



Short communication



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Epidemiological and clinical profile of primary anal fissures in the hospital of Sikasso

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Abstract

Anal fissure is a superficial attack of the anal canal between the skin-mucosa junction, located preferentially at the anal commissure. The objective of this study is to highlight the epidemiological and clinical profile of primary anal fissures in the hospital of Sikasso. This was a cross-sectional study that took place from February 2018 to January 2020 and included patients admitted to the hospital of Sikasso for primary anal fissure. Other cases of anal fissures were not included in this study. A total of 71 patients were collected during the study period. The mean age of our patients was 42.12 years (extremes 20 and 60 years) and a male/female sex ratio of 1.95. The symptoms were dominated by proctalgia (84%) followed by rectal pain (24%), constipation (12%), anal discharge (8%) and anal pruritus (0.71%). On proctological examination, the following were noted: presence of a sentinel mark (32%), sensitivity to palpation (45%), and moderate (56%), posterior (88%), anterior (8%), and lateral (0.71%) location. The fissure was at its first episode in 52% of cases (37 patients) and had recurred in 48% of cases (34 patients). Reflex sphincter hypertonia was noted in 26 patients (36%). The associated pathologies were internal hemorrhoids (45%), erythematous rectitis (0.71%) and rectal polyps (0.71%). The management was based on hygienic-dietary, medical and surgical aspects. Healing of the lesions was observed in 56% of cases after four weeks of medical treatment. The short and medium term satisfaction rate after surgery in 17 patients was 95%. Primary anal fissure is a common proctological pathology in Sikasso. Surgery remains the most effective, curative and definitive treatment, even if medical treatment associated with hygienic and dietary measures plays a major role in healing. Surgery is often ignored by the patient and surrounded by taboo in our environment.

Introduction

Anal fissure is a superficial injury of the anal canal between the skin-mucosa junction, preferentially located at the anal commissure. It is clinically manifested by anal pain during defecation with the presence of fresh blood on the stool and/or on the toilet paper [1,2]. This pain is discontinuous and rhythmized by defecation. It will persist after or resume after a transient lull (pain in two stages) for a variable duration, from a few minutes to a few hours, before disappearing until the next defecation. This chronology is very specific, allowing the diagnosis to be evoked even before the physical examination. It may radiate to the back, buttocks, genitals and urinary organs. A reflex constipation may coexist; it is sometimes even sought by the patient who fears defecation. A bleeding marking the stool is possible [3]. It is a frequent reason for consultation in proctology. The first epidemiological study on anal fissures was carried out in New Mexico using diagnostic coding. It estimated the annual incidence of anal fissures in the general population at 0.11%. The authors of this study estimated that the lifetime risk of suffering from anal fissure is 7.8% [4]. The literature reports that the prevalence of this pathology is higher in pregnant women, with 1.2% of anal fissures during the last trimester of pregnancy and 15.2% during the immediate postpartum period [5]. In Bangui, Central African Republic, a study conducted on anorectal pathologies found that anal fissure represented 4.48% of lesions observed [6]. Another study carried out in Dakar on the same theme, after analysis of 2061 proctological examinations, reported 12.37% of cases of anal fissure [7]. In Mali, very few studies on primary anal fissures have been conducted. The present work describes the epidemiological and clinical profile of primary anal fissures followed at the proctology unit of the hospital of Sikasso.

Methods

Type and population study: this was a cross-sectional study of symptomatic patients who were treated as outpatients for primary anal fissures. Patients were collected over a period from February 2018 to January 2020 at the proctology unit of Sikasso Hospital, with regular follow-up.

Inclusion and exclusion criteria: inclusion criteria were based on the diagnosis of primary anal fissure and the patients' agreement to participate in the study (informed consent). All other forms of lesions, including other cases of anal fissures, were not included in this study.

Data collection and statistical analysis: the data collected through a questionnaire were entered in Excel, then analyzed using Epi-info 7. In, given the purpose of the study and the sample size, the data analysis was based on descriptive analysis. The quantitative variables were described as mean plus extreme and qualitative variables in terms of percentage.

Case management procedure: in terms of management, in most cases, each patient received a rectal preparation with sodium dihydrogen phosphate (Normacol) one hour before the examination. The treatment of the patients consisted of two components, medical and surgical.

