Case Report

Pyoderma gangrenosum as a initial manifestation of ulcerative proctocolitis

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ABSTRACT: pyoderma gangrenosum is a rare inflammatory skin condition characterized by progressive and recurrent skin ulceration of destructive course. It is usually associated with rheumatoid arthritis, paraproteinemia, myeloproliferative diseases and inflammatory bowel diseases, especially non-specific ulcerative proctocolitis. In these situations, skin lesions are described as concurrent with the intestinal condition. However, reports on pyoderma gangrenosum preceding intestinal findings are less frequent. The authors describe a case of a woman with febrile condition associated with skin lesions diagnosed by biopsy as pyoderma gangrenosum. Two weeks later, she developed diarrhea, arthralgia and sepsis, being diagnosed as ulcerative proctocolitis. After the administration of the treatment for ulcerative proctocolitis, she showed improvements in sepsis care, remission of diarrhea and regression of skin lesions. This case highlights the importance of considering pyoderma gangrenosum as a manifestation associated with inflammatory bowel disease, regardless of its timing in relation to intestinal symptoms.

Keywords: pyoderma gangrenosum; proctocolitis; pyoderma; colitis.

INTRODUCTION

Pyoderma gangrenosum (PG) is a type of inflammatory skin condition of unknown origin characterized by progressive and recurrent skin ulceration of destructive course[1-3]. Dermatosis is usually unpredictable, sudden and aggressive, but it can also be chronic, slow and insidious, presenting skin ulcers that expand centrifugally[4]. The aggressive form may cause painful ulcerative lesions, with necrotic and hemorrhagic base[5]. It is associated with systemic disease in about 50% of the cases, such as rheumatoid arthritis, inflammatory bowel disease, paraproteinemia and myeloproliferative disease[6,7]. It is described as one of the extraintestinal manifestations for the patients who have inflammatory bowel disease (IBD), especially the severe forms of unspecified ulcerative proctocolitis (UUP)[8,9]. PG affects people at any age group, especially young women with proctocolitis and diffuse compromise of the entire colon[10,11]. It can appear in any part of the body, but is mostly described in the inferior limbs, especially the lower third of the legs. The skin lesion usually manifests during the two first years of inflammatory bowel disease, being more prevalent during the periods of UUP clinical exacerbation[12]. Skin lesions that precede the onset of the intestinal picture are a less frequent situation[13]. The authors report the case of a patient with severe UUP whose initial manifestation was the pyoderma gangrenosum, preceding diarrhea in two weeks.

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CLINICAL CASE

A white 46-year-old female patient, who was previously healthy, presented with a 38.5ºC fever and skin lesions in the face, limbs and vulva, characterized as deep and painful ulcers, with necrotic purulent center and small hemorrhagic blisters (Figures 1 and 2), five days prior to the first visit. At the doctor's appointment, the patient was given antithermic drugs; skin lesions were biopsied. The anatomopathological examination of the lesions showed superficial and deep diffuse dermatitis with the prevalence of neutrophils (Figure 3) and epidermal ulceration, which are compatible with pyoderma gangrenosum and evidence of deep abscesses in the subcutaneous tissue (Figure 4).

Two weeks after, she started presenting liquid diarrhea without mucus, suppuration or blood, followed by vomit and persistent fever. She reported the ingestion of untreated water, but denied having contact with sick people, trips, previous medications, insect bi-

