



## Case report

# Mucinous adenocarcinoma arising from recurrent perianal fistula in patient with Crohn's disease: case report<sup>☆</sup>



Suelene Suassuna Silvestre de Alencar<sup>a,b,c,d,\*</sup>, Romualdo da Silva Corrêa<sup>a,b,d,e</sup>,  
Cátia de França Bezerra<sup>a,f</sup>, Marcelo José Carlos Alencar<sup>a,d,g</sup>,  
Cristiana Soares Nunes<sup>a,d,g</sup>, Davi Aragão Alves da Costa<sup>a,d,f</sup>,  
Emanuela Simone Cunha de Menezes<sup>a,d,h</sup>, Antonio Luiz do Nascimento<sup>a,d</sup>

<sup>a</sup> Hospital Universitário Onofre Lopes, Universidade Federal do Rio Grande do Norte (UFRN), Natal, RN, Brazil

<sup>b</sup> Sociedade Brasileira de Coloproctologia, Brazil

<sup>c</sup> Universidade Federal de Pernambuco (UFPE), Recife, PE, Brazil

<sup>d</sup> Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil

<sup>e</sup> Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil

<sup>f</sup> Liga Norte Riograndense Contra o Câncer, Natal, RN, Brazil

<sup>g</sup> Complexo Hospitalar Monsenhor Walfredo Gurgel, Natal, RN, Brazil

<sup>h</sup> Hospital Eduardo Menezes, Belo Horizonte, MG, Brazil

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## ABSTRACT

**Introduction:** Anal carcinoma is a rare variant of epithelial tumors of the anal canal. When associated with chronic and active anal fistulas, usually this is an aggressive cancer that has difficult diagnosis and poor prognosis. Anal fistulas are a common manifestation of Crohn's disease (CD). This study aims to report a case of mucinous adenocarcinoma originating from recurrent perianal fistula in patients with CD.

**Case report:** A man of 43 years, with melanoderma, complaining of perianal tumors, anal pain and mucopurulent secretion, the patient was diagnosed with fistulae. Colonoscopy revealed a chronic inflammatory process associated with villous polypoid lesion in the colonic and rectal mucosa. In a new episode, where it was diagnosed, chronic colitis of rectum and sigmoid was being prescribed sulfasalazine with improvement. There were relapses and the patient underwent repeated fistulectomies. After investigation, CD was diagnosed. Computed tomography (CT) of abdomen and pelvis showed multiple perineal and gluteal collections, and the patient underwent abdominoperineal resection of the rectum. Anatomopathological exam showed invasive mucinous adenocarcinoma. A new CT showed

<sup>☆</sup> Study linked to the Department of Integrated Medicine, Universidade Federal do Rio Grande do Norte (UFRN), Natal, RN, Brazil.

\* Corresponding author.

E-mail: [suelene@ufrnet.br](mailto:suelene@ufrnet.br), [suelenesuassuna@gmail.com](mailto:suelenesuassuna@gmail.com) (S.S.S. de Alencar).

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residual growth of the lesion. The patient was referred to the oncology referral service, where chemotherapy and radiotherapy were planned. The patient developed unfavorably, and his death occurred two months after treatment.

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## Adenocarcinoma mucinoso surgindo de fístula perianal recidivante de paciente com doença de Crohn: relato de caso

### R E S U M O

#### Palavras-chave:

Adenocarcinoma mucinoso  
Doença de Crohn  
Fístula anal  
Recidiva local de neoplasia  
Colectomia

**Introdução:** Carcinoma anal é uma rara variante de tumores epiteliais do canal anal. Quando associado a fístulas anais crônicas e ativas, geralmente é um câncer agressivo que possui difícil diagnóstico e mau prognóstico. Fístulas anais são uma manifestação comum da doença de Crohn (DC). Este estudo tem como objetivo relatar um caso de adenocarcinoma mucinoso originado de fístula perianal recidivante em paciente com DC.

**Relato de caso:** Homem de 43 anos, com melanoderma e queixas de tumorações na região perianal, dor anal e secreção mucopurulenta, sendo diagnosticada fístula. A colonoscopia evidenciou processo inflamatório crônico associado à lesão polipóide vilosa em mucosa colônica e retal. Em um novo episódio, constatou-se colite crônica em reto e sigmóide, sendo prescrito sulfassalazina com melhora. Houve recidiva do quadro e o paciente foi submetido a repetidas fistulectomias. Após investigação, diagnosticou-se DC. A tomografia computadorizada (TC) de abdome e pelve demonstrou múltiplas coleções perineais e glúteas, tendo sido realizada ressecção abdominoperineal do reto. O exame anátomo-patológico evidenciou adenocarcinoma mucinoso invasivo. Nova TC demonstrou crescimento da lesão residual. No serviço de referência oncológica, foram planejadas quimioterapia e radioterapia. O paciente evoluiu desfavoravelmente e veio a óbito após dois meses do tratamento.

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## Introduction

Anal carcinoma is a rare variant of epithelial tumors of anal canal.<sup>1</sup> Mucinous adenocarcinoma corresponds to 3–20% of all anal carcinomas.<sup>1–3</sup> When associated with chronic and active anal fistulae, generally this is an aggressive cancer that has a very difficult and poor prognosis.<sup>1,3</sup> Anal fistulae are a common manifestation of Crohn's disease (CD), being present in 54% of cases.<sup>4,5</sup> Their malignancy process was first described in 1974 by Lightdale and subsequently had its incidence demonstrated in 0.7% of patients with CD.<sup>3,5</sup>

Here, we describe a case of mucinous adenocarcinoma originated from recurrent perianal fistula in a patient with CD.

