Acta Scientific MEDICAL SCIENCES (ISSN: 2582-0931)

Volume 6 Issue 9 September 2022

Research Article

Surgical Treatment of the Crack at the Polyclinic of the Armees of Kati

FM Keita[1]*, B Traoré[2], D Traoré[2], M Coulibaly[3], O Guindo[5], K Mallé[12], A Traoré[4], D CISSE[2], P Coulibaly[6], S Mariko[12], A Guindo[2], DT Théra[2], KI Keita[10], MS Konate[8], D Samaké[9], BT Dembelé[7] and AP Togo[7]

[1]Kati Military Polyclinic, Mali

[2]Department of General Surgery, Sominé DOLO Hospital of Mopti, Mali

[3]Medical Biology Laboratory Service, Sominé DOLO Hospital of Mopti, Mali

[4]Anesthesia/Resuscitation Service and Operating Room, Mali

[5]Public Health Department, Sominé DOLO Hospital of Mopti, Mali

[6]Gyneco-Obstetrics Department, Sominé Dolo Hospital in Mopti, Mali

[7]Department of General Surgery, CHU Gabriel Touré, Mali

[8]Mopti Garrison Infirmary, Mali

[9]Department of Medicine, Sominé Dolo Hospital in Mopti, Mali

[10]Sikasso Referral Health Centre, Mali

[11]Gyneco-Obstetrics Department, Mali Hospital, Mali

[12]Ségou Regional Health Directorate, Mali

***Corresponding Author:** FM Keita, General Surgeon, Research Fellow in General Surgery at CNRST, Mali.

DOI: 10.31080/ASMS.2022.06.1345

Received: June 21, 2022

Published: August 30, 2022

Abstract

Primary fissure was the most common proctological pathology after hemorrhoidal disease. Our objectives were to describe the diagnostic and therapeutic aspects of the primary fissure.

This was a retrospective study that took place from January 2015 to May 2021 at the Polyclinic of the Armies of Kati.

We had surgically treated 40 patients or 33.05%, out of 121 patients with primary fissure. Our inclusion criteria were all cases of primary fissure diagnosed and surgically treated in the surgical department of the Polyclinic of the Armed Forces for the duration of the study. Excluded from the study were medically treated fissures as well as secondary cracks.

The average age was 32.9 years ± 10.26. We had recorded 60% of men with a sex ratio of 1.5 in favor of men.

Pain was the clinical sign encountered in all patients, 100% of cases.

Localizations at the posterior commissure were the most frequent, accounting for 62.5% of cases.

The associated pathologies consisted mainly of hemorrhoidal disease 50%, polyp 3.4% malignant tumor 3.4%. HIV serology was voluntary, with only 1 in 8 HIV1 and HIV2 positive cases tested.

The traditional treatment had been practiced in 55% of our patients, 42.5% of the patients had a consultation time of more than 2 years.

The operative indication was the failure of medical treatment.

The crackectomy with dilation had been performed in all our patients or 100% of cases, it was associated with hemorrhoidectomy in 42.5% of cases.

The surgical follow-up had been simple in 97.5% of cases at 6 months 85% at 1 year, 95% of patients were satisfied at discharge from the hospital.

Keywords: Crack; Primary; Treatment; Surgery

Introduction

Crack is an acute or chronic and recurrent longitudinal superficial ulceration of the anus. It is characterized by severe pain with sphincter contracture and epithelial tear in the acute and youthful form. During evolution, pain and contracture decrease, the visual analogue scale of pain decreases by half and then by three out of four (3/4) after 4 to 8 weeks of follow-up [15].

Crack is the most common proctological pathology after hemorrhoids respectively 13% and 47% [15], 1% of French people say they have been operated on an crack.

In Africa, some studies have shown: In Lomé (Tokoin University Hospital), from 1993 to 2002 the crack occupied 3.9% of consultations in a surgical setting [25]. In Mali, a study carried out at the B surgical department at the CHU du point G from 1979 to 1997 showed that 15% of proctological consultations and 4% of surgical consultations in the department were crack [2].

