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Case Study

EFFECTIVENESS OF *THANTRIKAI CHOORANAM* IN THE TREATMENT OF *RAITHTHA MOOLAM* (BLEEDING HEMORRHOIDS)

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ABSTRACT

Hemorrhoidal disease, a prevalent benign anorectal disorder, has a substantial influence on patients' quality of life and entails significant health and financial strains. The focus of this study is to evaluate the therapeutic value of Siddha medicine, *Thantrikai Choornam*, in alleviating first-degree internal hemorrhoids (*Raithta Moolam*). **Method:** A descriptive case series was carried out at the Government Siddha Medical College & Hospital in Palayamkottai, involving 20 patients (80% male, mean age 45.94±2.60 years) reported having bleeding hemorrhoids. Participants were prescribed *Thantrikai Choornam* (2 g, twice daily) for 24 days. Clinical symptoms such as bleeding, discomfort, constipation, and other parameters were graded both before and after treatment. **Results:** Substantial improvements were observed following treatment, with 75% of patients observing an overall decrease in bleeding severity from grade 3 to 0, along with a resolution of anal pain. Constipation alleviated for 85% of individuals. The average hemoglobin level raised from 11.88 to 12.25 g/dL. The statistical analysis demonstrated noteworthy reductions in the majority of complaints ($p < 0.05$). **Conclusion:** This case series illustrates that *Thantrikai Choornam* delivers a beneficial intervention for first-degree hemorrhoids, with considerable improvements in primary symptoms. The outcomes offer a call to further investigations into Siddha medicines role in contemporary therapeutic practices for managing hemorrhoidal disease.

INTRODUCTION

Hemorrhoidal disease is one of the most frequent benign anorectal disorders, defined as symptomatic enlargement and aberrant downward movement of anal cushions, resulting in venous dilation and prolapse. It has a substantial impact on patients' quality of life and is the most common cause of lower gastrointestinal bleeding. Hemorrhoids are regarded a cause of morbidity and can have economic and social consequences for the community. They are influenced by food, hygiene, and sexual behaviours, and their symptoms can have both physical and psychological consequences [2].

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Hemorrhoids affect around 50% to 85% of the global population. They can affect people of any gender and age. The estimated global frequency of hemorrhoids in the general population is 4.4%. It has been projected that about 50% of the population would have hemorrhoid symptoms at some point in their life probably by the time they reach the age 50, and approximately 5% population suffer from hemorrhoids at any given point of time [11]. According to Siddha system of Medicine, first degree internal hemorrhoids can be correlated with *Raithta Moolam. Raithta Moolam* is one among the 21 types of *Moola noi* mentioned in *Yugi Vaithiya Chinthamani 800*[7]. Among the three humours that is essential for maintenance of life in accordance with Siddha system, this anorectal disease is due to derangement of *Vaatham* and *Piththam*. As per *Siddhar Theraiyar's noigalukkana mutharkaranam* (etiology of diseases), hemorrhoids is the manifestation of imbalance in *Vaatham* and *Piththam* stating *'அனிலபித்தத் தொந்தமலாது மூலம் வராது'*. Food and lifestyle

changes that cause disparity in *Vaatham and Piththam* and furthermore affecting the other humour is the major genesis of this structural GI disease [19]. This case series aims to determine the effectiveness of siddha medicine *Thantrikai Chooranam* in *Raththa Moolam* (bleeding hemorrhoids) among patients attending OPD, Government Siddha Medical College & Hospital, Palayamkottai.

Thantrikai Chooranam

- **Author**: C. Kannusaamy pillai [9]
- **Book Reference*: Pathartha Guna Vilakkam (Moola varkkam)***
- **Year of publication**: 2006.
- **Page no**: 411.

Figure 1 and 2 indicates the raw drug (*Thantrikai* – *Terminalia bellirica*) and processed trial drug (*Thantrikai chooranam*) respectively.