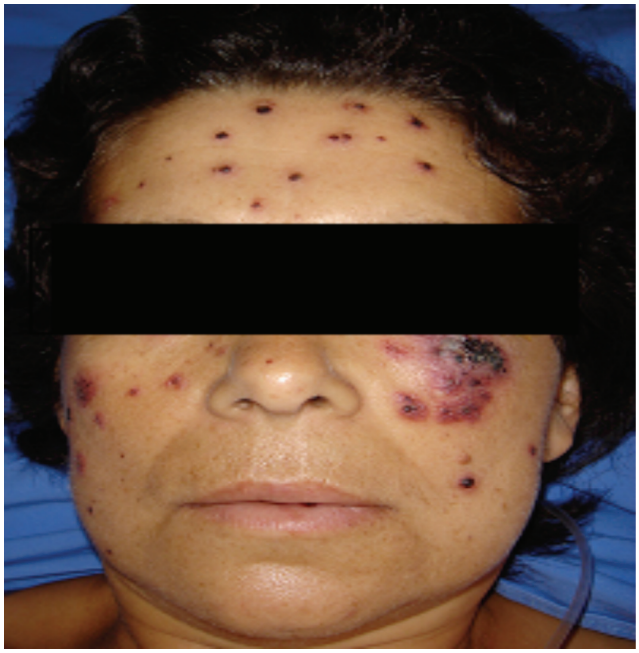

Figure 1. *Deep ulcer with necrotic purulent center and hemorrhagic blisters on the face.*

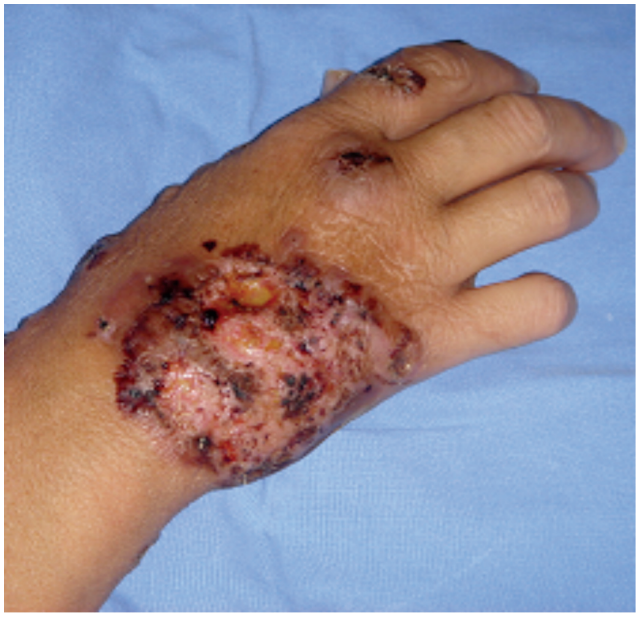

Figure 2. *Deep ulcer with necrotic purulent center on the right hand.*

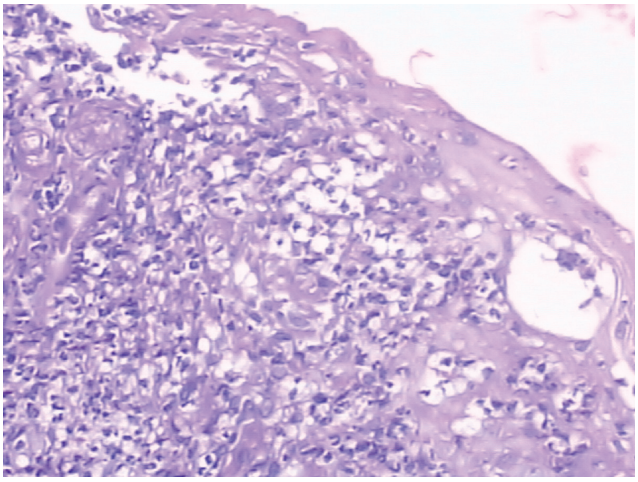

Figure 3. *Superficial diffuse dermatitis with an inflammatory process at base, and deep dermatitis with the prevalence of neutrophils, compatible with PG - hematoxylin-eosin (H&E) 5x.*

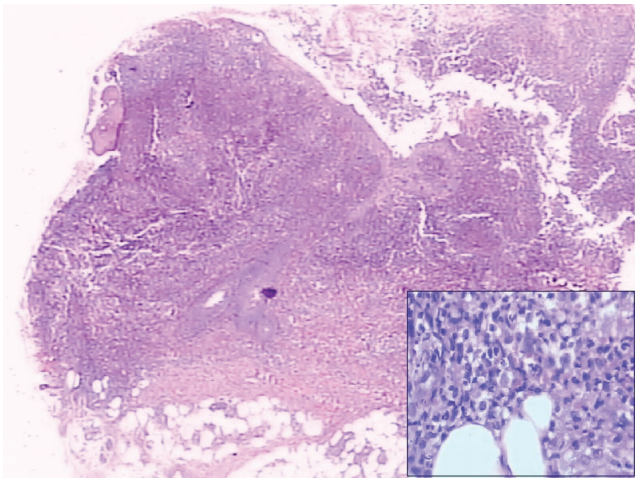

Figure 4. *Deep skin inflammation and presence of abscesses in the subcutaneous tissue – H&E 5x and H&E 3x.*

