

A Review of Non-Operative Management of Anal Fissures in Pediatrics: A Study of 50 Cases at Alkarama Teaching Hospital

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Abstract

Anal fissure is a tear or break in the skin of the anal canal. whilst acute anal fissures heal spontaneously or with simple therapeutic measures, a proportion may progress to form a chronic anal fissure. The aim of this study is to show the efficacy of conservative therapy in management of anal fissures in pediatrics. A prospective study was conducted in alkarama teaching hospital during a period from February 2014 to March 2015 for analyzing fifty cases of anal fissure in children & the effect of conservative treatment. A personal biodata, detailed history of diet, bowel habits, site of fissure & presentation, all were registered.

Keywords: Anal fissure, Conservative Treatment, Proctocidar.

1. Introduction

The anus is the external opening of the rectum (the final portion of the colon). A rip or tear in the skin of the anal canal is called an anal fissure. Anal fissures may result in anal bleeding, which is noticeable on toilet paper or in stool in the toilet ⁽¹⁾.

Pain is associated with both acute and chronic anal fissures. In general, the fissures extend from the anal opening and are located posteriorly in the midline. The depth of the fissure varies; it may be superficial or as deep as the underlying sphincter muscle (the muscle that holds the anus closed). An anterior fissure is very rare. When fissures are found laterally, tuberculosis, occult abscesses, leukemic infiltrates, carcinoma or inflammatory bowel disease should be considered as causes ⁽²⁾.

Anal fissures are generally caused by stretching of the anal mucosa (moist tissue). This may occur because of constipation, passing hard and/or large stools. Anal fissures occur commonly in infants. Less common causes include anal sex and diseases such as cancer, HIV, tuberculosis, and syphilis ^(3,4).

2. Classification of Fissures

- ❖ **Acute vs. chronic anal fissures:** Acute anal fissures are commonly associated with severe pain after defecation. Acute fissures generally heal within days to weeks. Chronic anal fissures, lasting longer than about six weeks, are generally associated with less pain than the acute form of the disorder. These anal fissures become deeper (forming an ulcer), and healing is more difficult or does not occur. Internal anal sphincter muscle spasm impairs blood supply to the fissure, reducing the ability to heal. In the case of a chronic, nonhealing ulcer, infection by fecal bacteria is possible ⁽⁸⁾.
- ❖ **Primary vs. secondary anal fissures:** Primary anal fissures are most commonly located on the posterior anal midline. A small percentage of primary anal fissures are located on the anterior midline. Secondary anal fissures are a result of inflammatory bowel disease, previous anal surgery, and disease (e.g., venereal diseases, skin disorders, infections, or tumors). Infections associated with secondary anal fissures may include tuberculosis, herpes, cytomegalovirus, Chlamydia, Haemophilus ducreyi, and HIV. The location of secondary anal fissures may not be typical (lateral, etc.).

3. Patient and method

Study samples were patients presenting to Alkarama Teaching Hospital of between Feb. 2014 to Mar. 2015. In prospective descriptive-analytical study:

- ❖ Fifty (50) cases with anal fissures were evaluated in the pediatric surgery outpatient clinic.
- ❖ All cases were subjected to medical history and clinical examination. The collected data were classified in a systematic manner.
- ❖ In history, we focused on dietary habits, bowel habits, rectal bleeding, painful defecation & constipation.
- ❖ The collected data consisted of age, sex, presentation & location of fissure. In clinical examination, we assessed the site, presence of skin tags & PR if needed.
- ❖ All cases underwent conservative treatment for anal fissure by using Proctocidar ointment locally 2-3

- ❖ times daily for 3-6 weeks & lidocaine gel 2% applied 10 minutes before defecation to minimize the pain.
- ❖ Lactulose syrup was given 2-3 times daily with meal to soften the stool & Purgative (Dulcolax) orally in addition to dietary habit instructions.
- ❖ Two patients only not responded to this regimen, so underwent anal dilatation under general anesthesia.

4. Results

In our study, we found that the main presenting symptom was pain during defecation (68%) & the location of the fissure was posteriorly. 48 cases (96%) got symptomatic relief to conservative measurements within (3–6 weeks). Only two cases (4%) needed surgical treatment by dilatation under General Anesthesia.

A total of 50 cases (30 cases 60% Males & 20 cases 40% Females) at age between (6 months - 3years) presented in alkarama teaching hospital mainly as pain during defecation. All of them were evaluated, diagnosed & managed during the period from Feb.2014 to Mar. 2015 & followed up for 3-6 weeks.