Practical surveys conducted among specialists show that therapies carried out in 1st intention in patients suffering from chronic fissure consist of pure analgesics and healing topicals in 50% of cases, surgery intervenes in 2nd intention [15].

Recurrence after drug healing is 1/3 to 2/3 after 1 to 3 years of follow-up: [15]. At the Polyclinic of the Armed Forces, no study has focused on this pathology, however the resurgence of HIV must draw particular attention to anorectal diseases [8]. This motivated us to undertake this work on the crack in the surgical department.

Patients and Method

This was a retrospective study that took place from January 2015 to May 2021 in the surgical department of the Polyclinic of the Armies of Kati.

Included in the study were: Cases of primary fissure diagnosed and surgically treated in the ward during the study period.

Excluded from the study were: Young non-operated fissures and secondary cracks. Data carriers: They consisted of individual survey sheets based on the patient's records and observations, hospitalization and operative report records. Data entry and analysis were performed on the EPI info 6.0 software. The Chi^2 test was used for the comparison of proportions, the difference is significant at p less than 0.005.

Methods

The surgical indication was posed in all patients with an fissure resistant to well-conducted medical treatment. Our diagnostic elements were based on the interrogation of the patient, the clinical examination as well as the results of the para-clinical examinations. All patients were subjected to the same treatment protocol. Temperature, pulse, blood pressure were checked regularly, pain was assessed by the EVA method (visual analogue scale). Anorectoscopy was systematically requested in all cases of fissure.

The preoperative assessment includes: complete blood count (Nfs) sedimentation rate (vs), rhesus grouping, blood glucose, serum creatinine, prothrombin level, bleeding time, clotting time.

Patients were seen in pre-anesthetic consultation with the results of the preoperative assessment and before any programming. They were then hospitalized 1 day before the surgery. The tampon introduced intrarectal during the procedure was removed on the first day after the procedure.

Dilation was systematic after each surgical procedure.

The patient's discharge was conditioned to the improvement of his clinical condition.

Results

- Out of a total of 121 patients with fissure, 40 had been treated surgically or 33.05%, she had represented 3.28% of the surgical consultations of the Polyclinic of the Armed Forces from January 2015 to May 2021.
- The male sex was the most represented with 60% of cases and a sex ratio is 1.5.
- The age group from 31 to 45 years was the most represented at 55% with extremes of 16 - 50 years and an average of 32.9 ± 10.26 years.
- Almost half of the patients, or 42.5%, had a low income. Recruitment had been dominated by regulated surgery with 39 patients or 97.5%, the only patient who had consulted in

emergency had hemorrhoidal thrombosis associated with the fissure in intraoperative.

- Pain had been the main reason for consultation in 60% of cases. The favoring factor was not found in 90% of cases and 60% of patients had no particular history; 1 HIV-positive patient was on triple therapy.
- Pain had been the clinical sign found in all patients, 100% of cases.
- Characteristics of pain: 3-stroke pain was found in 57.5% of cases.
- The discharge was bloody in 71.4% of cases and 92.5% of patients were in their 1st episode. Among the recurrences we had 1 case of tumor diagnosed during the 2nd intervention in a 44-year-old soldier and 2 others had a notion of familial diabetes and alcohol-smoking.
- We had registered 37 patients or 92.5% who were in their first intervention for fissure (Table 1).
- The posterior commissure was the preferred seat of the fissure in 62.5 of the cases. The crack was unipolar in 97.5% of cases, the case of bipolar fissure had been observed in a patient in connection with voluntary termination of pregnancy.
- The fissure was associated with other pathologies of the anorectal sphere in 72.5% of cases including 42.5% of hemorrhoidal disease.
- The general condition was kept in all our patients.
- Pain with sphincter hypertonia had been found in all patients.