## Case report

43-Year-old man with melanoderma was admitted in May 2009 with complaints of perianal tumors for four months. Described episodes of anal pain and mucopurulence for about 11 years, with a diagnosis of fistula, not treated at that time. A colonoscopy was performed in May 2002, revealing a chronic inflammatory process associated with villous polypoid lesion with mild dysplasia in colonic and rectal mucosa. In a new episode, chronic colitis with an ongoing inflammatory process

in the rectum and sigmoid was observed; sulfasalazine was prescribed. After an asymptomatic year, there was recurrence of symptoms and the patient underwent repeated fistulectomies. In 2006, after endoscopic and pathologic studies, the patient was diagnosed with Crohn's disease. After 1 year, a treatment with ciprofloxacin and infliximab was started, with favorable evolution. In the following year, the condition worsened and the patient was referred and admitted to our service.

The patient reported weight loss of 23 kg (27%) since the beginning of the disease, tobacco use (7 packs/year; stopped smoking eight months ago) and alcohol consumption for 22 years. During physical examination, on palpation revealed pain in the right iliac fossa, presence of tumors in the perianal region (the largest with about 15 cm) with areas of mucopurulent discharge and a characteristic odor, associated with anal fistulas and vegetating, friable lesions (Fig. 1). A computed tomography (CT) of the abdomen and pelvis showed multiple perineal and gluteal collections (Fig. 2). The patient underwent abdominoperineal resection of the rectum and exenteration of soft parts, when an invasive pelvic injury with incomplete resection was verified. The pathologic analysis of the surgical specimen diagnosed invasive mucinous adenocarcinoma. A new CT in late postoperative period showed growth of residual injury and extensive soft tissue involvement of both gluteal regions, forming a large heterogeneous mass (Fig. 3) and liver metastases. The patient was referred to



**Fig. 1 – Perianal tumors with areas of mucopurulent discharge and a characteristic odor, associated with anal fistulas and vegetating, friable lesions.**



**Fig. 3 – Growth of residual lesion, forming large heterogeneous masses in the gluteal region.**



**Fig. 2 – Computed tomography (CT) of the abdomen and pelvis showing multiple perineal and gluteal collections.**

the oncology referral center, where chemotherapy and radiotherapy were planned. However, with the worsening of the clinical condition, the planned treatment was discontinued. The case developed unfavorably and the patient died after two months of treatment.

## Discussion

Over the past 60 years, only 61 cases of mucinous adenocarcinoma originated in an anorectal fistula in DC have been

published in the literature. Among the patients presented, 61% were women. In general, in males, the diagnosis of this disease is lately established and it takes longer for the evolution of DC to the development of malignancy. The average age at diagnosis is 50 years, after 20 years of DC evolution.<sup>5,6</sup>

Although several hypotheses have been put forward for the emergence of adenocarcinoma as a complication of CD, there is no consensus yet as to its true etiology. Some possible explanations suggest the continuous regeneration of the mucosa in chronic fistulas as a reason for the malignant degeneration. Another hypothesis would be the long-term immunosuppression as a mechanism for carcinogenesis.<sup>6</sup> Some authors consider the possibility that the malignancy process was due to the prolonged use of metronidazole, azathioprine and immunobiologicals.<sup>7</sup>

Clinically the patient may manifest pain and rectal bleeding, anal abscess, perianal mass and edema and chronic discharge.<sup>1,2,8,9</sup> Digital rectal examination (DRE) may reveal only a hardened area adjacent to the fistula.<sup>10</sup> Furthermore, the stenosis and anal pain may limit the physical examination, delaying the diagnosis.<sup>5</sup>

Upon presentation, in 80% of cases the tumor has usually more than 5 cm in diameter and may present inguinal and retrorectal metastasis.<sup>1</sup> Furthermore, the diagnosis of mucinous adenocarcinoma is difficult, due to the presence of other simultaneous conditions such as Paget's disease, leukoplakia, hemorrhoids and fissures.<sup>2</sup>

Endorectal ultrasonography, computed tomography (CT) and magnetic resonance imaging are tests that can assess the extent of the disease.<sup>1,5</sup> However, sometimes these methods are not very useful.<sup>5</sup>

Biopsies of the fistulous tract and of the abscess are critical to an early diagnosis and treatment.<sup>11</sup> At histopathological examination, this type of tumor contains cancerigenous cells that produce large amounts of extracellular mucin, with a mucinous component in more than 50% of the tumor volume, which characterizes the mucinous adenocarcinoma.<sup>12</sup>

In general, mucinous adenocarcinomas have a reserved prognosis due to a late diagnosis in most cases, when the tumor was already at an advanced stage.<sup>1</sup> Authors report a

good prognosis after abdominoperineal amputation, probably due to the tendency of this tumor to be well differentiated, by its slow growth and the rarity of metastases to lymph nodes.<sup>11</sup>

As for the therapy to be instituted, it has been accepted that the presence of dysplasia associated to the lesion or mass in patients with CD is an indication for colectomy, due to the increased risk of neoplasia. In general, there is a tendency toward more radical procedures when colorectal cancer is associated with Crohn's disease.<sup>13</sup> The role of radiotherapy in the treatment of perianal mucinous carcinoma is not established, because some authors hypothesize that the radiation can cause changes in the consistency of mucin, inducing tumor growth.<sup>11,14</sup> However, it was mentioned that a strict follow-up associated with adjuvant chemotherapy and/or radiotherapy can prevent local recurrence.<sup>11</sup>

## Conclusion

This report highlights the difficulty in the management of patients with mucinous adenocarcinoma arising in anal fistula associated with Crohn's disease, emphasizing the need for an early diagnosis for institution of an aggressive therapy, aimed at a more favorable prognosis.

## Conflicts of interest

The authors declare no conflicts of interest.

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