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Pyoderma Gangrenosum: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Pyoderma Gangrenosum (PG) is an Uncommon Neutrophilic Dermatoses that presents as Auto-Inflammatory and Ulcerative Disorder of the Skin. It has an estimated incidence of 3-10 cases per million people per year. It is more common in the young and middle-aged people , average age of onset- 40-60years ,although it can affect children . It has female preponderance, and is characterized by painful papule, plaque or pustule that rapidly ulcerate with raised undermined borders on sites of normal or traumatized skin. It has no pathognomonic diagnostic test.

Keywords: pyoderma gangrenosum; neutrophilic dermatoses; auto-inflammatory; pathognomonic.

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1. INTRODUCTION

Pyoderma gangrenosum (PG) is an uncommon neutrophilic dermatosis that presents as an inflammatory, painful, ulcerative disorder of the skin [1].

In contrast to its name, PG is neither an infectious nor gangrenous condition [1].

Due to neutrophil dysfunction, genetic susceptibility and systemic inflammation [1].

2. CASE PRESENTATION

A 67 year old Rheumatoid arthritic and Hypertensive patient of 38 and 15 years duration respectively, with poor drug adherence, who presented to the accident and emergency department of the Rivers State University Teaching Hospital (RSUTH) due to complaints of painful right leg ulcers of 1week duration [2-4].

Had trauma to the affected limb, few days prior to the onset of ulcers.

No complaints of intermitent claudication, progressive weight loss.

Known to be living with hypertension for 15 years and rheumatoid arthritis for 38 years and on medications though not adherent (metformin, glimepiride, amlodipine, candesartan, hydroxychloroquine, prednisolone) [5-8].

On examination revealed an elderly woman, in obvious painful distress, febrile (38C), not pale, anicteric, not cyanosed, not dehydrated, nil palpable peripheral lymphadenopathy, rheumatoid nodules, swan neck and boutonniere deformities of the fingers of both hands, bilatEeral pitting lower limb edema right > left, with two ulcers on the medial aspect of the shin and ankle of the right leg [9-14,15-17].

2 oval shaped ulcers, located over the medial aspect of the right shin and ankle, with necrotic floor with slough, with differential warmth, tender, measuring 4cm-length,4cm-width,0.5cm-depth, undermined edges and raised borders [18,19].

Dorsalis pedis and posterior tibialis pulses were diminished.

No regional lymphadenopathy.

No abnormalities of the hairs and nails.

