

Anorectal Abscess an Underestimated, Silent and Rough Disease. Integration of a New Treatment Line: “Four Phases” 15 Years of Experience

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Abstract

Introduction: Anorectal abscesses are a very common pathology and are underestimated. Its etiology is unknown to date, and it is defined as a collection of pus in the virtual spaces of the anus and rectum.

Objective: To describe the experience of the results obtained in the Colon and Rectal Surgery service of treated anorectal abscesses, in four hospitals in Mexico City.

Material and Methods: It is a study with a retrospective, longitudinal, observational and descriptive design. The records and files of all the patients who were treated for anorectal abscesses during 15 years in the Colon and Rectal Surgery services are reviewed.

Results: 4,549 records with confirmed diagnosis of anorectal abscess were reviewed, detecting a total of 1,311 patients, with 1,009 males representing 77% and 302 females representing 23%, in a male-female relationship. from 3:1; with an average age of 46 years, a range of 16 to 87 years. A new line of treatment is specifically described: diagnosis, surgical technique, follow-up, complications or sequelae.

Discussion: Anorectal abscesses have little relevance in their beginnings, since there is a disdain for this disease, both for its own essence, and for its apocryphal natural evolution, where its silent procedure can be devastating when underestimated. Since it can evolve into cellulite or even Fournier syndrome.

Conclusion: The treatment of anorectal abscesses is surgical, its prompt resolution and its adequate surgical technique will lead to a complete cure without sequelae, with the exposed and well-specified line of treatment called four phases.

Keywords: Abscess; Anorectal; Pus; Treatment; Surgical Technique; Fournier Syndrome

Introduction

Anorectal abscesses (AAs) are a very frequent pathology within proctological diseases, these become sometimes cataclysmic and with sequelae, most of the time devastating, and that can be preventable [1-3]. Its etiology to date is unknown, however, there is a theory that is the most accepted, formulated first in 1889 by Chiari and Herrmann, later Klosterhalfen in 1991 that reaffirms it [4]. It is more frequent in men than in women, its presentation is insidious and is defined as a collection of pus in the anorectal virtual spaces [1,5].

Objective of the Study

To describe the experience of the results obtained in the Colon and Rectal Surgery service of the AAs treated, with a deductive and critical analysis of the data obtained.

Materials and Methods

It is a study with a retrospective, longitudinal, observational and descriptive design. The records and files of all the patients who were treated for AAs in the Colon and Rectal Surgery service in four hospitals in Mexico City are reviewed:

1. Mexico City Specialty Hospital “Dr. Belisario Domínguez” of the Ministry of Health. Mexico City. Country: MEXICO. 3rd Level.
2. General Hospital “Dr. Rubén Leñero” of the Ministry of Health. Mexico City. Country: MEXICO. 2nd level.
3. General Hospital High Specialty Medical Unit La Raza National Medical Center “Dr. Gaudencio González Garza” of the Mexican Institute of Social Security. Mexico City. Country: MEXICO. 3rd Level.
4. Infectology Hospital High Specialty Medical Unit of La Raza National Medical Center. “Dr. Daniel Méndez Hernández” of the Mexican Institute of Social Security, Mexico City. Country: MEXICO. 3rd Level.

The study period is from September 2006 to September 2021. Age, sex, etiology, clinical picture, anatomical location and its classification, surgical time, line of treatment or therapeutic conduct were analyzed with a focus on surgical intervention, colostomy or not, previous surgery (recurrent), incontinence and type, reported bleeding, complications, morbidity and mortality.

