

# Pyoderma gangrenosum and rheumatoid arthritis - case report\*

## *Pioderma gangrenoso e artrite reumatóide - relato de caso\**

Izelda Maria Carvalho Costa<sup>1</sup>

Lucas Souza-Carmo Nogueira<sup>2</sup>

**Abstract:** The case is described of a 15-year-old patient that presented several pyoderma gangrenosum lesions 16 months before onset of rheumatoid arthritis manifestations. There was an excellent response to therapeutics using clofazimine.

**Keywords:** Arthritis; Arthritis, reumatoid; Clofazimine; Clofazimine/therapeutic use; Pyoderma gangrenosum/drug therapy; Pyoderma gangrenosum/therapy; Case report.

**Resumo:** É descrito caso de paciente de 15 anos que apresenta várias lesões de pioderma gangrenoso 16 meses antes de iniciar acometimento por artrite reumatóide e com excelente resposta à terapêutica com clofazimina.

**Palavras-chave:** Artrite; Artrite reumatóide; Clofazimina; Clofazimina/uso terapêutico; Pioderma gangrenoso/quimioterapia; Pioderma gangrenoso/terapia; Relato de casos.

### INTRODUCTION

Pyoderma gangrenosum (PG) is a neutrophilic syndrome, described for the first time 70 years ago by Brunsting and O'Leary. Although the origin of the disease is not known, an ever increasing number of diseases have been related to pyoderma gangrenosum. Approximately 50% of the cases of pyoderma occur concomitantly with other diseases, notably inflammatory bowel disease, arthritis, myeloproliferative diseases, hepatitis and Aids, among others. The remaining forms of PG occur in an isolated manner. Its treatment is still a motive for discussion in the literature.

### CASE REPORT

A 15-year-old patient that developed one year previously a painful ulcer with a necrotic base in the left foot, with progressive and painful growth. Nine months ago the lesions had spread, reaching a total of 20 lesions in the lower members and right inguinal region. Antimonial treatment for seven months had been attempted in the region of origin, without improvement (Figure 1).

Laboratory exams: Montenegro negative; histopathology of the lesion showed granulation tissue with inflammatory cells and extravasated red cells; other exams were normal, including serology for HIV and hepatitis.

The diagnostic impression was pyoderma gangrenosum and 100 mg/day clofazimine was initiated.

Patient coursed with complete response of the cutaneous lesions after 15 days. Two months later, 100 mg clofazimine was given on alternate days. After four months, he presented overt arthritis in the hands, Latex and Whaler-Rose was positive and x-ray of the hands revealed no alterations. Rheumatoid arthritis was diagnosed by the presence of four criteria according to the American School of Rheumatology criteria (rigidity, arthritis in the hands, symmetry and rheumatoid factor). Clofazimine was suspended and methotrexate was initiated. He coursed with good control of the picture.

### DISCUSSION

There are apparently four clinical forms of pyoderma gangrenosum, each with its own subtleties and correlation with different diseases.<sup>1</sup>

It is a pathology predominantly seen in adults, aged between 25 and 54 years. It is rarer in children.<sup>1,2</sup>

Ulcerated pyoderma is the most frequent, characterized by irregular ulcers, with asymmetrical borders and a dirty base, corresponding to the pattern of the case described here. It is usually preceded by pustules and prevails in the trunk and members. The picture is extremely painful and is associated most commonly with rheumatoid arthritis, gammopathy and inflammatory bowel disease. In most cases it requires systemic treatment. Association with rheumatoid arthritis can

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<sup>1</sup> MSc and PhD in Dermatology, professor-tutor post-graduation course in Health Sciences at UnB, PhD professor in Dermatology at "Universidade Católica de Brasília"

<sup>2</sup> Resident, Hospital Universitário de Brasília



FIGURE 1: Various pyoderma gangrenosum lesions in the lower members. There was a complete involution following treatment.

occur in up to 37% of the patients with ulcerated pyoderma and unlike that seen in this patient, pyoderma is more frequent after diagnosis of rheumatoid arthritis.<sup>1,3</sup>

The other forms are: bullous, pustular and vegetans, each with its own peculiarities and different clinical responses to treatment.

The initial presentation of the various forms of PG can be explosive or indolent, and its diagnosis is essentially clinical.<sup>1,4</sup>

It is important to investigate the history of drug use that could have worsened the pyoderma gangrenosum, such as isotretinoin and acitretin.<sup>5</sup>

The differential diagnosis should exclude the following diseases: vasculitis, syphilis, neoplasias, phospholipid syndrome and mycobacterial infections.<sup>3</sup>

Regarding treatment, it is important to adopt local care with analgesia and antisepsis. One should obligatorily perform histopathological exam, culture for fungi and bacteria and routine hematological and biochemical tests. In the presence of few lesions and with little blood poisoning, it can begin the treatment with

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local therapy.

Use of intralesional triamcinolone can lead to remission of the lesions after five to eight weeks. Disodic chromoglucate is a less effective medication, but also mentioned for topical use.<sup>5,6</sup>

According to the literature, oral corticoids in high doses (up to 200 mg/d) are the choice drugs for systemic treatment. Their action is both immunosuppressant as well as anti-inflammatory and their side effects are known. Another form of corticotherapy administration is pulse methylprednisolone, at 1 g/day for three days.<sup>1,5,6</sup>

Other drugs used for systemic treatment include dapsons, clofazimine, minocycline and alkalization agents.

There has been a preference for use of clofazimine, due to the fact that there is already vast experience with its application in leprosy. The drug possesses anti-inflammatory action and improves the neutrophilic phagocytosis, which can be beneficial for PG patients. In these cases, it should be used at doses of 100-400 mg/d. The side effects include dryness of the skin, splenic infarct and deposition of crystals in the intestine.<sup>5,6</sup>

Other drugs such as dapsons, cyclosporin, azathioprine, methotrexate, rifampicin and thalidomide have been the subject of sporadic reports on successful treatment of pyoderma.<sup>7-9</sup>

Possibilities for the treatment of PG include tacrolimus, mycophenolate mofetil, the ifliximab and hyperbaric chamber.<sup>5,6,8,10</sup>

It can be affirmed that the management and diagnosis of PG continue to be an important medical challenge. The very diversity of drugs used gives a notion of the difficulty encountered in the treatment of this disease.

The initial care should exclude alternative diagnoses and identify possible correlated diseases, as was observed in the patient in question. Local therapy can be effective for small lesions. Systemic therapy should be initiated for serious or recalcitrant cases. Although the literature mentions a preference for the use of corticoids, alternative drugs, such as clofazimine, can present an excellent therapeutic response. □

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## MAILING ADDRESS:

Izelda Maria Carvalho Costa  
Hospital Universitário de Brasília  
SHIS QI 17, CONJ 8, CS 2  
Tel.: (61) 364-1702  
E-mail: Izelda@brturbo.com