# PIODERMA GANGRENOSUM ABOUT A CASE

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#### **Abstract**

Pyoderma gangrenosum is an inflammatory skin disease characterized by the formation of deep, painful ulcers that may heal with prominent scarring. This condition is classified as a neutrophilic disorder, which means it involves an exaggerated response from immune cells called neutrophils. Next, we will describe a clinical case of pyoderma gangrenosum that illustrates the typical characteristics of this disease. For its diagnosis, it was important to perform a biopsy of the lesions and their treatment. It is important to keep in mind that the disease can affect not only the physical health of the patient, but also her mental and emotional health.

Keywords: pyoderma gangrenosum, neutrophils, painful ulcers.

#### **INTRODUCTION**

Pyoderma gangrenosum is an inflammatory skin disease characterized by the formation of painful, deep ulcers that can heal with prominent scarring. This condition is classified as a neutrophilic disorder, meaning it involves an exaggerated response of immune cells called neutrophils (1). Pyoderma gangrenosum is a rare disease and its incidence is estimated at approximately 1 case per 100,000 people per year (2). It is more common in women than men and may be associated with other autoimmune diseases, such as rheumatoid arthritis (3). Pyoderma

gangrenosum is based on clinical findings and confirmed by skin biopsy, which shows neutrophil infiltration into the dermis and subcutaneous tissue (4). In order to treat it, a variable therapeutic approach must be focused, although the optimal management of this disease is still under investigation (5).

Pyoderma gangrenosum is a rare but serious inflammatory skin disease, with its ulcers spreading rapidly. This condition can affect any part of the body, but is most common in the legs and arms. The exact etiology of pyoderma gangrenosum is unknown, but it is believed to be an autoimmune disease that results from an exaggerated immune system response to a minor injury or previous infection. This disease has been observed to occur more frequently in patients with underlying autoimmune diseases, such as inflammatory bowel disease and rheumatoid arthritis (6).

The diagnosis of pyoderma gangrenosum is clinical and based on the presence of characteristic lesions and the exclusion of other diseases that may present in a similar way, such as infection, cancer and other inflammatory skin conditions. Skin biopsy is a key component of diagnosis and shows an infiltration of neutrophils into the dermis and subcutaneous tissue. Differential diagnosis can be difficult in some cases, and other conditions, such as leukocytoclastic vasculitis and Marjolin's ulcer, must be considered to establish an accurate diagnosis (7).

Treatment of pyoderma gangrenosum remains challenging, and is based on controlling inflammation and promoting healing of lesions. Corticosteroids are the treatment of choice for pyoderma gangrenosum, and control inflammation. are used to Immunosuppressants and biologic agents are also used in severe or corticosteroid-resistant cases. In addition, antibiotics may be helpful in treating secondary infections and preventing their recurrence. Proper and timely management of pyoderma gangrenosum is crucial to prevent serious complications, such as sepsis and limb amputation (8).

#### **TIMELINE**

The patient was a 50-year-old woman with a history of long-term rheumatoid arthritis treated with methotrexate 7.5 mg weekly and Prednisone 5 mg daily and presented to the Dermatology consultation because she had a painful ulcer on her left leg for 8 weeks. The ulcer had developed gradually and had become increasingly painful and inflamed as time passed, subsequently presenting with ulcerative satellite lesions.

He went to a pharmacy where he was prescribed some creams and oral antibiotics without any improvement, uses several home treatments that he consulted on the internet without any result, the pain increased in intensity, when going to the specialized consultation it was requested to perform a biopsy of the lesion.

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#### PATIENT INFORMATION

The 50-year-old patient, married, born and resident in Chunchi, instruction (basic). With personal pathological history rheumatoid arthritis in treatment with methotrexate 7.5 mg weekly and Prednisone 5 mg daily. She does not report a significant family history and is not allergic to any medication or food.

## 1. PHYSICAL EXAM

Blood pressure: 120/7 5 mmHg – Heart rate: 72 per minute – Respiratory rate: 1 8 per minute - WEIGHT: 70 Kg- Height: 1.5 8 cm.

**Dermatological Examination:** 

Skin phototype III

Type of lesions: ulcers

Location: left leg

Distribution: localized

The large, painful ulcer about 6 centimeters in diameter with small satellite lesions. The lesion had jagged edges and varying depths and exuded a thick, foul-smelling liquid. In addition, there were several small nodules around the main lesion, suggesting that the disease was spreading to other areas of the skin.