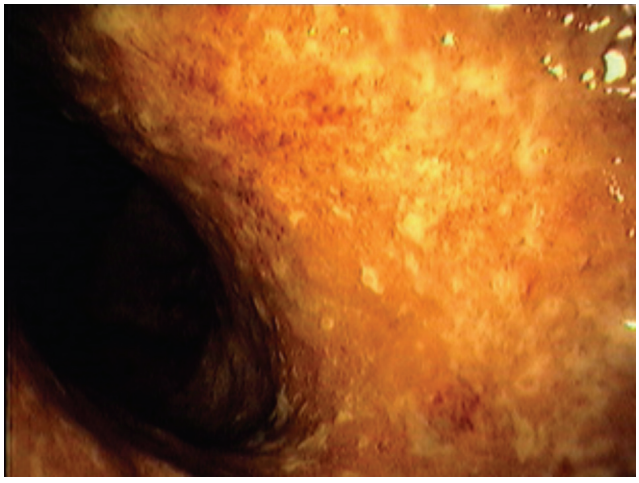

Figure 5. *Colonoscopy showing edema, hyperemia and erosions throughout the colons, which is compatible with the active inflammatory bowel disease.*

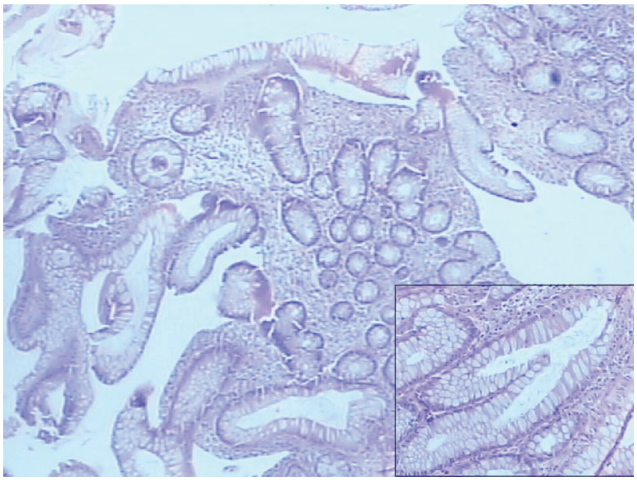

Figure 6. *Colonic mucosa with architectural distortion. Detail: gland bifurcation, criterion of a chronic inflammatory process (H&E 20x).*

tes and similar cases in the family. She was admitted at the hospital and submitted to complementary examinations, with the following results: hemoglobin 7.4 g/dL, leukocytes 22500/mm^3, band cells 7232/mm^3, segmented 12,430/mm^3; parasitological examination of stools without evidence of intestinal parasites or their evolutive forms. Fecal leukocytes test was positive (++). At coproculture, gram positive cocci were prevalente. The Widal reaction was negative. Right after admission, diarrhea had mucus and blood, and the patient started reporting arthralgia of the knees. On the seventh day after admission, she evolved to a septic picture and was transferred to the intensive care unit. Then, antibiotic therapy and support measurements were performed, including oxacilin and imipenem. The abdominal computed tomography showed a general distension of loops and thickening of the right colonic wall. Colonoscopy showed edema, hyperemia, erosions and pseudopolyps throughout the colon, compatible with inflammatory bowel disease (Figures 5 and 6). The treatment also consisted of prednisone, mesalamine and azathioprine, with the respective daily doses: 40 mg, 3 g and 100 mg. The patient showed improvements, reduction in the number of evacuations, no more blood and mucus in the stool and gradual regression of skin lesions. She was discharged from the hospital 30 days after the treatment for UUP started. Seven months after discharge, on mesalamine and azathioprine, the patient had regular intestinal habits and full remission of the skin lesions.

