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CASE REPORT: LIFESTYLE -ASSOCIATED CHRONIC ANAL FISSURE.

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Abstract:

Chronic anal fissure is a painful but treatable anorectal condition that significantly affects a patient's daily comfort and quality of life[1,2]. It commonly presents with severe pain during bowel movements and bright red rectal bleeding, often resulting from long-standing constipation, inadequate dietary fiber intake, and a sedentary lifestyle[1,2,13]

In this case report, a 32-year-old male presented with persistent anal pain, bleeding per rectum, and difficulty passing stools for three months. Clinical evaluation revealed a posterior midline chronic anal fissure with a sentinel pile[1,13] The patient was initially prescribed topical glyceryl trinitrate; however, he developed severe headaches, which affected his adherence to treatment[6,7,10]. Based on clinical response and tolerability, therapy was modified to topical diltiazem along with fiber supplementation and structured lifestyle changes, including improved hydration and physical activity[4,8,9]

Within six weeks, the patient experienced marked symptomatic relief and improved bowel habits[4,5]. Continuous counseling by the clinical pharmacist regarding medication use, diet, and lifestyle modification played a crucial role in enhancing adherence and overall recovery[15].

Keywords: *Chronic anal fissure, Constipation, Diltiazem, Glyceryl trinitrate, Clinical pharmacist, Chronic anal fissure, Constipation-related anorectal disorder, Sedentary lifestyle, Low dietary fiber intake, Sphincter hypertonia, Rectal pain and bleeding, Diltiazem therapy, Glyceryl trinitrate intolerance, Lifestyle modification, Clinical pharmacist intervention, Patient counseling, Conservative management*

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INTRODUCTION:

An anal fissure is a small but painful tear in the inner lining of the anal canal, usually occurring just below the dentate line[1,2]. Based on how long the symptoms persist, fissures are classified as acute when they last less than six weeks and chronic when they continue beyond six weeks[1,2]. Chronic fissures often develop due to increased tightness (hypertonia) of the internal anal sphincter muscle, which reduces blood supply to the affected area and slows down the natural healing process[1,11].

EPIDEMIOLOGY:

Anal fissure is a very common condition that many people experience at some point in their life, although many feel shy to talk about it or seek treatment[2,13]. It is one of the most frequent reasons for pain and bleeding during bowel movements[2,13]. This condition can affect people of any age, but it is most commonly seen in young and middle-aged adults, especially between 20 and 50 years[2]. It occurs in both men and women almost equally[2].

However, women may have a slightly higher risk after childbirth because of strain and constipation during the post-partum period[13].

Constipation is the biggest reason why anal fissures develop[1,2]. People who regularly pass hard stools, eat a low-fiber diet, drink less water, or have a sedentary lifestyle are more likely to develop this condition[2,13]. In some cases, chronic diarrhea, obesity, and poor bowel habits can also increase the risk[2].

In most patients, the fissure occurs in the back (posterior) part of the anal canal, while a smaller number develop it in the front (anterior) side, which is more common in women[1,13].

Although many fissures start as small and acute tears, they can become chronic if proper care and lifestyle changes are not followed[1,2]. Recurrence is also common if constipation and unhealthy bowel habits continue[2,5].

According to the updated clinical guidelines of the American Society of Colon and Rectal Surgeons, the initial approach to management focuses on Conservative treatment means managing the anal fissure without surgery. The main aim is to reduce pain, relax the anal sphincter muscle, improve blood supply, prevent constipation, and allow the fissure to heal naturally.

1. Topical medications (muscle relaxation and pain relief)

Doctors usually prescribe medicines that are applied directly to the anal area. These medicines help relax the internal anal sphincter muscle, which reduces pressure and improves blood flow to the fissure. Better blood flow helps faster healing.

Commonly used medicines include:
Topical nitrates (such as nitroglycerin ointment)
Calcium channel blockers (such as diltiazem or nifedipine ointment)

These medicines also reduce pain during bowel movements.

2. High-fiber diet (prevent constipation)

Constipation is one of the main causes of anal fissures. Hard stools can worsen the tear and delay healing. Increasing fiber intake helps make stools soft and bulky so they pass easily without causing strain.

Recommended fiber sources:
Fruits and vegetables
Whole grains
Fiber supplements like psyllium husk

3. Adequate fluid intake

Drinking enough water is very important. Fluids work together with fiber to soften stools and prevent straining during bowel movements. Patients are usually advised to drink at least 2–3 liters of water daily.

4. Warm sitz baths (pain relief and healing)

A sitz bath means sitting in warm water for 10–15 minutes, usually 2–3 times a day, especially after passing stool. Warm water:
Relaxes the anal muscles
Improves blood circulation
Reduces pain and discomfort
Promotes healing of the fissure

5. Lifestyle modifications

Simple lifestyle changes help prevent worsening of fissures and reduce recurrence:
Avoid straining during bowel movements
Do regular physical activity
Do not delay the urge to pass stool
Maintain proper toilet habits

CASE REPORT:

A 32-year-old male patient presented to with complaints of severe pain during and after bowel movements for the past three months. The pain was sharp in nature and caused significant discomfort, often lasting for some time after defecation. He also noticed bright red streaks of blood on the surface of the stool. Additionally, he reported infrequent bowel movements, occurring approximately three times per week, along with excessive straining while passing stools.