Figure 1-3: DERMAL LESIONS



## 2. DIAGNOSTIC EVALUATION: COMPLEMENTARY TESTS:

SKIN BIOPSY: showed an infiltration of neutrophils into the dermis and subcutaneous tissue.

#### 3. THERAPEUTIC INTERVENTION

Treatment consisted of oral and intralesional corticosteroids and a combination of antibiotics. Significant improvement of the lesion was observed after 4 weeks of treatment, with reduction of pain and inflammation. However, the patient experienced side effects from corticosteroids, such as weight gain and elevated blood pressure, so the dose of the drug was gradually reduced.

## 4. MONITORING AND THERAPEUTIC RESPONSE

After 12 weeks of treatment, the injury had completely healed, leaving a prominent scar on his left leg.

## 5. DISCUSSION

The clinical case of pyoderma gangrenosum is a serious inflammatory skin condition that can be difficult to treat and can cause serious complications if not managed properly(9). Pyoderma gangrenosum is a rare disease characterized by the presence of deep, painful, necrotic ulcers that spread quickly, which can make diagnosis and treatment difficult. In this clinical case, a patient with a history of inflammatory bowel disease and a painful skin lesion on the back of the hand was diagnosed with pyoderma gangrenosum (10).

Pyoderma gangrenosum is an autoimmune disease that occurs most often in patients with underlying autoimmune diseases, such as inflammatory bowel disease and rheumatoid arthritis (11). In this case, the patient had a history of rheumatoid arthritis, suggesting that there may be a relationship between the two conditions. In addition, pyoderma gangrenosum has also been shown to be associated with other autoimmune conditions, such as ankylosing spondylitis and systemic lupus erythematosus (12).

The diagnosis of pyoderma gangrenosum is based on the presence of characteristic lesions and the exclusion of other diseases that may present in a similar way. In this case, a skin biopsy was performed, which confirmed the presence of neutrophil infiltration into the dermis and subcutaneous tissue, which is consistent with the diagnosis of pyoderma gangrenosum. Differential diagnosis can be difficult in some cases, and other conditions, such as leukocytoclastic vasculitis and Marjolin ulcer, and even other neutrophilic conditions must be considered to establish an accurate diagnosis (13).

Treatment of pyoderma gangrenosum remains challenging, and relies on controlling inflammation and promoting healing of lesions. Corticosteroids are the treatment of choice for pyoderma gangrenosum, and are used to control inflammation. However, in some cases, corticosteroids may not be effective, and other treatments, such as immunosuppressants and biologic agents, may be required. In addition,

antibiotics may be useful in treating secondary infections and preventing their recurrence (14).

In this case, the patient was treated with corticosteroids and experienced an improvement in skin lesion after 12 weeks of treatment. However, the patient experienced a prominent scar on her left leg (15).

## **CONCLUSION**

In conclusion, pyoderma gangrenosum is a rare but potentially serious disease that requires proper diagnosis and treatment. Early diagnosis and aggressive management of the disease are important to prevent complications and promote healing of ulcers. In this clinical case, the diagnosis of pyoderma gangrenosum could be confirmed by skin biopsy and a positive response to treatment with corticosteroids and antibiotics was achieved. It is important to highlight the importance of a detailed clinical evaluation and proper skin biopsy for the diagnosis of the disease and proper management of the patient. In addition, potential side effects of medications used for treatment should be considered and patient response should be carefully monitored to adjust therapy as needed.

## PATIENT PERSPECTIVE

The 50-year-old patient with a history of rheumatoid arthritis developed a painful ulcer on her left leg, which significantly affected her quality of life. The ulcer was painful, making movement and daily activities difficult. In addition, the physical appearance of the injury may also have affected her self-esteem and self-confidence.

It is important to note that the disease can affect not only the physical health of the patient, but also her mental and emotional health. Patients with pyoderma gangrenosum may experience emotional stress, anxiety, and depression due to the disease and its treatment side effects.

Therefore, it is critical that the medical team provides a comprehensive approach to care, which not only focuses on medical treatment, but also on the emotional and psychological support of the patient. Effective communication and education about the disease, treatment, and healing expectations are also important to ensure the patient's understanding and ability to actively participate in the management of her disease.

In summary, the patient's perspective in this clinical case of pyoderma gangrenosum is crucial to ensure comprehensive and effective care. Emotional and psychological support, effective communication, and education about the disease and treatment are important factors in improving the patient's quality of life and her ability to manage the disease effectively.

#### INFORMED CONSENT

We have the informed consent of the patient to publish her clinical case.

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