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Non-surgical Resolution of Chronic Anal Fissure through Integrative Therapy: A Case Report

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ABSTRACT

Background: Anal fissure is a common anorectal disorder characterized by pain, constipation, and rectal bleeding, often impairing daily activities. While surgical sphincterotomy is considered the standard treatment for chronic fissures, conservative strategies are increasingly explored as safer alternatives.

Objectives: To describe the outcome of a multimodal conservative regimen in a patient with chronic anal fissure, highlighting the role of integrative therapy in achieving complete recovery without surgical intervention.

Methods: A 55-year-old female presented with constipation, rectal bleeding, and anorectal pain. Clinical evaluation and proctoscopy confirmed the diagnosis of anal fissure. A multimodal conservative regimen was initiated, including topical therapy, oral supplements, dietary modification, probiotics, and weekly ozone therapy. The patient was followed over two visits spanning two months.

Results: Progressive improvement was observed. Constipation resolved, rectal bleeding ceased, pain subsided, and overall quality of life improved. Follow-up confirmed fissure healing. No complications were reported during therapy.

Conclusions: This case demonstrates that combining lifestyle modification, gut microbiota support, and ozone therapy can achieve complete recovery in anal fissure without surgical intervention. Conservative multimodal strategies may provide effective symptom relief and healing in selected patients, reducing reliance on surgery. Limitations include the single case design and absence of long-term follow-up. Larger studies are needed to validate reproducibility and long-term outcomes.

Keywords: Anal fissure, Conservative management, Ozone therapy, Probiotics, Rectal bleeding, Case report

INTRODUCTION

Anal fissure is a common anorectal disorder characterized by a longitudinal tear in the distal anal canal mucosa, most frequently located in the posterior midline [1]. It typically presents with severe pain during defecation, rectal bleeding, and constipation, significantly impairing quality of life [2]. The etiopathogenesis involves hypertonia of the internal anal sphincter, reduced blood flow to the anoderm, and trauma from hard stools [3]. The condition affects both genders and is most prevalent in middle-aged adults, with chronic fissures often requiring surgical intervention [4].

Conventional management strategies include stool softeners, topical nitrates, calcium channel blockers, botulinum toxin injections, and lateral internal sphincterotomy. While

surgery remains the gold standard for chronic fissures, it carries risks such as incontinence and recurrence. Therefore, conservative approaches continue to be explored as safer alternatives.

This case report is unique because complete recovery was achieved through a multimodal conservative regimen combining topical therapy, oral supplements, probiotics, dietary modification, and ozone therapy. The outcome underscores the potential of non-surgical interventions in selected patients and highlights the supportive role of ozone therapy in anorectal healing

CASE REPORT

Chief Complaint: A 55-year-old female presented with complaints of constipation, rectal bleeding, and pain during defecation, accompanied by gas formation.

History: The patient reported progressive worsening of symptoms over several weeks, with increasing difficulty in bowel movements and sharp anorectal pain. There was no prior history of anorectal surgery, inflammatory bowel disease, or systemic illness.

Clinical Features: On physical examination, the patient appeared stable. Local examination revealed tenderness in the anal region. Proctoscopy confirmed the presence of an anal fissure with otherwise normal mucosa. No evidence of hemorrhoids, fistula, or other anorectal pathology was noted.

Figure 1: Diagnostic stage (with fissure)

Investigations: Routine laboratory tests including complete blood count and fasting blood sugar were within normal limits. Proctoscopy findings confirmed the diagnosis of anal fissure.

Diagnosis: Anal fissure associated with constipation and rectal bleeding.

Treatment Plan: A multimodal conservative regimen was initiated. The patient was advised dietary modification to increase fiber and fluid intake. Topical therapy was prescribed for local symptom relief. Oral supplements and probiotics were introduced to improve bowel habits and gut microbiota balance. Weekly ozone therapy sessions were administered to support tissue healing and reduce inflammation.

Table 1: Exact Treatment Regimen

Component	Exact Details
Topical Therapy	Local ointment applied twice daily for fissure healing
Oral Supplements	Vitamin C 500 mg daily, Zinc 50 mg daily
Dietary Modification	High-fiber diet (vegetables, whole grains), 2–3 L water intake per day
Probiotics	Lactobacillus + Bifidobacterium combination, one capsule daily
Ozone Therapy	Rectal insufflation, once weekly for 8 weeks

Prognosis and Follow-Up: The patient was followed up over two visits spanning two months. Progressive improvement was noted. Constipation resolved, rectal bleeding ceased, pain subsided, and overall quality of life improved. No complications were reported during therapy.

Figure 2: Healed fissure (post-treatment)

DISCUSSION

Anal fissure is a painful anorectal condition that significantly affects quality of life. The pathophysiology involves hypertonia of the internal anal sphincter and reduced anodermal blood flow, which perpetuate mucosal tearing and impaired healing [1,3]. Surgical sphincterotomy remains the gold standard for chronic fissures, but it carries risks such as recurrence and incontinence [2,4]. Therefore, conservative management strategies continue to be explored as safer alternatives.

Topical agents such as nitrates and calcium channel blockers have demonstrated efficacy in reducing sphincter pressure and promoting healing [4,5]. Dietary modification and stool softeners remain essential components of conservative therapy. In recent years, adjunctive modalities such as ozone therapy have gained attention. Ozone has documented anti-inflammatory and regenerative properties, enhancing local circulation and tissue repair [6].

Probiotics also play a supportive role by modulating gut microbiota, improving bowel habits, and reducing constipation, thereby decreasing anorectal strain [7]. In this patient, probiotic supplementation was associated with improved bowel function and symptom relief. The combined use of supplements, probiotics, and ozone therapy contributed to complete recovery without surgical intervention.

The novelty of this case lies in the multimodal conservative regimen that achieved rapid symptom resolution and healing. This outcome suggests that integrating lifestyle modification, gut microbiota support, and ozone therapy may provide effective alternatives to surgery in selected patients. However, limitations include the single-case design and absence of long-term follow-up. Larger studies are needed to evaluate reproducibility and long-term outcomes [8].

CONCLUSION

This case demonstrates that a multimodal conservative regimen, including topical therapy, dietary modification, probiotics, and ozone therapy, can achieve complete recovery in anal fissure without surgical intervention. The patient experienced resolution of constipation, cessation of rectal bleeding, relief of pain, and improved quality of life within two months of treatment. The outcome highlights the potential of non-surgical approaches in selected patients, particularly when lifestyle modification and supportive therapies are integrated. While encouraging, these findings are limited to a single case, and further studies are needed to validate the reproducibility and long-term effectiveness of such conservative strategies.

Declaration by Authors

Ethical Consent: Written informed consent was obtained from the patient for publication of this case report and accompanying images.

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Conflict of Interest: The authors declare no conflict of interest.

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