The medical component included: hygienic and dietetic rules: sufficient water intake (1.5 to 2l/L/day), diet rich in dietary fibres, sitz bath morning and evening; regularization of the transit by a soft laxative: Polyethylene glycol 4000 sachets every eight hours (dosage modifiable according to the clinical response); analgesic: paracetamol + codeine oral: one tablet before each bowel movement; local topical suppositories: one intra-rectal suppository every eight hours.

The surgical component: the technique used was fissurectomy, which consisted of excision of the base and edges of the fissure, partial section of

some fibers of the internal sphincter visible on the posterior commissure; then an anoplasty consisting of lowering a small flap of rectal mucosa to the skin was necessary in some cases.

Results

A total of 71 patients were collected during the study period. The mean age was 42.12 years (extremes 20 and 60 years) and the sex ratio male/female was 1.95. Clinically, the symptoms were largely dominated by proctalgia in 84% of cases, followed by rectal discharge with 24% of cases, constipation (12%), anal discharge (8%) and anal pruritus (0.71%) (Table 1). The proctological examination was performed in the pectoral knee position in 92% of cases and in the left lateral decubitus position in 8% of cases. It showed sentinel marisci in 23 patients (32%); significant sensitivity in 45% of cases (32 patients); moderate sensitivity in 56% of cases (40 patients). The anal fissure was posterior in 63 patients (88%); anterior in 8% (6 patients); lateral in 1 patient (0.71%). The fissure was at its first episode in 52% (37 patients) and had recurred in 48% of cases (34 patients). Reflex sphincter hypertonia was noted in 26 patients (36%) (Table 2). The comorbidities diagnosed during proctological examinations were internal hemorrhoids (45%); erythematous rectitis (0.71%) and rectal polyps (0.71%). The management of the patients included three components: hygienic-dietary, medical and surgical. All patients received medical treatment. Surgery was proposed in case of obvious failure of medical treatment after six weeks of regular follow-up, of which 24% (17 patients) were operated on with a short and medium term satisfaction of 95%. Healing of the lesions was observed in 56% of cases (40 patients). The minimum follow-up time for patients was 7 days and the maximum was 6 weeks. (Figure 1, Figure 2).

Discussion

Anal fissure is a frequent and benign pathology, its pain is disabling and its evolution recurrent. Its diagnosis is clinically obvious, its first-line treatment is conservative medical with a high cure rate in the acute phase and surgery is the treatment of choice in the chronic phase in the majority of cases. Few studies on anal fissures have been conducted in Mali. The present study, which is the first in the Sikasso region, aimed to highlight the epidemiological and clinical profile of primary anal fissures in the hospital of Sikasso. The literature reports that the prevalence of proctologic pathology in the general population is virtually unknown. However, a study of a cohort of 20,000 people reported a prevalence of hemorrhoidal disease of 13.1% in men and 14.1% in women, with unknown use of medical care [8]. Despite the benign nature of anal fissure, patients confide in medical personnel only when symptoms become worrisome. The concealment of anal symptoms by patients had already been reported in the study of Siproudhis *et al.* With 58.3% of patients with a proctological functional disorder who had never consulted for this reason [9]. In our study, the average age of the patients was 42.12 years (extremes 20 and 60 years) with a male predominance. This finding has been reported by several authors [10-13].

Clinically, the manifestations that motivated the proctological consultations were largely dominated by proctalgia in our series. Our data support those found by other authors throughout Africa and other countries in the world [14-19]. Anal pain is the most common clinical manifestation of anal fissure, regardless of its location [17]. It is a characteristic tearing or glass-breaking pain in the anus that is provoked and punctuated by defecation and maintained or aggravated by permanent excessive spasms in the sphincters [20]. In our study, anal discharge with a serohematic appearance was recorded in 8% of cases. This aspect of anal discharge is most often found in patients with this symptom [20]. Other

authors also report that this clinical manifestation is less frequent than pain [14-19] as reported in our study. The literature reports few cases of rectal bleeding [21], whereas in our study, rectal bleeding was encountered in seventeen patients out of seventy-one. In our context, this can be explained by the fact that these patients initially ignore and/or neglect the disease, and it is when they observe the appearance of blood in the stool that they take the anal lesions seriously and this is why rectal bleeding comes second to proctalgia in terms of mobile symptoms. Constipation and anal pruritus accounted for 12% and 0.71% respectively in our series.

