

Pyoderma Gangrenosum: An Over Treated and Underdiagnosed Mimicker of Ulcers, A Case Presentation

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Pyoderma Gangrenosum: An Over Treated and Underdiagnosed Mimicker of Ulcers, A Case Presentation

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Abstract

The differential for an adult patient presenting with necrotic ulcers includes infectious, autoimmune, and traumatic etiologies, all of which require thorough history-taking, examination, and pathological analysis. Despite the best efforts of clinicians, the diagnosis is not always clear, making it vital for providers to maintain an open differential.

Learning Objectives

- Maintain an open differential in cases that do not immediately have a clear diagnosis.
- Early biopsy and histologic examination to rule out infectious etiologies is critical to guide the diagnosis for pyoderma gangrenosum (PG).
- Once a diagnosis of PG is made, management should not be limited to reducing ulcerative skin lesions, but must also include consideration for treatment of other concurrent systemic diseases.

Case

- 58 year-old female with chief complaint of an expanding ulcerative lesion on her left lower leg for 1 week since gardening and being pricked by a thorn. The ulcerative left leg lesion measured 8x4cm located on the posterior-medial aspect (**Figure 1**). Patient was started on Vancomycin for a suspected cellulitis.
- Review of past medical history found that she had been hospitalized multiple times for similar lesions appearing as dark and pus-filled lesions that would rupture and ulcerate. The lesions would envelop her lower legs. These nodules presented after minor trauma, such as an insect bite or being pricked by a thorn (as was the case most recently while working in her garden). Patient was diagnosed with Buruli ulcers in Nairobi, Kenya.
- She was treated with surgical debridement and skin grafting, while living in Africa. Skin grafting was temporarily effective and the patient was hospitalized repeatedly with the same presenting symptoms and, ultimately, the same surgical management.

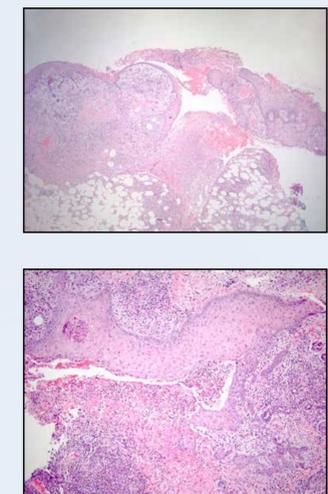
Course

- Her symptoms did not improve and dermatology was consulted. Ultimately a wedge biopsy was taken from the left lower extremity lesion (**Figure 2**).
- Fungal and mycobacterial cultures (GMS, PAS and Fite stains) returned negative. No dramatic improvement was made on antibiotics. Chronic non-healing ulcers with inflammatory biopsy and no clear infectious source prompted a consideration of an underlying autoimmune process and pointed to pyoderma gangrenosum (PG).
- The patient was placed on methylprednisone, and this resulted in gradual healing of her wounds. She was discharged on steroid therapy with a gradual taper as the skin lesions resolved. Notable laboratory findings found during continued outpatient workup included elevations in serum M IgG.

Figure 1: Sequential healing of left lower leg lesion from admission to 56 days of therapy.



Figure 2: Left lower leg wedge biopsy shown at low and high power views, neutrophilic predominance in both epidermal and dermal skin layers with neutrophilic microabscesses.



Discussion

- Pyoderma gangrenosum (PG) is a condition characterized by large, painful ulcers that develop on the skin, specifically the lower legs. Rarely an isolated occurrence, PG occurs most often in the setting of a pre-existing autoimmune disorder, such as Crohn's disease, rheumatoid arthritis, or multiple myeloma.
- The ulcerative lesions are both formed and exacerbated by trauma (even minor). Treatment with corticosteroids is widely considered effective as a means of symptom reduction. Other treatments, however, such as interleukin-1 inhibitors, have also proven to have promising reduction in disease.
- The association between monoclonal gammopathies/paraproteinemias and PG has been well-documented in multiple case studies. Continued evaluation of the patient presented in this case with a specific focus on a recent serum M spike is critical for her general health and prevention of further PG recurrences.

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