Chronic uninfected fissure accounted for 70% of cases at ano-rectoscopy.1cases of progressive young fissure resistant to medical treatment was observed. 20% (8 patients) of our patients had given their consent to the HIV AIDS test among which 1 patient or 12.5% was positive; 55% of patients had carried out a traditional treatment (based on medicinal plants) before the medical consultation. In the African context, traditional medicine is dominated by phytotherapy based on decoctions in drinkable solution and in sitz baths. This treatment rather led to a covering of the fissure by a fibrosis made of necrotic tissues with an aggravation of the contracture of the anal sphincter leading to an evolution of the young fissures towards chronicity.

The young fissures successfully treated medically were excluded from our study, the failures of the medical treatment and the complications of the traditional treatment represented the essential of our sample.

The antiseptic sitz bath was systematic from the first postoperative day, tetanus prevention (SAT serotherapy and VAT vaccination) had been carried out in all patients, as well as the use of analgesics, anti-inflammatories and laxatives.

All the patients had benefited from medical treatment in the first instance, which consisted of digital anal dilation associated with antibiotic therapy based on metronidazole 500 Mg morning and evening and ciprofloxacin 750 Mg morning and evening, plus painkillers based on anti-inflammatory drugs and paracetamol for at least three weeks, accompanied by a sitz bath with antiseptics; It was in front of the failure of this treatment which had led in most of the cases to a clean wound by fighting against the infection and an improvement of the clinical symptomatology without healing of the fissure had not allowed to avoid the surgical cure (fissurectomy plus anoplasty).

Locoregional anesthesia was performed in all patients, i.e. 100% of cases.

Crackectomy with anoplasty was the most applied technique in 95.5% of cases, 1 case or 4.5% of fissurectomy plus partial sphincterotomy.The surgical treatment consisted of a median or commissural sphinterectomy associated with a conical resection at the inferior base and superior summit of the fissure plus a lowering of the rectal mucosa on the anal margin. (sphinterectomy plus fissurectomy plus anoplasty). This treatment allowed the removal of the anal contracture and healing of the crack.

The average duration of progression was 3.25 ± 2.82 years, 42.5% of patients sensed the signs of the disease for more than 24 months.

The average length of hospital stay was 2.6 days.

Traditional treatment was performed in 55% of our patients before the use of surgical treatment (Table 2).

The surgical technique was dominated by fissurectomy in our series with 18 cases (45%) followed by the association of hemorrhoidectomy with fissurectomy in 17 cases (42.5%) illustrated by table 3.

Postoperative morbidity was 2.5% represented by postoperative haemorrhage.

Postoperative follow-up in the 1st month had been simple in 100% of cases. The satisfaction of patients after the surgical procedure in the medium and long term had been 95%, only 2 patients had not been satisfied after the surgical procedure including a case of HIV positive and an association fissure rectal tumor.

92.2% of patients were in their first episode.

Age Episode of the crack	15 to 30 years	31 to 45 years	> 45 ans	Total	Percentage
Episode[1]	16	20	1	37	92;5%
Recidivism	-	2	1	3	7,5%
Total	16	22	2	40	100%

Table 1: Age and episodes of the crack.

Age Traditional treatment	15 to 30 years	31 to 45 years	Sup at 45 years old	Total	Percentage
Performed	9	11	2	22	55%
Not done	7	11	-	18	45%
Total	16	22	2	40	100%

Table 2: Traditional treatment and age of patients.

Traditional treatment was performed in 55% of our patients before the use of surgical treatment.

Épisode Surgical treatment	Episode[1]	Recidivism	Total	Percentage
Fissurectomie	17	1	18	45%
Fissurectomie+Hémorroïdectomie	15	2	17	42,5%
Fissurectomie+Fistulectomie	3	-	3	7,7%
Fissurectomie+Sphincterotomie	1	-	1	2,5%
Fissurectomie+Thrombectomie	1	-	1	2,5%
Total	37	3	40	100%

Table 3: Type of surgical treatment and episode of occurrence of the disease.

Simple or associated hemorrhoidectomy fissurectomy dominated surgical treatment.