DISCUSSION

Pyoderma gangrenosum is believed to be the skin manifestation of several systemic diseases. It is associated with: rheumatoid arthritis, myeloproliferative diseases, liver disease, monoclonal gammopathy, Wegener's granulomatosis, diabetes mellitus and inflammatory bowel disease[14]. In approximately 50% of the cases, no associated disease can be identified, thus being called idiopathic pyoderma. Among the systemic diseases, IBD is the most frequently found, corresponding to 27% of the cases[15]. About 20% of the patients who present with skin lesions suggestive of PG can have IBD[16]. According to other data, the established relation is 0.5 to 5%[8,9]. The relation between between PG and the extension, length and severity of IBD is controversial. PG is a relatively rare extraintestinal presentation of ulcerative proctocolitis, and its incidence ranges from 2 and 12%[17,18,19], affecting both genders and all age groups. It is also associated with Chron's disease, however, the prevalence of such association is lower than the one observed for ulcerative proctocolitis[20,21].

It is believed that PG occurs due to a reaction against antigens of bowel disease. The presence of bacterial antigens in the bowel lumen and their absorption through the affected colonic mucosa could trigger and continue a local and systemic inflammatory reaction, which would be a result of the stimulation of cells in the immune system and

of the production of proinflammatory cytokines[22,23]. The existence of an antigenic relation between bacterial antigens and the colonic mucosa, biliary tract, skin and/or joints would turn these organs into real "target antigens", which would explain the different manifestations[24,25]. Deficiencies in immunoglobulin synthesis, the production of an inhibitory factor for mast cells, neutrophil dysfunction and skin allergies can also be involved[8,5]. In most cases described in literature, PG presents during the active bowel disease[12]. Bowel symptoms precede or are concomitant with PG, and exacerbations of the disease can be usually related with worse skin lesions[26]. However, PG can occur in any stage of the disease, at the absence of active inflammation, even after total colectomy[24,27,28]. In the described report, skin manifestations preceded the diagnosis of ulcerative proctocolitis in two weeks. PG preceded the intestinal picture in the described report, which reinforces how important it is to correlate both pathologies in order to conduct an early diagnosis.

Clinically, PG may be presented in four types: classic, pustulous, bullous and vegetative[29]. The patient had the classic type, characterized by deep and painful ulcer, with violaceous border and necrotic purulent center. This type usually affects the legs, but it can also reach the head, neck and the genitalia[13], which was the case for this patient.

When PG is associated with IBD, the therapy should be directed to the bowel disease, whose remission is followed by the clinical improvement of the skin lesion[30]. It is also important to have extra local hygiene care to avoid the secondary infection[15].

CONCLUSION

It is essential to consider the presence of IBD in patients with pyoderna gangrenosum, even at the absence of gastrointestinal symptoms, so that it is possible to have an early diagnosis. Thus, the treatment can be rapidly administered to avoid the development of the disease and further complications.

RESUMO: Pioderma gangrenoso é uma forma de inflamação cutânea, caracterizada por ulceração progressiva e recorrente da pele, com curso destrutivo. Geralmente é associada à artrite reumatoide, paraproteinemia, doenças mieloproliferativas e doença inflamatória intestinal, em especial retocolite ulcerativa inespecífica. Em tais casos, as lesões cutâneas são descritas concomitantes ao quadro intestinal, porém, relatos com descrição de pioderma gangrenoso precedendo achados intestinais são menos frequentes. Os autores relatam caso de mulher com quadro febril associado a lesões cutâneas diagnosticadas por biópsia como pioderma gangrenoso. Duas semanas depois, apresentou diarreia, artralgia e sepse sendo diagnosticada retocolite ulcerativa. Com o tratamento para retocolite ulcerativa apresentou melhora do quadro séptico, remissão da diarreia e regressão das lesões cutâneas. Este caso enfatiza a importância em considerar o pioderma gangrenoso como manifestação associada à doença inflamatória intestinal, independente de sua temporalidade em relação aos sintomas intestinais.

Palavras-chave: pioderma gangrenoso; proctocolite; pioderma; colite.

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