Results

4,549 records with confirmed diagnosis of AAs were reviewed, detecting a total of 1,311 patients, with 1,009 males representing 77% and 302 females representing 23%, in a male relationship. 3:1 woman; with an average age of 46 years, a range of 16 to 87 years. All patients who already had infection with muscle fascia involvement or necrotizing fasciitis, as well as abscesses with already formed fistulas, were ruled out; the most frequent morbidities were identified, which in order of frequency were diabetes mellitus first, then arterial hypertension, obesity in third place and trauma in fourth place, the rest are shown in table 1. The predominant clinical picture was pain dull, stabbing or oppressive, localized severe or intense, continuous and with a gradual increase due to the mass effect, and that will depend on its location. Palpable tumor in most cases, with hyperthermia, redness or erythema, edema and increased sensitivity to digital pressure, fever, asthenia, adynamia, general malaise, among others. See table 2. On the other hand, AAs were classified by their location and incidence in this study, with perianal abscess being the most frequent and ischiorectal abscess second, see data in table 3. The average surgical time was 23 minutes, and depended on the anatomical location of the anorectal virtual space where the abscess was located. All AA drainages were performed in the operating room under regional anesthesia or sedation, see table 3.

Diseases	No. of patients	%
Mellitus diabetes	765	58%
Obesity	317	24%
Hypertension	224	17%
Dyslipidemia	62	5%
Trauma	213	16%
Heart disease	9	2.10%
Hyperuricemia	73	6%
Chronic renal failure	69	5%
Oncological pathology	81	6%
Chronic obstructive pulmonary disease and asthma	44	3%
Healthy subjects	288	22%
SITC	12	1%
Crohn	3	0.2%
Tuberculosis	5	0.3%
HIV	112	9%

Table 1: Associated morbidity in all patients with anorectal abscesses by number and percentage.

Signs and symptoms	Number of patients	Percentage
Pain	1,126	85%
Tumor	993	76%
Fever	719	54%
Suppuration	567	43%
pruritus	243	18%
Asthenia and dynamia	184	14%
Inflammatory answer systemic	359	27%
Sensation of strange body	472	36%

Table 2: Clinical table of anorectal abscesses of all patients, expressed in number and percentage.

Type of Abscess	Patients	Percentage	Surgical Time	Fistula
Submucosal	27	2%	10 Mins	0
Superficial Perial	369	28%	15 Mins	1
Deep Perial	468	36%	18 Mins	23
Isquirrectal	301	23%	25 Mins	49
Posal	120	9%	22 Mins	23
Horseshoe	21	1.6%	40 Mins	11
Supra Elevator	5	0.5%	70 Mins	0
Total	1311	100%	Media: 28 Mins	107

Table 3: Of anorectal abscesses of all patients, expressed in number and percentage. in surgical time and fistulas.

Surgical technique or integrated line of treatment four phases

Previous anesthesia in the prone position in the Kraske or seville razor position, or as a second option in the lateral or Sims position, adapted for patients with ASA IV-V; with asepsis and antisepsis, an incision is made in the skin in the area of greatest edema and as close as possible to the anus, without damaging the sphincters in the form of a cross of 2 cm by 2 cm, it is dissected and avulsed for its correct and complete drainage, reaching the deep planes, debriding non-viable tissues and draining all the purulent material with culture taking, with digital rupture of septa, it is unroofed. Phase 1 surgical lavage is performed with 4% chlorhexidine, which exposes the necrotic or non-viable tissue and consequently debrides it. With certainty of identifying the involved space or silent spaces, without leaving purulent material or non-viable tissue. Phase 2 proceeds to a second surgical wash with povidone iodine with only contact and not carving in the entire space area for 5 minutes. Phase 3 subsequently, 3% hypertonic sterile solution is applied, rinsing with povidone-iodine. Finally, phase 4, surgical lavage is performed with hydrogen peroxide, where in addition to the antiseptic effect, it is an identifier of the sites of active bleeding, thus achieving optimal hemostasis.

Closure is avoided at all costs with the option of surgical marsupialization with polyglycolic acid of 0 and pending closure by second intention (Figure 1). If the defect is too bloody, it is packed with gauze or compresses impregnated with povidone-iodine for only 24 hours. Hours and an external patch is placed. No fistulectomy is performed (because there is no fistula to treat yet). No management of the presumed primary orifice or infected gland of the anal canal is performed, since there is no infection at the site and the damage to healthy tissues would be catastrophic and without any beneficial impact as yet ascertainable.