Literature Review

Table 1: Detailed description of *Thantrikai* - *Terminalia bellirica* (Combretaceae)

Tamil Name	*Thantrikai*
Botanic al Name	*Terminalia bellarica*
Family	Combretaceae
Parts Used	Fruit
Phyto Chemicals	Glycosides, flavonoids, tannins, phenolic compounds, saponins, methyl ester, gallic acid, ellagic acid, ethyl gallate, galloyl glucose, mannitol, chebulagic acid [7,8,18,21]
Phamacological Actions in Journals	Anti diabetic, anti-microbial, anti-cancer, antipyretic, anti diarrheal, hepatoprotective, anti-hypertensive [1,3-6,8,15,20,22]

Table 2: Detailed description of *Terminalia bellarica* as per Materia medica [14]

Thantrikai Chooranam	*Terminalia bellarica*
Taste	Astringent
Composition of Elements	*Mann* (Earth) + *Kaatru* (Air)
Potency	Heat
Post Digestive Transformation	Sweet
Action	Astringent, expectorant, laxative, tonic

MATERIALS AND METHODS

Ingredients of *Thantrikai Chooranam*

Thantrikai (*Terminalia bellirica*) - *1 Palam* (35 grams)

Standard Operative Procedures: Fruits of *Thantrikai* was procured from Tirunelveli district, Tamil Nadu. They were dried and purified. Required quantity of purified country sugar was obtained from nearby herbal store, Tirunelveli district, Tamil Nadu. This *Chooranam* is finely powdered single drug formulation with a particle size of 80-100 mesh with a shelf life of 3 months. Then the *Chooranam* was stored in an air tight container.

Table 3: Detailed description of *Thantrikai chooranam* as per the Siddha literature and detailed study design

Drug Profile	
Adjuvant	Raw sugar (*Naatu sarkkarai*)
Dose	15 *Kuntri* (2 gm)
Indication	*Piththa thalaivali, Suram, Raththa moolam*
Medicine	*Thantrikai chooranam*
Time	Twice a day
Course	24 days
Study Design	
Study Type	Descriptive study
Study Design	Case series
Study Place	OPD, Govt. Siddha Medical College & Hospital, Palayamkottai
Study Period	4 Months
Sample Size	20 patients (Male and Female)

Methodology

Case series was carried out in GSMC, Palayamkottai, after approval from IEC (GSMC-XIII IEC Br I/8/24.05.2024). The patients who were enrolled were informed about the terms and objectives of the study in the regional language and informed consent was obtained from them. This clinical study was registered in CTRI (CTRI/2024/07/069915). Criteria for inclusion were depicted in the below given table 4. Clinical symptoms were analysed by comparing the clinical assessment data obtained at two points of time (before and after intervention).

Table 4: Criteria for inclusion, exclusion and withdrawal in the case series

Inclusion Criteria	Exclusion Criteria	Withdrawal Criteria
Age between 18 and 60 yrs. Sex – Both male and female. Patients who were having classical symptoms of bleeding piles (1st degree internal hemorrhoids) i.e., constipation, Bleeding per anus, itching in the perianal region. Patients who are all willing to give blood samples at subsequent visit were involved in this study.	Pregnancy Fissure in ano Fistula in ano Diabetes mellitus Hypertension Rectal Malignancy	Intolerance to the drug and development of any serious adverse effects during the trial Patients turned unwilling to continue in the course of clinical trial. Poor patient compliance Any other acute illness which needs rescue medication.

Method of Approach

Clinical Assessment: Raakhi Mehra et.al. (2011) disease criteria was used in this clinical study. Grading was done in accordance with severity and frequency of the criteria (Grade 0 – Grade 3)

Disease Criteria for Assessment *Raakhi Mehra, et al, Ayu. 2011)*[17]

Table 5: Clinical assessment using disease criteria (Rakhi Mehra.et.al., 2011)

S.No	Parameter	Grade 0 (G0)	Grade 1 (G1)	Grade2 (G2)	Grade3 (G3)
1	Bleeding Per Anus	Nil	Mild (Occasionally)	Moderate (Weekly/Monthly)	Severe (On each defecation)
2	Pain around anus	Nil	Mild (Lasts for < 1 Hour)	Moderate (Last for 1-2hr)	Severe (Last for > 2hrs)
3	Constipation (Bristol stool scale)	Nil	Mild (Type 2) (On alternate days)	Moderate (Type 2) (2-3 days)	Severe (Type I) (>3 days)
4	Protrusion of pile mass	Nil	Protrude into anal canal, no prolapse	Prolapse out of anal canal, spontaneous Reduction	Prolapse out of anal canal, manual reduction
5	Mucous discharge	Nil	Mild	Moderate	Severe
6	Itchy anus	Nil	Mild	Moderate	Severe
7	Anemia [Hb (g/dl)]	Nil	Mild Men: 11-12.9 Women:11-11.9	Moderate (8-10.9)	Severe (<8)

