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## Original Article

# Perianal abscess: a descriptive analysis of cases treated at the Hospital Santa Marcelina, São Paulo<sup>☆</sup>



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## ABSTRACT

**Introduction:** Perianal suppurations have an incidence of 1–2:10,000 inhabitants per year and represent about 5% of proctology consultations, more frequently in males, being rare in childhood. Although perianal or anorectal abscess is an entity of relatively simple diagnosis and treatment, in a considerable percentage of patients difficulties will be found, especially considering that the initial treatment of these patients is performed by non-specialist physicians.

**Objective:** This is a retrospective survey of cases of perianal and anorectal abscess operated in Santa Marcelina Hospital between October 2011 and December 2014.

**Patients and methods:** A retrospective study of patients operated on an emergency basis for perianal and/or anorectal abscess in Santa Marcelina Hospital between October 2011 and December 2014, being excluded patients with inflammatory bowel disease. Data of gender, age, clinical presentation, the season of the year in which the abscess occurred, time of progression of symptoms, comorbidities, signs of Systemic Inflammatory Response Syndrome (SIRS) on admission, surgeries carried out, reoperations and clinical outcome were analyzed. **Results:** Electronic medical records of 52 patients (73.1% male) who underwent surgical treatment of anorectal and perianal abscess were analyzed. The mean overall age was 43.03 years, and all patients reported pain as the main symptom, with a mean time of symptoms of 6.5 days. As for the season of the year of onset and diagnosis of perianal abscess, 61.5% of patients had this pathology in the summer and spring months.

<sup>☆</sup> Study conducted by Program of Medical Residency in Coloproctology, Department of General Surgery, Hospital Santa Marcelina, São Paulo, SP, Brazil.

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**Conclusion:** In our study, it can be observed a higher incidence of perianal abscess in males and in the warmer months; furthermore, just over half of the patients developed perianal fistula in their progression.

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## Abscesso perianal: análise descritiva de casos atendidos no Hospital Santa Marcelina, São Paulo

### R E S U M O

#### Palavras-chave:

Abscesso perianal  
História clínica  
Sinais de síndrome da resposta  
inflamatória sistêmica  
Cirurgia  
Sazonalidade

**Introdução:** As supurações perianais apresentam uma incidência de 1-2:10000 habitantes por ano e representam cerca de 5% das consultas proctológicas, com maior frequência no sexo masculino, sendo raras na infância. Embora o abscesso perianal ou anorretal seja de diagnóstico e tratamento relativamente simples, uma percentagem considerável representa maior dificuldade para tal, notadamente pelo fato do atendimento inicial desses pacientes ser realizado por médicos não especialistas.

**Objetivo:** Levantamento retrospectivo dos casos de abscesso perianal e anorretal operados no Hospital Santa Marcelina entre outubro de 2011 e dezembro de 2014.

**Casística e método:** Estudo retrospectivo de pacientes operados em caráter de urgência por abscesso perianal e/ou anorretal no Hospital Santa Marcelina entre outubro de 2011 e dezembro de 2014, excluídos portadores de doença inflamatória intestinal. Analisaram-se dados de sexo, idade, quadro clínico, época do ano da ocorrência do abscesso, tempo de evolução dos sintomas, comorbidades, sinais de Síndrome da Resposta Inflamatória Sistêmica (SIRS) na admissão, cirurgias realizadas, reoperações e desfecho clínico.

**Resultados:** Foram analisados prontuários eletrônicos de 52 pacientes submetidos à tratamento cirúrgico de abscesso anorretal e perianal, dos quais 73,1% pertenciam ao sexo masculino. A média de idade geral foi de 43,03 anos e todos os pacientes relataram dor como sintoma principal com média de tempo de sintomatologia de 6,5 dias. Quanto à época do ano do aparecimento e diagnóstico do abscesso perianal, 61,5% dos pacientes apresentaram a patologia nos meses de verão e primavera.

**Conclusão:** Em nosso trabalho, pode-se observar maior incidência de abscesso perianal no sexo masculino e nos meses mais quentes e que pouco mais da metade dos pacientes desenvolveram fistula perianal na evolução.