Authors	Man	Wife	Total
Ellen N., *et al.* [8]	76,2%	23,8%	21
Diarra., *et al.* [5]	66,3%	33,7%	132
CHU Tokoin [25]	77,4%	22,6%	168
Our study	60%	40%	40

Table 4: Fissure and sex by authors.

The predominance of the male sex was observed in all authors.

Authors	Average age	Actual
Diarra., *et al.* [5]	36,43 ± 9,95	132
Fall., *et al.* [7]	38	31
Ellen E., *et al.* [9]	40	21
Minguez., *et al.* [20]	49,5	140
Our study	32,9 ± 10,26	40

Table 5: Fissure and age by authors.

Adults were the most affected according to the literature.

Authors	Haemorrhoids	Fistula	Marisque	Polyp	Malignancy
Diarra coll. 1979-1997 (132cas)	29,54%	6,05%	23,48%	0,8%	-
CHU Tokoin [25] 1993-2002 (168 cas)	-	-	-	3	4
Our study 2015-2021 (40cas)	50%	5%	20%	2,5%	2,5%

Table 6: Pathologies associated with the crack and the authors.

Hemorrhoidal disease was the most associated pathology.

	Year	Total	Posterior commissure
Diarra., *et al*. [5]	1979-1997	132	79,51%
Ellen N., *et al*. [8]	1999-2004	21	66,6%
Our study	2015-2021	40	62,5%

Table 7: Crack location and perpetrators.

The posterior commissure was the preferred seat of all authors.

Discussions

In our series, the fissure had constituted 3.28% of all surgical consultations from January 2015 to May 2021, it represented 4% of all surgical consultations at the G-spot hospital over 8 years of activity from 1979 to 1997 [2]. In France, it was 13% of proctological consultations [15].

The number of consultations was 3 on average per patient in our study; 33.05% of the fissures were treated surgically.

The male predominance observed in our series was found in all authors in the literature [5,8,25] (Table 5).

The most affected age range was between 38 and 50 years according to most authors [5,7,9,20] (Table 5).

Occupations considered to be low-income (pupils/students, housewives, peasants) made up 42.5% of our patients.

Only 1 patient was admitted to us urgently; it was a case of hemorrhoidal thrombosis in which exploration led to the discovery of a posterior commissural fissure.

pain was the main reason for consultation with 60% of cases. The characteristic 3-stroke pain punctuated by stool emission found in our study in 57.5% of cases was less than the 79.5% of Diarra., *et al*. [5].

The discharge was bloody in 71.4% of cases compared to 84.4% for Diarra., *et al*. [5].

55% of patients first tried a traditional treatment consisting of herbal laxative in infusion.

The history found was familial diabetes 5 times out of 40, 1 case of voluntary termination of pregnancy was observed.

The favoring factors found were: 1 case of HIV positive serology observed, this test not being systematic, 8 out of 40 patients had voluntarily accepted it, 1 case of crack after childbirth and 2 cases of alcohol smoking were the main promoting factors found as by Diarra., *et al*. [5]; 3 cases of recurrence had been observed or 7.5%: 1 case associated with a rectal tumor in a 44-year-old soldier, the 2nd in a 32-year-old alcoholic-smoking gendarme with a posterior commissural fissure with hemorrhoids and history of generalized dermatosis, HIV serology was not accepted by the patient; the^{3rd} Case of recurrence was observed in a 31-year-old gendarme operated for fissure 10 months ago, smoking with the notion of family diabetes. Out of a total of 140 patients Minguez., *et al*. [20] in 2008 had found 12% recurrence in patients who underwent percutaneous lateral sphincterotomy compared to 4.6% in patients who underwent open-air sphincterotomy.

Fissure is a pathology that tends towards chronicity. 42.5% of patients had had the pathology for more than 2 years. The average duration had been 3.25 years against 3 years according to studies by Fall., *et al*. in Dakar [9] in 2002 in 31 patients suffering from this pathology.

The general condition was kept in all our patients. There is no direct relationship between the general condition of the patient and the cracked pathology.