RESULT

Among the 20 patients recruited for the case series after obtaining informed consent maintaining confidentiality, 80% were males and the mean age was 45.94 ± 2.60 years with 40% in the 51-60 age group as shown in figure 3 and 4. The clinical symptoms of the patients were assessed before and after treatment for 24 days revealing the mean grades were markedly reduced from grade 3 to grade 0 in bleeding per anus. Symptoms such as pain around anus, constipation, anemia progressed from grade 2 to grade 0 as given in table 6. The mean hemoglobin after intervention improved from 11.88 to 12.25. Since, this was a normally distributed with less than 30 samples student's t test was used which exhibited significant change in most of the symptoms ($p<0.05$) as shown in table 7.

Table 6: overall grading before and after treatment (mean of 20 patients)

Clinical Symptoms	Grade Before Treatment (Mean)	Grade After Treatment (Mean)
Bleeding per anus	Grade 3	Grade 0
Pain around anus	Grade 2	Grade 0
Constipation	Grade 2	Grade 0
Mucous discharge	Grade 1	Grade 0
Itchy anus	Grade 1	Grade 0
Anemia	Grade 2	Grade 1
Hemoglobin	Grade 1 (11.88)	Grade 1 (12.25)

Table 7: Results of paired t test (since the skewedness was <0.2 and the histogram showed normal distribution, parametric test was employed.) HS- Highly significant, S-Significant.

Paired Variables	Paired T Test P Value	Significance
Bleeding per anus	0.00	HS
Pain around anus	0.00	HS
Constipation	0.00	HS
Mucous discharge	0.08	Insignificant
Itchy anus	0.00	HS
Anemia	0.02	S
Hemoglobin	0.00	HS