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## Introduction

Perianal abscess is defined as a collection of pus located in perineal tissues<sup>1</sup> and is the most common proctologic disease requiring an emergency surgical treatment.<sup>2</sup> On the other hand, anorectal abscesses result of a cryptoglandular infection,<sup>3</sup> usually of idiopathic etiology<sup>4</sup> and located in the inter-sphincteric space.<sup>5</sup>

But although most of the time perianal or anorectal abscesses are an entity of relatively simple diagnosis and treatment, in a considerable percentage of patients, difficulties will be found, especially considering that the initial treatment of these patients is performed by non-specialist physicians.<sup>6</sup>

Anorectal abscesses are classified into five types, with incidences defined: perianal (60%), ischiorectal (30%), inter-sphincteric (5%), supralevator (4%) and submucosal (1%).<sup>7</sup>

Perianal suppurations have an incidence of 1-2:10,000 inhabitants per year and represent about 5% of all proctology

consultations, being more frequent in males and occurring uncommonly in children.<sup>5,8</sup> In the United States, the estimated incidence is between 68,000 and 96,000 cases per year. However, the actual incidence of perianal abscesses is underestimated, considering that this is a condition that nowadays can be seen with spontaneous drainage; in addition, there is the possibility of treatment in the emergency room itself, or even in the physician's office.<sup>9</sup>

In this study, our goal was to conduct a retrospective study of cases of perianal and anorectal abscess operated in Santa Marcelina Hospital between October 2011 and December 2014.

## Materials and methods

This is a retrospective study through an analysis of electronic medical records of patients operated on an emergency basis for perianal and/or anorectal abscess in Santa Marcelina

**Table 1 – Symptomatology of patients with perianal and anorectal abscess.**

|                       |            |
|-----------------------|------------|
| Ache                  | 52 (100%)  |
| Bulging               | 23 (44.2%) |
| Secretion             | 9 (17.3%)  |
| Signs of inflammation | 9 (17.3%)  |

Hospital between October 2011 and December 2014; patients with inflammatory bowel disease were excluded.

Gender, age, clinical presentation, the season of the year in which the abscess occurred, time of progression of symptoms, comorbidities, signs of Systemic Inflammatory Response Syndrome (SIRS) on admission, surgeries carried out, reoperations, and clinical outcomes were analyzed.

## Results

Electronic medical records of 52 patients (73.1% male) who underwent surgical treatment of anorectal and perianal abscess were analyzed. The mean overall age was 43.03 years (20–77 years), with the same mean age in males, and 42.2 years for females.

With regard to complaints, all patients reported pain as a symptom, 23 patients (44.2%) reported perianal bulging and 9 (17.3%) informed discharge and signs of inflammation (17.3%) (Table 1). The mean time of progression of symptoms was 6.5 days, ranging from 1 to 30 days. Half of the patients had no comorbidities, 21.2% were smokers and 15.4% were carriers of diabetes mellitus. As for signs of SIRS on admission, this was found in only 3 patients (5.8%).

As for the season of the year in the onset and diagnosis of perianal abscess, 61.5% of patients had this pathology in the summer and spring months.

In 47 patients (90.4%) only abscess drainage was carried out; in one case there was the need for a colostomy, as this patient was diagnosed with necrotizing fasciitis intraoperatively. In the remaining 5 patients (9.6%) drainage and passage of a Seton were conducted. In only one patient, excluding the case of necrotizing fasciitis, a reoperation was required within the first 10 days after the initial surgery.

The mean hospitalization time was 1.63 days (1–21 days) and after the exclusion of the patient with Fournier's gangrene, this mean time decreased to 1.25 days, ranging from 1 to 3 days. Twenty-nine patients (55.8%) were lost to outpatient follow-up; thus, it was not possible to assess their outcome. Thirteen of 23 remaining patients (56.5%) developed a perianal fistula in their progression and 10 (43.5%) patients were discharged without a new surgical approach.

## Discussion

As the terminal portion of the rectum goes through the pelvic floor muscles, becoming the anal canal, creases known as columns of Morgagni, are formed; in these creases, anal crypts are located at their lower end.<sup>8</sup> Microtrauma and fecal stasis induced in these glands explain the formation of a pyogenic cryptitis with subsequent formation of anorectal abscesses.<sup>3,10</sup>

Abcarian et al.,<sup>9</sup> taking into account that 26–37% of abscesses evolve to a fistula,<sup>11,12</sup> and analyzing data about this disease, report an annual incidence of anorectal abscesses of 68,000–96,000 cases per year in the United States of America. These authors also report that most patients with anorectal suppuration are aged between 20 and 60 years, with a mean of 40 years. Furthermore, studies have reported an incidence twice as high in men, reaching up to 83.9% of cases.<sup>4,11,13</sup> Similarly, we found in our study a mean age of 43.03 years, more frequently in male (73.1% of cases).