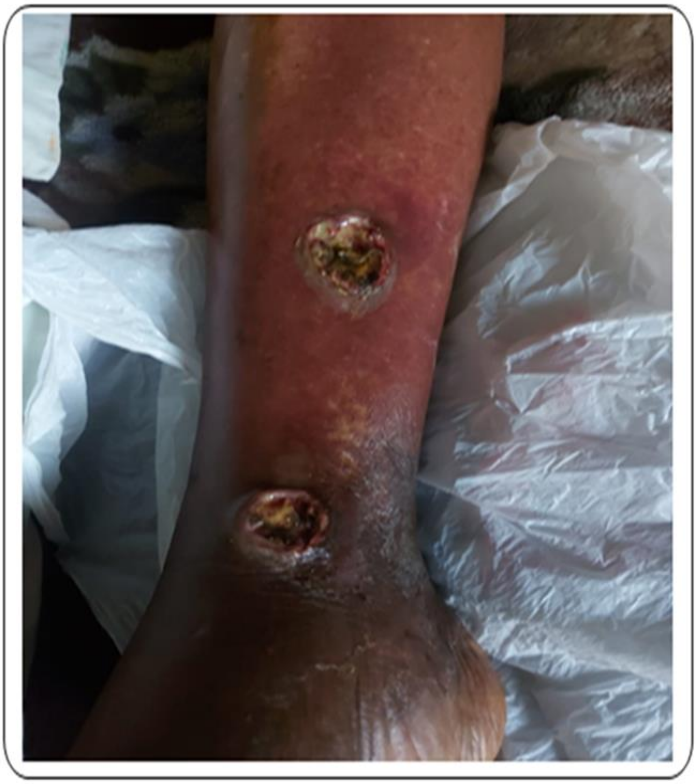

Fig. 1. Morphological identification mark

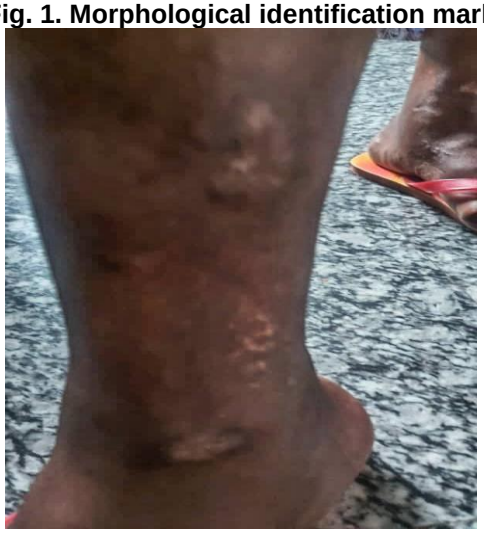

Fig. 2. Systemic therapy

Investigations revealed moderate growth of staphylococcus aureus sensitive to moxifloxacin on wound swab microscopy, culture and sensitivity test. Punch skin biopsy of the ulcer showed focal area of ulceration on the epithelium, beneath the epithelium contained mixed inflammatory cells infiltrate, predominantly neutrophils with necrotic tissues and hemorrhage [20-22]. Complete blood count revealed anemia, other parameters were within normal range. A diagnosis of pyoderma gangrenosum (PG) on background rheumatoid arthritis and hypertension was made. She was counseled on the nature of the disease and commenced on treatment.

Systemic therapy with tabs. prednisolone 30mg daily and topical clobetasol cream, caps. tramadol 50mg, tabs.zinc 50mg daily.

Patient made significant clinical improvement and was discharged but failed to follow up at clinic.

3. DISCUSSION

Pyoderma gangrenosum is a rare, neutrophil-mediated, auto-inflammatory dermatosis that is charactereized by painful, necrotic ulceration.

Due to neutrophil dysfunction, genetic susceptibility and systemic inflammation.

Commonly presents as a nodule, plaque or pustule that rapidly develops into a painful, purulent ulcer with raised undermined borders on sites of normal or traumatized skin.
Clinically has 4 variants; ulcerative (classic), bullous, pustular, vegetative.

It is associated with pathergy in 25%, systemic diseases in 50% of cases.

It is associated with inflammatory bowel diseae, inflammatoty arthritis, hematological neoplasms, and some clinical syndromes;

- PAPA (pyogenic arthritis, pyoderma gangrenosum, and acne) syndrome.
- PAPASH (pyogenic arthritis, pyoderma gangrenosum, acne, and suppurative hidradenitis) syndrome.
- PASH (pyoderma gangrenosum, acne, and suppurative hidradenitis) syndrome.

Diagnosis is made with the help of biopsy of the lesions, in addition to other clinical signs (pathergy, rapid expansion of the lesions).

Treatment is largely aimed at reducing inflammation, controlling pain, promoting wound re-epithelization, and treating the underlying etiology.

Treatment modalities inclube: Immunosuppressive therapy, biologics, alkylating agents orticosteroid (topical, systemic), intravenous Immunoglobulins.

4. CONCLUSION

Pyoderma gangrenosum is a rare, neutrophil-mediated, auto-inflammatory dermatosis that is characterized by painful, necrotic ulceration.There is no specific diagnostic test, hence it is often mis-diagnosed, and under-reported. It can be treated using, Immunosuppressive therapy, biologics, alkylating agents orticosteroid topical, systemic), intravenous Immunoglobulins.

CONSENT

Written consent was collected and preserved by the authors.

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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