In about 48 cases (96%) associated with constipation & 2 cases (4%) associated with diarrhea. 34 cases (68%) had pain during defecation & 27 cases (54%) had bleeding per rectum (streaks of blood or small drops of blood).

All Patients were diagnosed clinically by history from parents & local examination. 45 cases of fissures in any were located posteriorly, 3 were anteriorly located & only 2 cases have fissures on both sides.

Forty-eight (48) cases had history of developing symptoms within 2 weeks' period & underwent medical management in the form of laxatives e.g. lactulose & purgatives e.g. Dulcolax in addition to lidocaine gel 2% which is topically applied for about 3 to 6 weeks resulting in complete healing.

Two (2) cases (4%) only were not responded to this regimen & needed anal dilatation. We found that an acute anal fissure is more common than chronic in pediatrics. The most common presenting symptoms were pain during defecation & constipation

5. Discussion

Anal fissure is a common proctologic disease & it is considered to be the most frequent source of pain during and after defecation accompanied by anal bleeding. The pain may persist even for several hours following defecation. The standard management of anal fissures in pediatrics has recently been established with nonsurgical methods⁽³⁰⁾.

As it can be inferred from the results, in our study like other studies, the male to female ratio was (3:2). In this study, it's inconsistent with the finding in a study done by Dr. Abid Hussain & Dr. Kishwar Naheedin 2011 in which male to female ratio (4:1)⁽³⁰⁾.

Regarding the age, the mean age was (7-12) months and the incidence was about 38% & less incidence was found in age after 3 years (8%), as it is nearly compatible with the study done by Brian P Gillett in which anal fissures manifested in children aged from 6-24 months⁽³¹⁾.

Changing diet from liquid to solid & so stool changes from soft to firm may explain the increase incidence of anal fissure in such age group⁽³²⁾.

In concern with location of fissure we found that majority of cases were located posteriorly (90%) probably because of the relatively unsupported nature & poor perfusion of the anal wall in that location.

(6%) located anteriorly & this is needed for further evaluation to exclude inflammatory bowel disease e.g. Crohns disease because approximately 20% of them presented with anal fissure. (4%) were in bothsides located. This is inconsistent with study done by Safia Rehman in 2009 in which the ratio of anal fissure posteriorly was (47.2%) & other locations were (52.8)⁽³³⁾.

In our study & according to presentation we found that the most common presentation was constipation (98%) & pain during defecation (68%) associated with (54%) bleeding per rectum (streaks of blood). The least presenting symptom was pruritus in about (6%) & diarrhea in about (4%). This is about to be consistent with the study mentioned above by Safia Rehman in 2009 in which constipation was (63%), pain (73.2%), bleeding (53.5%) & pruritus (32.3%).

Conservative management of anal fissure last for 3-6 weeks. This was noticed in our study that only two cases were underwent anal dilatation under general anesthesia. So, non-operative measurements gained benefit in about 96% of patients in our study & only 4% of them underwent dilatation under general anesthesia

6. Conclusions

- ❖ Non-operative treatment heals majority of anal fissures in pediatrics within few weeks and If the fissure does not heal and becomes chronic, further treatment, such as anal dilatation under general anesthesia is quite enough.
- ❖ Anal fissures can be simply and effectively treated medically by topical Proctocidar ointment and lidocaine gel 2% in addition to lactulose syrup & purgative.
- ❖ These are an excellent combination, associated with a low recurrence rate and minimal side effects.

7. Recommendations

Education about the disease & encourage drinking of plenty of fluid & eating fruits are important & necessary in conservative measurements for treatment of anal fissure in children. Due to importance of early presentation of patient's with (AF), we recommend that:

- ❖ Importance of education about the disease especially in the primary health center services in order to increase the possibility knowledge of this disease.
- ❖ Encourage the child to drink plenty of fluids and to eat fruit.
- ❖ Increase lactulose to make feces softer & Keep giving the correct dose for at least one month before trying to gradually reduce it.
- ❖ Brush teeth after giving lactulose to prevent tooth decay.
- ❖ Informing the family to follow the medical treatment carefully.

The family should be informed about that & should undergo the conservative management otherwise incomplete healing may occur & progression of acute anal fissure to chronic which the latter not responding to medical treatment anymore.

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