Clinically, this disease is manifested by a constant and progressive acute pain that may worsen with defecation,<sup>5</sup> besides showing an association with signs of Systemic Inflammatory Response Syndrome (SIRS). In cases of perianal abscess, one can find a local hyperemia and pain with floating and cellulitis in its periphery.<sup>8,14</sup>

Sometimes, and in situations of deeper abscesses, these signals are more difficult to be found, and the physician should value digital rectal examination and complementary investigation, either by CT, pelvic MRI, or endoanal ultrasound.<sup>15</sup>

Czeiger et al.<sup>1</sup> carried out one survey and analysis of 1415 patients enrolled in the study over 11 years and found that 73.6% were male and that the mean hospitalization time was  $2.1 \pm 0.8$  days. One hundred and eighty-eight patients (16.4%) required more than one abscess incision/drainage surgery during hospitalization; among these patients, 21.8% had more than one recurrence. In this study, it was found that only two patients (3.8%) required reoperation, and one of them suffered necrotizing fasciitis.

In this respect, Akkapulu et al.<sup>4</sup> evaluated 93 patients with anorectal abscess and sought to identify factors related to clinical recurrence. These authors found that there was no statistically significant correlation with respect to gender, age, type of abscess, use of a drain, and fistula identification in the first surgery.

Although some studies have not observed an occurrence of predisposition with seasonality or certain months,<sup>9</sup> Vasilevsky and Gordon<sup>12</sup> reported a higher prevalence in June (summer in their countries) and a lower incidence in August and September. We observed that there was a higher incidence of diagnoses of perianal abscess in the summer and spring months (61.5%).

Considering that in most cases of anorectal abscess the patients are seen and operated on an emergency basis, Jimeno et al.<sup>16</sup> conducted one prospective study in order to verify the importance of the clinical symptoms in the accuracy of anorectal disorders. For this purpose, these authors divided the group between surgeons and physicians with clinical specialties, involving a total of 44 participants. In our study, it has been found that both groups were able to diagnose patients with anorectal abscess solely viewing images in 100% versus 80.4%, respectively, that is, between surgeons and medical doctors ( $p=0.157$ ). However, greater accuracy for all participants was found when the clinical history was associated with the image of the abscess ( $p=0.025$ ).

Regarding the treatment of perianal abscess, it is recommended to make an incision and drainage with debridement of necrotic and devitalized tissue. The search for a fistula and a possible internal orifice of the fistula is an important part of the procedure that should be performed by a thorough

proctologic examination with digital rectal examination and anoscopy. The literature recommends that in cases of intersphincteric or low transsphincteric fistulas, one can make a fistulotomy; and in cases of doubt or of complex fistulas, one must introduce a Seton.<sup>8,17,18</sup>

On the other hand, considering that the perianal abscess drainage surgery is usually performed by general surgeons (in some cases not very familiar with anorectal anatomy), and also considering the local septic process with loss of normal architecture, we believe that the making of a large abscess drainage at the nearest possible point from the anal margin and parallel to the fibers of the external anal sphincter muscle,<sup>5</sup> along with debridement of devitalized tissue and the introduction of a Seton in cases of identification of an internal fistulous orifice would be the most prudent strategy. Czeiger et al.<sup>1</sup> also share this view and recommend that the fistulotomy should be performed only when the surgery is being performed by an experienced proctologist.

With respect to the implementation and application or non-application of a latex drain to the abscess cavity, Billingham et al.<sup>19</sup> recommend that the attending surgeon relinquish (or can give up) this procedure, provided that an adequate drainage has been obtained. On the other hand, one should recommend a post-operative procedure with the use of antibiotics in patients with diabetes, morbid obesity, immune deficiency, in cardiac prosthesis users, or in cases of extensive cellulitis.<sup>3,9</sup> Furthermore, it is important that in situations of persistent fever, cellulitis or leukocytosis after the initial drainage, the surgeon proceeds to an anorectal surgical exploration.<sup>9</sup> Still with that in mind, Sözen et al.<sup>13</sup> demonstrated that postoperative treatment with antibiotic therapy does not decrease the risk of a future formation of an anorectal fistula.

## Conclusion

Our study corroborates literature data on the prevalence of gender and prevalence period, drawing attention to the seriousness that some cases may represent in the event of progression to necrotizing fasciitis and the need to fine-tune the initial treatment, respecting the degree of knowledge and expertise of the attending physician, in order to avoid serious and permanent sequels of such a common pathology in emergency rooms.

## Conflicts of interest

The authors declare no conflicts of interest.

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