Terminalia bellirica	*Thantrikai chooranam*
	
Figure 1	**Figure 2**

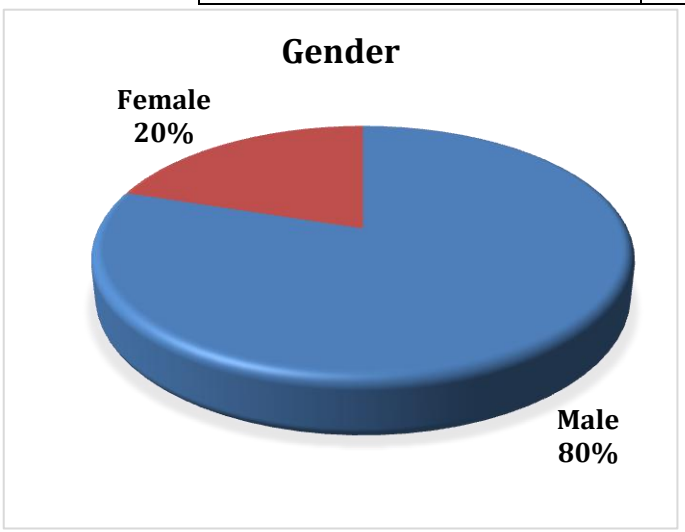

Figure 3: Gender distribution among 20 cases

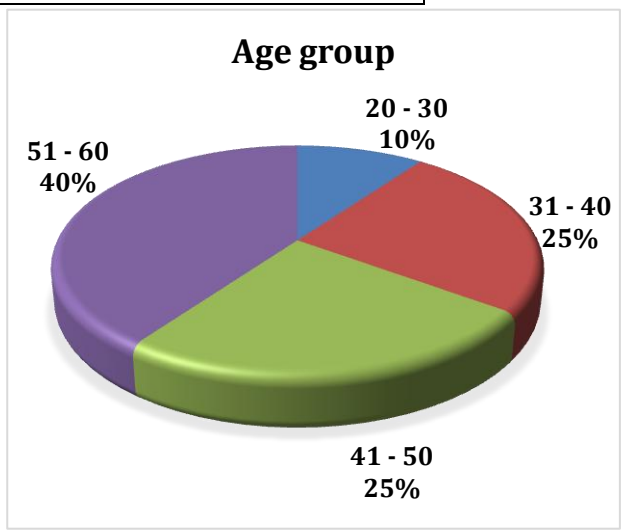

Figure 4: Age distribution-category-wise

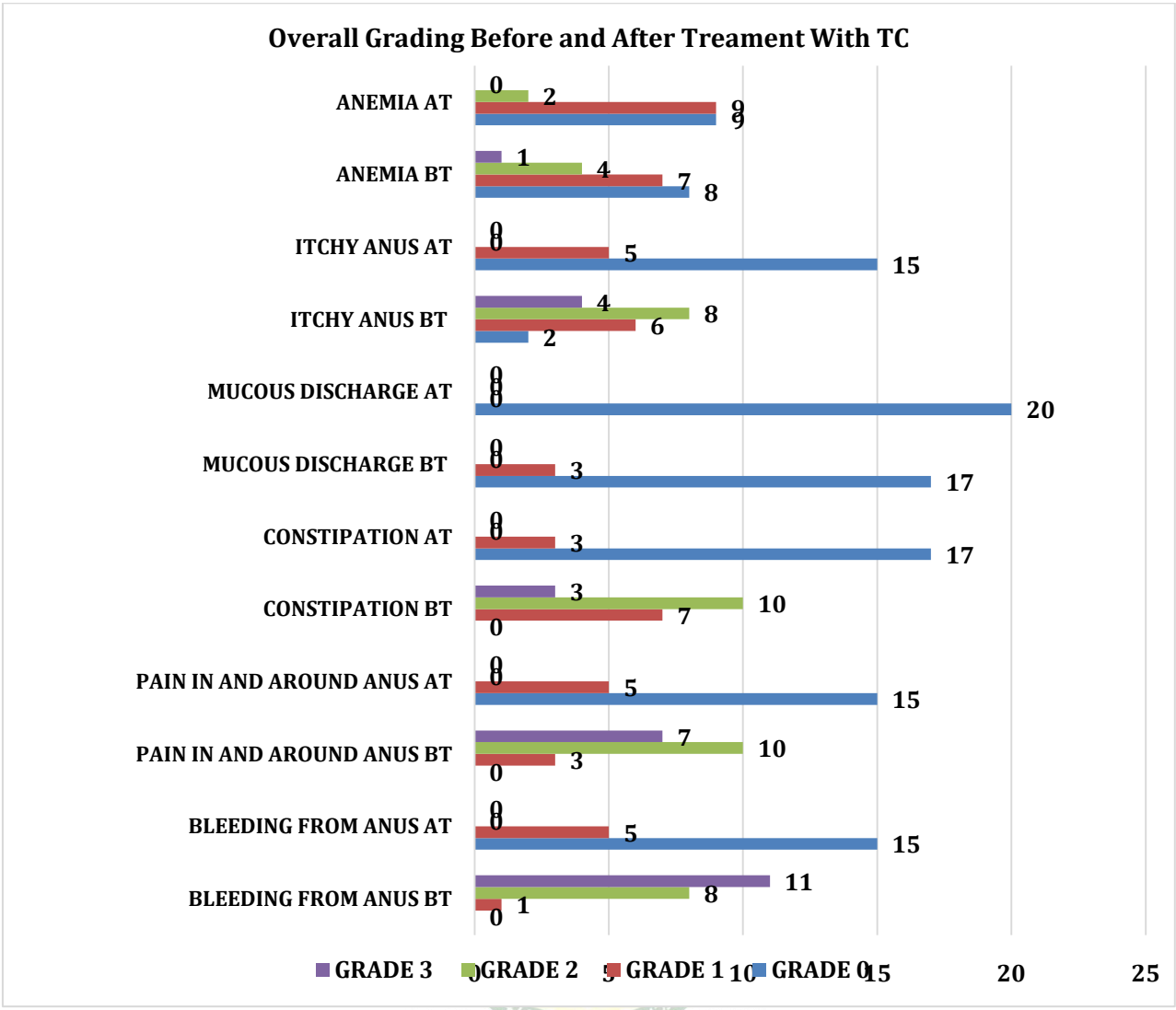

Figure 5: Overall grading of clinical assessment criteria (7) before and after intervention for 24 days with *Thantrikai chooranam*