Figure 1

The surgical technique is different in the horseshoe AA, adding a curettage with 10 intertwined gauzes and at the end placing tutors (Figure 2) and in supra-elevating AA this integrated 4-phase technique does not apply.



Figure 2

No colostomy was performed in this group of patients. Average bleeding was less than 50 mL or minimal. A total of 169 cases with recurrent abscesses without fistula were operated on as new patients, representing 13% of the study group. No type of incontinence was reported according to the Jorge-Wexner scale and the Browning and Parks scale [6]. There were no complications, morbidity, and no mortality reported.

It is known that AA are the prelude to the formation of anorectal fistulas, in this study the formation of only 107 fistulas was reported, representing 8%. Of which 34 were considered complex [7] and that is 31%. There were no recurrent abscesses reported in this study, see table 3.

All patients were given an antibiotic schedule with a double preoperative schedule starting with metronidazole for 48 to 72 hours and ciprofloxacin for 21 days. 24 hours after surgery, sediluvians or sitz baths with cold water are started every 4 hours for 20 minutes for 15 days at 08:00, 12:00, 16:00 and 20:00 hours, subsequently every 8 hours. with schedules 08:00, 14:00 and 20:00 hours, evaluating their clinical evolution in each case, until the doctor determines the time, which on average is 2 months, until extending them to every 12 hours in a schedule of 08:00 and 8:00 p.m., regardless of the daily bath; continuing extreme hygiene measures for another 6 months. The cultures carried out showed *Escherichia coli* as the main pathogenic agent isolated in 49% of the cases, the second was *Bacteroides fragilis* in 21%, *Streptococcus pyogenes* in 13% and in 17% no microorganism was isolated. It should be emphasized that no results were obtained from any anaerobic germ [8].

With an average hospitalization of 24 hours and discharge home, with subsequent control in the consultation at one week, three weeks, one month and every two months until 6 months were completed, definitive discharge was determined. Patients with fistula, Fournier syndrome, Crohn's disease and neoplasms were treated specifically.

Discussion

The AAs are given little relevance at first, since there is a disdain for this disease, both for its own essence, and for its apocryphal natural evolution, where its silent behavior can be devastating when underestimated. Since it can evolve into cellulitis (Figure 3), or even a Fournier syndrome [9] (Figure 4), not observing a synchronous or symbiotic neoplastic comorbidity [10-12].



Figure 3



Figure 4

Many authors mention that AAs are the acute or initial stage of an entire "fistula-abscess" disease entity and that even if it is consistently treated medically and surgically, it will lead to a fistula at the end of the day [13] or even in a fistula. a horseshoe fistula [7,14,15]. However, it is even more unfortunate to state that to date, it is unknown what is the factor or the etiology that AAs form fistulas in up to 75%, and that they do not [16-18]. In other investigations, AAs are defined as their cause or etiology, associated morbidities or specific microorganisms, when in fact the origin or etiology is still unknown [19-22].

The classic symptoms of AAs can be very recurrent or even obvious, but on the other hand, in some patients there are non-specific and even very isolated symptoms, which will depend on the location, size and volume effect on the virtual anatomical site specific anorectal [23,24]. Regarding the diagnosis, the authors of this research determine that a subspecialized preparation and having a high diagnostic suspicion with the pertinent expertise or espertis is pertinent and crucial. The opposite of what is reported in the literature [25]. Diagno-

sis is mainly clinical [26], however, in some cases it is essential to have the infrastructure and trained specialists to interpret them [27-30] such as endoanal ultrasound, magnetic resonance imaging, and helical computed tomography. In these hospitals where this research was carried out, there is no indicated technological infrastructure, with the occasional exception of computerized helical tomography. Therefore, they are requested by private means and at the economic cost of the patient when this is essential, for a correct protocol.