Some studies find higher figures than ours for constipation [15,16,18,19]. The same is true for anal pruritus, which reaches a much higher rate in other series [14-19]. The constipation encountered in anal fissures would be induced by pain and involuntary anal contraction due to fear of exoneration [17]. Concerning anal pruritus, for Laurent S *et al.* it generally translates the beginning of healing of the fissure [17] whereas for others, the serous secretion coming from the fissure causes an oozing giving rise to a wet anus and an anal pruritus [22]. In our series, the pruritus can be explained by the serous secretion with frequent oozing observed through the careful examination of chronic lesions in one patient, thus corroborating the second theory on the cause of pruritus. Regarding the topography of anal fissures, it was posterior in 88%, anterior in 8% and lateral in 0.71% of cases in our study. Several studies confirm the predominance of the posterior location of the anal fissure compared to the anterior location [17,23,24]. The frequent posterior location of the anal fissure can be explained by a defect in the vascularization of the posterior commissural of the anal canal, which has been well demonstrated by anatomical, angiometric and debimetric studies [17,24]. It should be noted that the lateral location of the fissure in our series was of neoplastic origin on histology.

The notion of fissure recurrence is a frequent entity. In our series, the fissure was at its first episode in 52% of cases and was chronic in 48% of cases. Other studies conducted elsewhere have found fairly high figures for the first episode of the fissure compared to recurrence; for example, the series by Denke D.L in Lomé in 2003, which found 97% of anal fissures in their first episode and only 3% of cases of recurrence [18]. Garcia in 2008, in Spain, found 88% of fissures at the first episode against 12% of cases of recurrence [25]. The high number of recurrence cases in our study is explained by the fact that patients are treated in the majority of cases during the first episode either by traditherapeutes or by self-medication. It is when the symptoms persist or become disabling that they turn to the medical community. Some pathologies associated with anal fissure were noted in our series. These were internal hemorrhoids (45%), erythematous rectitis and rectal polyp (0.1%). Similar results have been reported in other studies [14,18]. The occurrence of these different pathologies at the time of diagnosis of anal fissure may be related to the etiopathogenic factors they have in common and their high frequency [18]. Concerning the healing of the lesions, it was observed in more than half (52%) of the cases after a period of four weeks of well-conducted medical treatment in all the patients. The main purpose of this medical treatment was to relieve the patient by acting on the pain and therefore on the sphincter hypertonia, thus promoting healing, and to regulate intestinal transit. A sitz bath and sufficient daily water intake were also associated with the medical treatment. In the literature, the healing rates of anal fissures after conventional conservative treatment are very variable. The percentage of healing observed in our series is relatively higher than those reported by authors [26-28].

Conclusion

The results in our series can be explained in part by the fact that the patient was well-informed

about the recurrent nature of the disease, the complexity of the treatment and, above all, the particular emphasis placed on the need for good therapeutic compliance throughout the follow-up period. Also, given the high failure rate of medical treatment of anal fissure in general, due to poor compliance, we have introduced an innovation in the follow-up arsenal by instituting a daily telephone call to each patient to ensure that medication is being taken and that hygienic and dietary measures are being respected, because experience tells us that: "once the patient is relieved, the treatment is abandoned". Regarding surgical treatment, we obtained a satisfaction rate of 95% in the short and medium term, despite the modest size of our sample. The surgical technique used was fissurectomy for all our patients who failed medical treatment. This technique allows a resection of the perifissure fibrous tissue by decreasing the resting anal tone, thus favoring the healing without risk of anal incontinence because it spares the internal sphincter. It also allows a histological study of the surgical specimen. Some authors have preferred to associate anoplasty with fissurectomy, considering it as a valuable surgical treatment for chronic anal fissure, sparing the internal sphincter, and having satisfactory results on the reduction of the average resting anal pressure, with less anal incontinence [29,30]. Fissurectomy can be isolated or combined with sphincterotomy, a covering plasty, or both. Fissurectomy alone is less effective than lateral internal sphincterotomy for pain control [31,32].

What is known about this topic

- *Fissures are known for their recurrent nature and this is closely related to their pathophysiology explained in vascular and mechanical theory; pain reveals the disease and is the master symptom at first;*
- *The triggering mechanism is either related to an intestinal transit disorder (constipation, diarrhea) or tumor although rare. Radical treatment in the chronic phase is purely surgical.*

What this study adds

- This study brings a socio-cultural component to the fissure both in terms of social interpretation of the disease considered as a bad fate cast by someone because of its recurrent character;
- On the etiological level, this study highlights another possibility of causing a fissure (iatrogenic) following an abusive traditional treatment of an anorectal manifestation other than the crack but which appears as a direct consequence of this therapy.