BT - Before treatment, AT - After treatment

DISCUSSION

Hemorrhoids are a prevalent condition that can significantly disrupt the quality of life (QOL) for affected individuals. Epidemiological studies suggest that nearly half of the population is expected to experience hemorrhoids at some point in their lifetime, underscoring the widespread nature of this condition. The impact of hemorrhoids extends beyond physical symptoms, encompassing emotional and psychological dimensions that contribute to the overall burden faced by patients. Physically, hemorrhoids can cause a range of discomforts, including pain, itching, and bleeding during bowel movements. These symptoms can lead to alterations in bowel habits and avoidance of certain activities, such as exercise or prolonged sitting, which can further exacerbate the condition. The chronic nature of hemorrhoids often necessitates ongoing management strategies, including dietary modifications and lifestyle adjustments. Patients may find themselves navigating a complex interplay of factors to manage their symptoms effectively, leading to frustration and a sense of helplessness. Emotionally, the presence of hemorrhoids can provoke significant distress. The stigma associated with this condition often results in embarrassment, leading individuals to avoid seeking medical advice or discussing their symptoms with healthcare professionals. The anxiety surrounding hemorrhoids may also extend to concerns about hygiene, social interactions, and overall well-being. Moreover, the chronic nature of hemorrhoids can impose limitations on dietary choices and lifestyle habits. Given the high prevalence of hemorrhoids, it is crucial for healthcare providers to recognize and address the full scope of this condition, promoting open communication and effective management strategies to enhance patient outcomes and quality of life. *Terminalia bellirica,* commonly known as *Thantrikai,* is a traditional medicinal plant used in Siddha medicine. It is recognized for its potential therapeutic effects in managing various gastrointestinal disorders, including hemorrhoids

(piles). *Terminalia bellirica* contains bioactive compounds such as tannins, flavonoids, and phenolic acids, which are believed to contribute to its medicinal properties. These compounds exhibit anti-inflammatory, analgesic, and antioxidant activities. As per the literature evidences, *Terminalia bellirica* appears to be a promising herbal remedy for managing piles. This case series highlights the significant efficacy of *Thantrikai Choornam (TC)*, a Siddha herbal powder, in managing symptoms associated with hemorrhoids. The demographic data indicate a predominance of males, with a mean age of 45.94±2.60 years, particularly in the 51-60 age group, aligning with existing literature that suggests a higher incidence of hemorrhoids in middle-aged males. The intervention led to substantial improvements in three key clinical symptoms: bleeding per anus, pain around the anus, and constipation. Before treatment, 95% of subjects experienced severe or moderate bleeding during defecation; notably, 75% reported complete cessation of bleeding following TC intervention. This finding supports previous studies that have documented the hemostatic properties of certain herbal formulations. The marked reduction in anal pain, where 75% of subjects reported no pain post-treatment, reinforces the analgesic potential of TC, consistent with research indicating its anti-inflammatory effects. Furthermore, the improvement in constipation, with 85% of participants reporting normal bowel movements post-intervention, suggests a beneficial laxative effect of TC, corroborating findings from prior studies that emphasize the role of herbal laxatives in managing hemorrhoidal symptoms. The reduction of symptoms from grades 2 and 3 to grade 0 indicates not only symptomatic relief but also a potential improvement in the overall clinical status of patients. While symptoms such as anal itching, mucous discharge, and hemoglobin levels exhibited only modest improvements, the overall outcomes suggest the efficacy of *Thantrikai Choornam* in mitigating the burdens associated with hemorrhoids.

CONCLUSION

In conclusion, this case series on the intervention of the Siddha herbal drug *"Thantrikai Choornam"* for stage 1 hemorrhoids highlights its significant therapeutic potential. The formulation, enriched with potent phytochemicals such as gallic acid, ellagic acid, phenolic compounds, tannins, and glycosides, has demonstrated a multifaceted pharmacological profile through various studies. These compounds exhibit critical properties including antioxidant, antimicrobial, styptic, astringent, wound healing, and analgesic effects, all of which contribute to the management of hemorrhoidal symptoms. The clinical outcomes observed in this case series of 20 patients reflect a marked improvement in the most distressing symptoms associated with hemorrhoids. Notably, the severity of bleeding per anus and pain around the anus improved from grades 3 and 2 to grade 0, indicating a substantial reduction in symptom severity. Although symptoms such as itchy anus, mucous discharge, and hemoglobin levels showed only mild improvements, the overall prognosis points toward the efficacy of *Thantrikai Choornam* in alleviating the burdens of this condition. These findings support the integration of Siddha medicine, particularly "*Thantrikai Choornam*," into contemporary treatment protocols for hemorrhoids, underscoring the need for further research to elucidate the precise mechanisms of action and to validate these clinical benefits. The promising results not only advocate for a holistic approach in managing hemorrhoidal conditions but also highlight the rich potential of traditional herbal remedies in modern therapeutic practices.

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