The only treatment is surgical, there being no doubt about this, and carrying it out properly avoids complications, recurrences and, best of all, a lower incidence of fistulas and therefore of complex fistulas, successfully and successfully canceling out the roughness of the disease [7,9,15,31-34]. It has been confirmed that the delay in surgical treatment is chaotic and catastrophic with increased costs, exponential consumption of supplies, and commendable wear on the health system. When all this is preventable [35-37]. The use of local anesthesia and topical drainage of the abscess is questionable, in order to save costs, however this action may be counterproductive and reprehensible in the opinion of the study authors, due to the inhospitable, unhealthy conditions of a black area and not white of an operating room, poor light with poor visibility, patient pain that is not controlled, it is also not humane or ethical, adding the lack of a comprehensive vision due to poor exposure and without adequate material and instruments, with partial or incomplete drainage, added to the lack of proper asepsis and antisepsis [38]. With a high risk of a torpid evolution, sequelae, complications, exorbitant costs, poor patient prognosis or even the risk of death [1,9,35,37-40].

It is essential to point out that AAs are not characteristic in Crohn’s disease and in Mexico it is extraordinarily rare or sporadic. This association is demonstrated in this study and it only occurred in 0.2%, unlike what is mentioned in the literature; and this can clearly be the influence exerted by foreign pharmaceutical emporiums, which are achieving a greater tendency to gain ground in our country with these claims or fashions (globalization) [17,41-43].

It is undeniable to fail to mention supra-levator abscesses of the rectum, where the diagnosis is extremely difficult since a high diagnostic suspicion and radiological studies such as computed tomography with intravenous contrast medium or nuclear magnetic resonance are required, if the resource is available; this is a consequence of another pathology of abdominal origin such as complicated diverticular disease, residual abscess or pelvic inflammatory disease, among others; its management is a surgical emergency, with laparoscopic surgical treatment, conventional surgery or guided needle aspiration with a posterior drainage system; specifically, it would not enter into the pathological entity of AAs, but as a residual abscess because it is another type of disease [29,44,45] and this does not meet the characteristics shared by other AAs such as:

- Unknown etiology.
- Primary training in anorectal virtual spaces.
- Characteristic and common clinic, due to the mass effect.
- Risk of forming anorectal fistula.
- Risk of necrotizing fasciitis.
- Risk of recurrence.

Recommendations

1. In AA there is never any involvement of any of the sphincters or the sphincteric complex, consequently there is no or there should be an alteration in continence.

2. Surgical drainage should be done in an operating room under regional anesthesia.
3. The incision should be as close to the anal opening as possible without affecting the sphincters and not closing the wound, promoting a late secondary closure.
4. There should be no delay in surgical treatment, since it is one of the main factors to avoid complications or sequelae.
5. AAs are a surgical emergency and their high potential for morbidity or mortality should not be underestimated.
6. Biopsy should be taken into account and sent to pathology in specific or suspected cases.
7. Carry out complete drainage of the purulent material from the AA cavity with four-stage surgical lavage, after culture.
8. Systematized use of sediluves or sitz baths.
9. Low-spectrum antibiotic therapy with simple adherence dosage.
10. The fistula after the abscess begins its formation at 6 weeks, but already definitively 3 months after drainage, treating it surgically electively.

Conclusion

- The treatment of AA is surgical, its prompt resolution and its adequate surgical technique will lead to a complete cure practically without sequelae, with the line of treatment exposed and well specified in four phases. In this investigation, it was shown to drastically reduce the formation of anorectal fistulas to a minimum and to a null recurrence in terms of abscesses.
- It is a determining factor that has an impact on the good prognosis that this pathological entity is evaluated and treated by a Colon and Rectal Surgery subspecialist.
- Catastrophic consequences such as complex fistulae, necrotizing fasciitis or Fournier's syndrome are avoidable or preventable if this disease is given importance.

Conflict of Interests

The authors declare that they have no conflict of interest.

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