The chronic uninfected fissure was found at ano-rectoscopy in 70% of cases against 52.3% of advanced fissure at Brazza University Hospital [8].

45.2% of patients were blood type O+; of 8 HIV tests performed, 1 was positive (HIV1et2); a study conducted on 434 patients with anorectal pathologies, aged 20 to 40 years, all with HIV, 87.1% had HIV1; HIV2: 8.1%; HIV1 and 2: 48% in Bangui according to a retrospective study spanning 4 years [31].

Hemorrhoidal disease was the pathology most associated with cracking in all authors [5,25] (Table 6).

The posterior commissure was the preferred seat of the fissure according to most authors as in our series (Table 7).

All patients had benefited from fissurectomy with dilation, it was associated with hemorrhoidectomy in 35% of cases. The Diarra., *et al*. team performed fissurectomy associated with dilation in 52% of cases, isolated crackectomy in 34.6% of cases, fissurectomy with lateral sphincterotomy in 9% of cases, anoplasty was associated with crackectomy in 4% of cases.

1 case of postoperative haemorrhage had been observed in a 44-year-old subject operated for crack recurrence in whom a malignant tumour had been observed intraoperatively which had been resolved by a compression dressing to stop the haemorrhage**.** The consequences were simple in 97.5% of cases compared to 92.3% found by Diarra., *et al*. [5] with gas incontinence in 3.84% and wound infection in 3.84% of cases. Siddique., *et al*. [29] found 6% gas and stool incontinence after sphincterotomy compared to 0% in patients treated with glycerin trinitrate ointment.

The surgical follow-up was simple in 100% of our patients at 1 month postoperatively. The average hospitalization was 2.6 days.

The patient satisfaction rate was 95% after the intervention, 2 patients were not satisfied after the surgical procedure, it was a 40-year-old HIV-positive patient in whom clinical signs had persisted and a 44-year-old patient received for crack recurrence in whom a malignant-looking tumor was associated with the crack.

Conclusion

The fissure is a fairly common pathology whose diagnosis is essentially clinical. The young crack is treated medically and surgery is indicated only in case of resistance to medical treatment or for chronic cracks. Surgical follow-up is usually simple, but incontinence or stenosis can occur in the long term. Recurrence is possible regardless of the type of treatment undertaken.

Bibliography

1. Brisinda G., *et al*. "Botulinum toxin injections in the internal anal sphincter for the treatment of chronic anal fissure long-term results after two different dosage regimens". *Annals of Surgery* 228 (1998): 664-669.

2. Crossover T and Gupka PJ. "Evaluation de la douleur dans la fissure anale chez les patients à consommation élevée de piment rouge. Hospital rechearch center Nagpur Inde". *Arg Gastro Entérol* 2 (2008): 162-168.

3. Crossover T and Gupka PJ. "Hospital research center Nagpur India. Anale fissure treatment in India". *Arg Gastro Entérol* 2 (2008): 124-127.

4. Diallo G., *et al*. "La maladie hémorroïdaire dans le service de chirurgie B de l'hôpital du point G". *Mali Médical* 18 (2003): 236-239.

5. Diarra BM. "Fissure anale primitive en chirurgie B Hôpital du point G Bamako 192 cas". *Thèse De Médecine* 98 M. 67.

6. Eisenhammer S. "Surgical correction of chronic internal (sphincteric) contracture". *South African Medical Journal* 25 (1951): 486.

7. Eisenhammer S. "The evaluation of the internal anal sphincterotomy operation with special reference to an anal fissure". *Surgery, Gynecology and Obstetrics* 109 (1959): 583.

8. Ellen N., *et al*. "Traitement chirurgical des fissures anales au CHU de Brazza à propos de 21cas". *Journal Africain De Chirurgie Digestive* 2 (2003): 292-295.

9. Fall B., *et al*. "Prise en charge des fissures anales chroniques au CHU le Dantec". *Dakar Medical* 47 (2002): 31-32.