History of Present Illness

The patient is employed as a software professional and reported spending nearly 9–10 hours a day in a seated position due to the nature of his work. A detailed lifestyle assessment revealed several contributing factors. His daily diet was low in fiber, with minimal intake of fruits, vegetables, and whole grains. He consumed only about one liter of water per day. Physical activity was limited, and he

described experiencing high levels of occupational stress.

There was no history suggestive of inflammatory bowel disease, previous anorectal surgery, or any other major systemic illness.

LAB INVESTIGATIONS

Physical Examination

At the time of admission:

Blood Pressure: 110/70 mmHg

Pulse Rate: 84 beats per minute

Abdomen: Soft and non-tender

Per rectal examination revealed a posterior midline fissure with a sentinel pile and increased anal sphincter tone.

Diagnosis: Chronic Anal Fissure

1. Initial Conservative Management

After confirming the diagnosis of chronic anal fissure, the patient was started on standard first-line medical therapy as recommended by the American Society of Colon and Rectal Surgeons guidelines.

A. Pharmacological Treatment

S.NO	DRUG NAME	GENERIC NAME	DOSE	R.O.A	FREQUENCY	INDICATIONS
1.	GTN-Ointiment	Glyceryl trinitrate 0.2%	Pea -sized amount	Topical	TID	Reduces sphincter tone & improves blood flow
2.	Isabgol	Psyllium husk	5-grams	oral	TID	Stool softening
3.	Dolo	Paracetamol	650mg	Oral	SOS	Pain relife
4.	Sitz Bath	_	10-15minutes	local	TID	Pain relief & muscle relaxation

2. Adverse Drug Reaction

After 10 days of GTN therapy, the patient developed:

Severe throbbing headache

Dizziness

These are common dose-related adverse effects of topical nitrates, which led to poor adherence.

3. Modified Pharmacotherapy

Due to intolerance to GTN, therapy was revised.

Topical diltiazem was chosen because it provides comparable healing rates with fewer systemic side effects compared to nitrates.

S.NO	DRUG NAME	GENERIC NAME	DOSE	R.O.A	FREQUENCY	INDICATION
1.	Diltiazem Ointment	Diltiazem 2%	Pea-sized amount	Topical	TID	Relaxes internal sphincter
2.	Isabgol	Psyllium husk	5 grams	oral	TID	Prevents constipation
3.	Dolo	Paracetamol	650mg	Oral	SOS	Pain relife

Topical diltiazem was chosen because it provides comparable healing rates with fewer systemic side effects compared to nitrates.

4. Non-Pharmacological Management

Dietary Modifications

Increase fiber intake to 25–30 g/day

Include green leafy vegetables, fruits, whole grains

Avoid processed & spicy foods

Hydration

Increase water intake to 2.5–3 liters/day

Physical Activity

Brisk walking for 30 minutes daily

Avoid prolonged sitting (>1 hour continuously)

Bowel Habit Training

Avoid straining

Do not delay urge to defecate

Fixed morning toilet routine

Stress Management

Deep breathing exercises

Adequate sleep (7–8 hours)

5. Follow-Up Plan

Time

Observation

2 weeks

Pain intensity reduced

4 weeks

Bleeding significantly decreased

6 weeks

Near complete healing, normal bowel movements

6. Role of Clinical Pharmacist

Educated patient on correct ointment application

Monitored adverse drug reaction (GTN-induced headache)

Counseled regarding diet & hydration

Reinforced adherence

In this case, the clinical pharmacist helped the patient a lot.

• Showed how to use the medicine correctly
• Advised to eat more fiber and drink more water
• Suggested regular exercise and less stress
• Checked side effects and treatment use

DISCUSSION:

Chronic anal fissure is commonly linked to long-standing constipation and a sedentary lifestyle[1,2]. When dietary fiber intake is low and fluid consumption is inadequate, stools tend to become hard and difficult to pass[2,13]. This leads to repeated strain and trauma to the delicate lining of the anal canal, preventing proper healing[1]. In addition, prolonged sitting and high levels of psychological stress may increase internal anal sphincter tightness, further reducing blood flow to the area and delaying recovery[1,11]

Topical nitrates are widely used because they help relax the anal sphincter and improve blood supply, promoting healing[4,6,7]. However, their use is often limited by side effects such as headache, which can reduce patient compliance[6,10] In contrast, calcium channel blockers like diltiazem offer similar therapeutic benefits but are generally better tolerated, making them a suitable alternative for patients who cannot tolerate nitrates.[8,9].

CONCLUSION:

The patient experienced substantial improvement within six weeks after adjusting the medical therapy and adopting recommended lifestyle changes. This case emphasizes that effective management of chronic anal fissure requires more than medication alone. A combined approach involving pharmacological treatment, dietary correction, hydration, and behavioral modification is essential for long-term recovery.Active participation of the clinical pharmacist further enhances treatment adherence, minimizes adverse effects, and improves the patient’s overall quality of life.

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