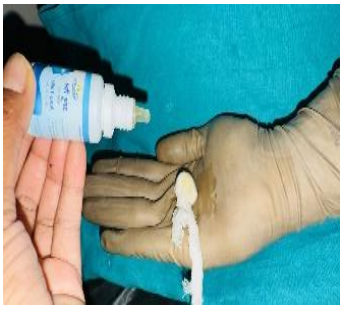
Table no.7- Overall % effectiveness of intervention between Group-A and Group-B.



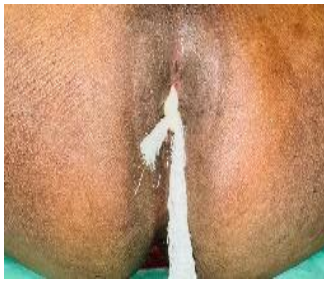
Therapy effectiveness was 96.59% in Group A and 97.16% in Group B, with no statistically significant difference between the two (p = 0.7494).

Application of Anutaila pichu.

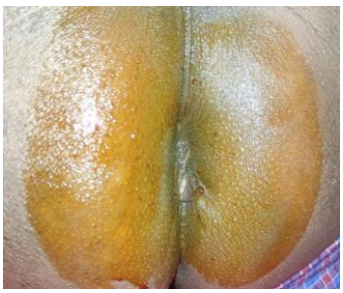
Materials used



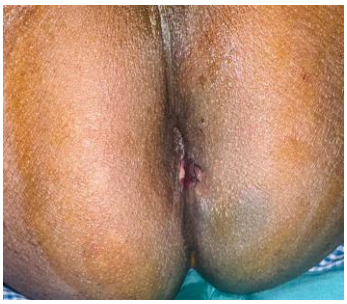
Application of Anutailpichu



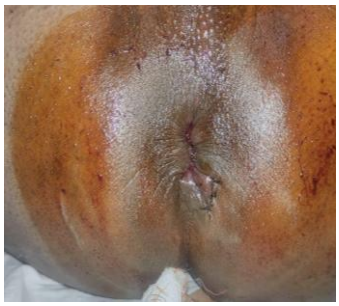
After 4 hr - After withdrawal of Anaesthesia



After 8 hr -After withdrawal of Anaesthesia.



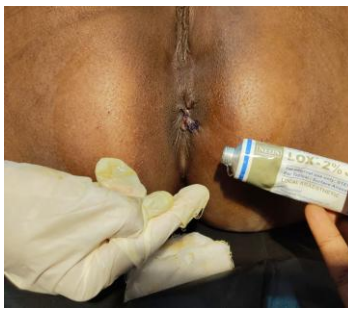
After 3rd day



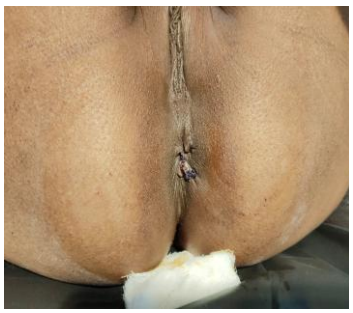
After 7th day

Application of Lox 2% jelly

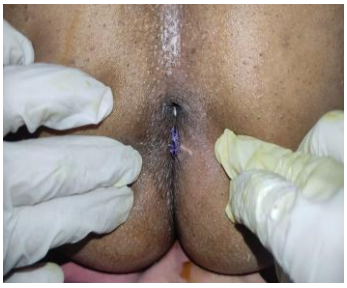
Materials used



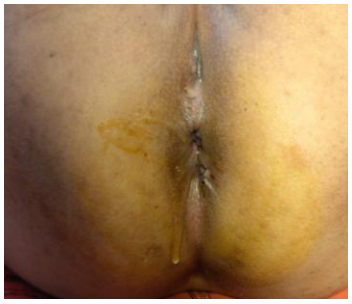
Application of Xylocaine jelly



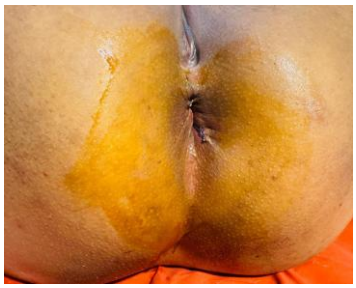
After 4 hr - Withdrawal of Anaesthesia



After 8 hr - withdrawal of anaesthesia



After 3rd day



After 7th day

Discussion

Parikartika,[14] described in classical Ayurvedic texts mainly as a complication of Basti, Virechana, or Vataja *Atisara*, closely correlates with anal fissure in modern medicine. Ancient authors such as Charaka, Sushruta, and *Vagbhata* emphasized its association with pain and dosha imbalance, while Kashyapa provided a distinct classification and management approach, especially in pregnancy. Modern medicine recognizes anal fissure as a painful anorectal condition commonly associated with constipation and lifestyle factors [15].

The present study integrates Ayurvedic and modern perspectives to evaluate postoperative pain management of anal fissure using *Anutaila Pichu* (Group A) and Xylocaine jelly (Group B). Demographic observations revealed that fissure-in-Ano predominantly affected young and middle-aged adults, equally in both genders, with lifestyle factors such as irregular diet, constipation, prolonged sitting, and stress playing a major role.

Both treatment groups showed significant improvement in postoperative pain and anal spasm. In Group A, pain reduction reached 93.18% and anal spasm resolved completely by the 7th day, attributable to the Vata-Shamaka, *Shoolahara*, and *Vranaropana* properties of *Anutaila*. Similarly, Group B demonstrated rapid and sustained relief, with 94.31% pain reduction and 100% resolution of anal spasm, likely due to the local anaesthetic effect of Xylocaine jelly.

Overall effectiveness was high in both groups (96.59% in Group A and 97.16% in Group B), with no statistically significant difference between them ($p = 0.7494$). These findings indicate that *Anutaila Pichu* is as effective as Xylocaine jelly in postoperative management of anal fissure, offering a safe, cost-effective Ayurvedic alternative with sustained therapeutic benefits.

Results

This study compared *Anutaila Pichu* (Group A) and Xylocaine jelly (Group B) for postoperative management of anal fissure. Fissure-in-Ano primarily affected young and middle-aged adults, with equal gender distribution; common contributing factors included irregular diet, constipation, prolonged sitting, and stress. Both groups demonstrated significant improvement in postoperative pain and anal spasm. Group A achieved 93.18% reduction in pain and complete spasm resolution by day 7, likely due to the *Vata-shamaka*, *Shoolahara*, and *Vranaropana* properties of *Anutaila*. Group B showed 94.31% pain reduction and full spasm resolution, attributable to the local anaesthetic effect of Xylocaine. Overall effectiveness was comparable between the groups (96.59% vs. 97.16%; $p = 0.7494$), indicating that *Anutaila Pichu* provides a safe, effective, and cost-efficient Ayurvedic alternative to conventional therapy.

Conclusion

The present study demonstrates that both *Anutaila Pichu* and standard modern management are highly effective in reducing postoperative pain and anal spasm in patients with fissure-in-Ano. Both treatment modalities produced significant relief, with comparable mean effectiveness in pain reduction and complete resolution of anal sphincter spasm. Although the difference between the two groups was not statistically significant, *Anutaila Pichu* showed marginally better patient comfort and satisfaction. These

findings suggest that Anutaila Pichu is a safe, effective, and economical alternative to standard postoperative care. As both interventions exhibited nearly equal efficacy, the null hypothesis is accepted, supporting the clinical utility of *Anutaila Pichu* in postoperative management of fissure-in-Ano.

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