10. Goliger JC. "Surgery of the anus rectum and colon (4e éd)". Baillere thindall. London 113 (1984): 63-68.

11. Grandjean P. "Fissure anale à l'heure du traitement chirurgical. Léiomyotomie postérieure avec anoplastie ou Sphinctérotomie latérale int". *Journal of Med Lyon* 68 (1987): 47-49.

12. Hananel N and Gordon PH. "Re-examination of clinical manifestations and response to therapy of fissure-in-ano". *Diseases of the Colon and Rectum* 40 (1997): 229-233.

13. Hoffmann DC and Goliger JC. "Lateral subcutaneous internal sphincterotomy in treatment of anal fissure". *British Medical Journal* 3 (1970): 673-675.

14. Hugues ES. "Anal fissure". *British Medical Journal* 2 (1953): 803-805.

15. Jean Luc F. "La fissure anale enquête de pratique diagnostique et thérapeutique en France Aout". 1.3 (2007): 199-203.

16. Jost WH., *et al*. "Results of surgical treatment". *Coloproctology* 13 (1991): 110-113.

17. Kortbeek JB., *et al*. "Chronic fissure in ano: randomized study comparing open and subcutaneous lateral internal sphincterotomy". *Diseases of the Colon and Rectum* 35 (1992): 835-837.

18. Loder PB., *et al*. "Reversible chemical sphincterotomy by local application of glyceryl trinitrate". *British Journal of Surgery* 81 (1994): 1386-1389.

19. Lombard R and Barth X. "Traité de technique chirurgicaleappareil digestif (EMC)". (1995): 40-700.

20. Minguez M., *et al*. "Sphinctérotomie latérale interne pour fissure anale idiopathique à propos de 140 cas". Département de chirurgie générale, l'unité du colon hôpital clinique universitaire de Valence Espagne, colorectal Dis (2008): 15.

21. Nielsen MB., *et al*. "Risk of sphincter damage and anal incontinence after anal dilatation for fissure in ano. An endosonographic study". *Diseases of the Colon and Rectum* 36 (1993): 677-680.

22. Notoras MJ. "Lateral subcutaneous internal sphincterotomy for anal fissure. A new technic". *Journal of the Royal Society of Medicine* 2.53 18 (2008): 1500-1503.

23. Parks AG. "The management of the fissure in ano". *British Journal of Surgery* 43 (1956): 337.

24. Parnaud E., *et al*. "La léiomyotomie avec anoplastie dans le traitement des fissures anales". *La Presse Médicale* 76 (1968): 1661-1663.

25. Pitché P., *et al*. "Prise en charge chirurgicale des affections anorectales non malformatives au CHU Tokoin de Lomé a propos de 168 cas". *Journal Africain De Chirurgie Digestive* 3 (2002): 2-2.

26. Récamier N. "Cité par Maisonneuve jg. Du traitement de la fissure de l'anus par la dilatation forcée". *Gazette Des Hôpitaux* 1 (1949): 220.

27. Schouten WR., *et al*. "Ischemic nature of anal fissure". *British Journal of Surgery* 83 (1996): 63-65.

28. Siddique MI., *et al*. "Etude comparative du traitement de la fissure anale chronique par sphinctérotomie latérale interne et le traitement au trinitrate de glycéril pommade à 0,2%". Département de chirurgie Bangabandhu Cheikh Mujib medical university Shah bag, Dhaka 1000 Bengladesh 18 (2008): 71-77.

29. Staumont G and Suduca JM. "Thérapeutiques en proctologie: la fissure anale, de nouveaux concepts physiopathologiques et thérapeutiques". *Gastroentérologie Clinique et Biologique* 22 (1998): 148-154.

30. Touré O. "Etude des fistules anales primaires dans le service de chirurgie générale et pédiatrique du CHU Gabriel Touré à propos de 64 cas". *Thèse De Médecine* 135 (2006).

31. Yassibanda S., *et al*. "Pathologie ano rectales à Bangui (RCA)". *Mali Médical* 19.212 (2004): 34-39.