Competing interests

The authors declare no competing interests.

Authors' contributions

Oumar Traore: study design, data collection, editing of the final report and editing of this manuscript. Abdoul Salam Diarra: study design, statistical analysis of data, editing of the final report, and editing of this manuscript; Salia Keïta: revision and translation of the manuscript into English; Kalba Tembiné, Kadidiatou Cissé, Saidou Touré, Ibrahim Coulibaly, Ahmadou I Dramé, Souleymane Sidibé, Korotoumou Wélé Diallo, Théodore Habib Maxime Coulibaly, Moussa Diarra: review of the article. All authors read and approved the final manuscript.

Tables and figures

Table 1: distribution of patients by reason for consultation

Table 2: distribution of patients according to proctological examination data

Figure 1: young posterior anal fissure

Figure 2: chronic posterior anal fissure

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Table 1: distribution of patients by reason for consultation

Reason for consultation	Number (N)	Percentage (%)
Proctalgia	60	84
Rectalgia	17	24
Constipation	9	12
Anal flow	6	8
Anal pruritus	1	0.71

Table 2: distribution of patients according to proctological examination data

Data from the proctological examination	Number (N)	Percentage (%)
Sentinel marker	23	32
Sensitivity to palpation	Intense	45
	Moderate	56
Posterior location of the anal fissure	63	88
Anterior location of the anal fissure	6	8
Lateral location of the anal fissure	1	0.71
Reflex hypertonia of the anal sphincter	26	36



Figure 1: young posterior anal fissure

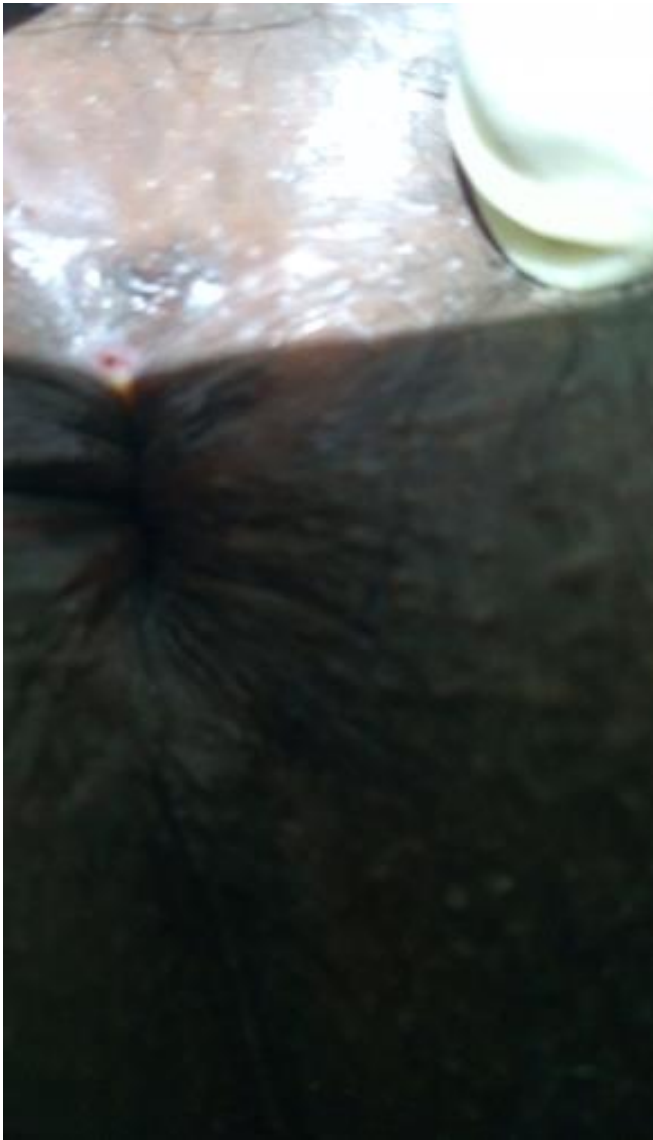


Figure 2: chronic posterior anal fissure