SKIN

SHORT COMMUNICATION

Facial Pyoderma Gangrenosum: Overcoming Anchoring Bias

Andrew C. Whittington[1], DO, Ross Pearlman, MD[2], Robert T. Brodell, MD[2]

[1] Department of Medical Education, Corpus Christi Medical Center, Corpus Christi, TX
[2] Department of Dermatology, University of Mississippi Medical Center, Jackson, MS

Pyoderma gangrenosum (PG) is a rare, noninfectious, ulcerating disease that commonly affects women between 40 to 60 years of age. It usually occurs on the lower extremities; however, it can occur anywhere.[1] A case of recurrent PG in a 44-year-old female is presented to highlight the difficulty in making this diagnosis on the face.

A 44-year-old woman presented with a 2-week history of a 4 x 5 cm beefy-red ulceration on the left chin (Figure 1). One year earlier, a small red papule developed on her right upper lip that enlarged into an angulated ulceration over 2-3 weeks. The patient admitted to "rubbing" the lesion but denied "picking." A 4 mm punch biopsy from the edge of the ulcer demonstrated acute on chronic inflammation and fibrosis. Within weeks, a new 2 x 2 cm ulceration developed on the right medial eyebrow. A diagnosis of factitial dermatitis was made. Over a one-year period, there was little improvement in these lesions despite treatment with topical antibiotics, petroleum jelly, honey with collagen powder, and a variety of dressings. The patient was urged to avoid "picking" at the lesions.

About 14 months after her initial visit, she returned to clinic reporting spontaneous resolution of the lip and eyebrow ulcers. She had undergone spinal surgery 6 weeks prior to this visit receiving several doses of intravenous corticosteroids following the procedure with resolution of all facial ulcers in one month. One new ulcer developed on the left chin in the previous two weeks which she attributed to irritation from a post-operative supportive neck brace. At this point, a past medical history of inflammatory bowel disease was ascertained (IBD).

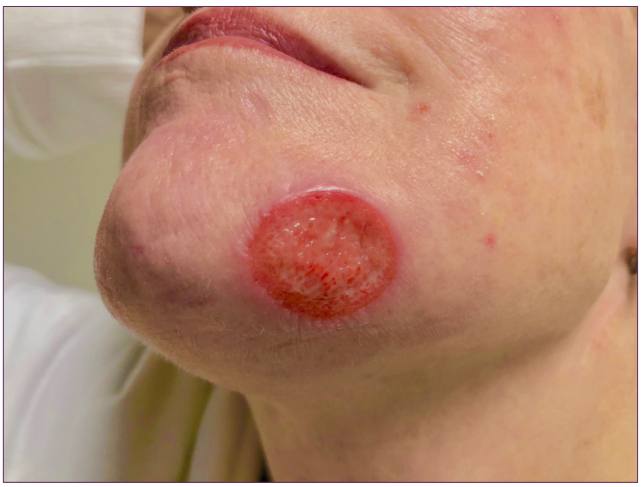

Figure 1.

Given the improvement associated with intravenous corticosteroids and newly discovered history of IBD, the diagnosis was revised to PG. Treatment with oral prednisone 60 mg tapered over 4 weeks, intralesional triamcinolone, and petroleum jelly led to flattening of the rolled border and

Table 1. Comparison of Facial Ulcerations in Factitial Disease versus Pyoderma Gangrenosum

Characteristics	Factitial Ulcerations	Pyoderma Gangrenosum
Associated Conditions	Anxiety and Psychiatric conditions	Inflammatory Bowel Disease, inflammatory arthritis & hematologic disorders
Relationship to Trauma	Persistent trauma potentiates ulcerations	Trauma initiates ulcerations (Pathergy)
Appearance	Angulated borders	Rolled borders
Pathology	Non-specific findings	Non-specific findings
Treatment	Covering wounds to avoid continuing trauma/psychotherapy and psychopharmacology	Oral or intralesional steroids

then complete clearance of ulcers in 1 month.

PG is a rare ulcerating neutrophilic dermatosis.[1] The pathophysiologic basis is poorly understood, but it may result from a combination of neutrophil dysfunction, inflammatory mediators, and genetic predisposition. PG is associated with underlying medical conditions such as IBD, inflammatory arthritis, or hematologic disorders.[2] While it most commonly affects the lower limbs, PG can involve any area of the body. Head and neck involvement is, however, rare.[3]

Since there are no diagnostic, serologic or histologic features, PG is diagnosed based on the clinical findings. The presence of associated diseases, such as IBD, are important clues. Factitial disease is a particularly difficult diagnosis to exclude[4] (Table 1). In this case, the patient's description of "rubbing" was believed to be an admission of "picking," erroneously contributing to our error in diagnosis. In addition, the rarity of PG on the face inappropriately led to the exclusion of this consideration. Diagnostic momentum was responsible for an unwavering diagnostic conviction for almost a year, during which time the ulcerations did not improve.[5-6] Clinicians should remain wary of complicating biases that distort their view of the clinical picture.

Abbreviations used: PG: pyoderma gangrenosum; IBD: inflammatory bowel disease

Conflict of Interest Disclosures: Robert T. Brodell discloses the following: Multicenter Clinical Trials: Novartis – Principal Investigator; Corona psoriasis biologic registry. Editorial Boards: Faculty Advisor, American Medical Student Research Journal; Editor-in-Chief, Practice Update Dermatology; Associate Editor, Journal of the American Academy of Dermatology; Practical Dermatology; Journal of the Mississippi State Medical Society; SKIN: The Journal of Cutaneous Medicine; Archives of Dermatological Research. Advisory Boards: Bracco Diagnostics, Inc. (Gadolinium-based Contrast Agent Litigation); Chairperson of REGN3500 AD independent

monitoring committee (iDMC) (Sanofi Genzyme/Regeneron); SunPharma; and, Cassiopea. Dr Whittington has no conflicts of interest to disclose.

Funding: None

Corresponding Author:
Robert T. Brodell, MD
University of Mississippi Medical Center
2500 North State Street
Jackson, Mississippi 39216
Phone: 330-393-4000
Fax: 330-392-5870
Email: rbrodell@umc.edu

References:

1. Ahronowitz I, Harp J, Shinkai K. Etiology and Management of Pyoderma Gangrenosum. *American Journal of Clinical Dermatology*. 2012; 13: 191-211.
2. Braswell SF, Kostopoulos TC, Ortega-Loayza, AG. Pathophysiology of pyoderma gangrenosum (PG): An updated review. *Journal of the American Academy of Dermatology*. 2015; 73 (4): 691-698.
3. Binus AM, Qureshi AA, Li VW, Winterfield LS. Pyoderma gangrenosum: a retrospective review of patient characteristics, comorbidities and therapy in 103 patients. *British Journal of Dermatology*. 2011;165(6):1244-50
4. Lavery MJ, Stull C, McCaw I, Anolik RB. Dermatitis artefacta. *Clinics in Dermatology*, 36 (6): 719-722.
5. Lowenstein EJ. Dermatology and its unique diagnostic heuristics. *Journal of the American Academy of Dermatology*. 2018; 78 (6): 1239-1240.
6. Helms SE and Brodell RT. Let's acknowledge our mistakes and learn from them! *British Journal of Dermatology*. 2018; 179 (6): 1237-1239.