Treatment of Pyoderma Gangrenosum with Bimekizumab

Kareena S. Garg, BS[1]; Leonardo Tjahjono, MD[2]

[1] Georgetown University School of Medicine, Washington, DC
[2] George Washington University, Department of Dermatology, Washington, DC

Disclosures

- Dr. Leonardo Tjahjono has served as a consultant for Bristol Myers Squibb.

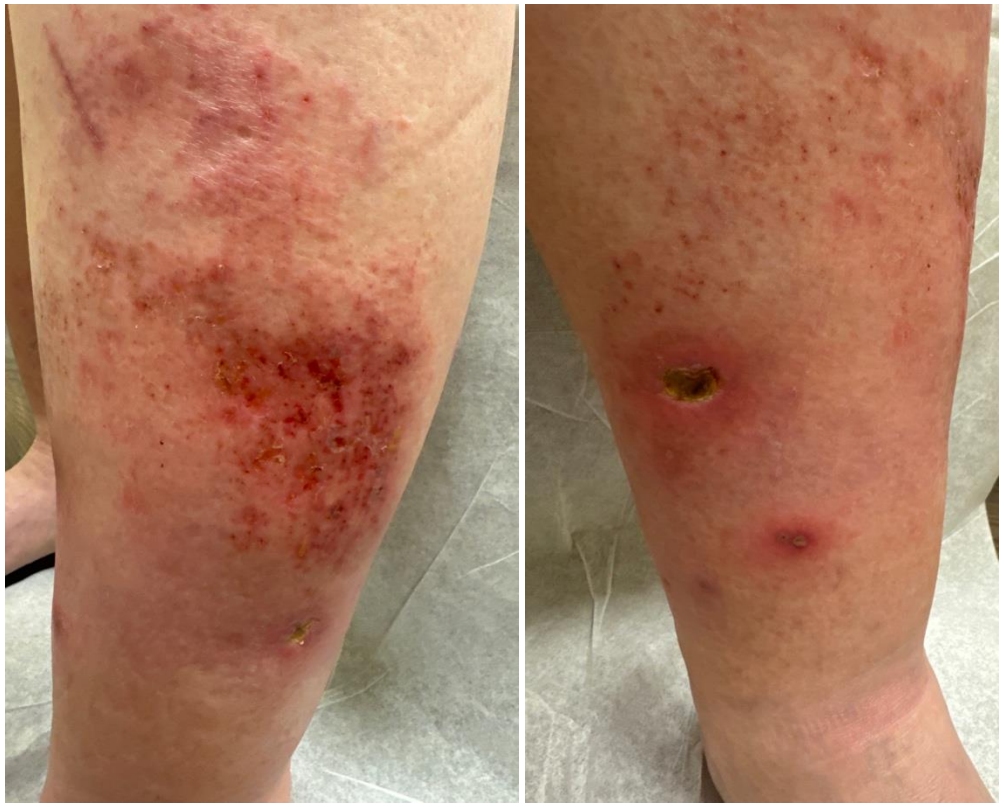
- The patient in this presentation has given written informed consent to publication and presentation of their case details, including photographs and medical information with the understanding that this information may be publicly available.

Introduction

- Pyoderma Gangrenosum (PG) is an inflammatory, ulcerative, and debilitating neutrophilic dermatosis [1].
- There is currently no US Food and Drug Administration (FDA)-approved medication for the diagnosis.
- Typical treatments include topical, systemic, and intralesional corticosteroids, cyclosporine, tumor necrosis factor (TNF) and interleukin (IL)-1 inhibitors.
  - However, these treatments have limited reported efficacy and a multitude of side effects [1].
- We report a case of PG successfully treated with bimekizumab.

Case Report

- 60-year old male with past medical history significant for type 2 diabetes mellitus, non-alcoholic fatty liver, hypertension, hyperlipidemia, and recurrent nephrolithiasis
- Presented with debilitating, ten out of ten painful left lower extremity eruptions of six months duration.
  - The pain on the extremity increased gradually and eventually prevented him to ambulate.
- Physical exam showed painful, ulcerated and eroded, erythematous papules and plaques with undermined borders and scattered erythematous pustules on the left lower extremities.



Case Report

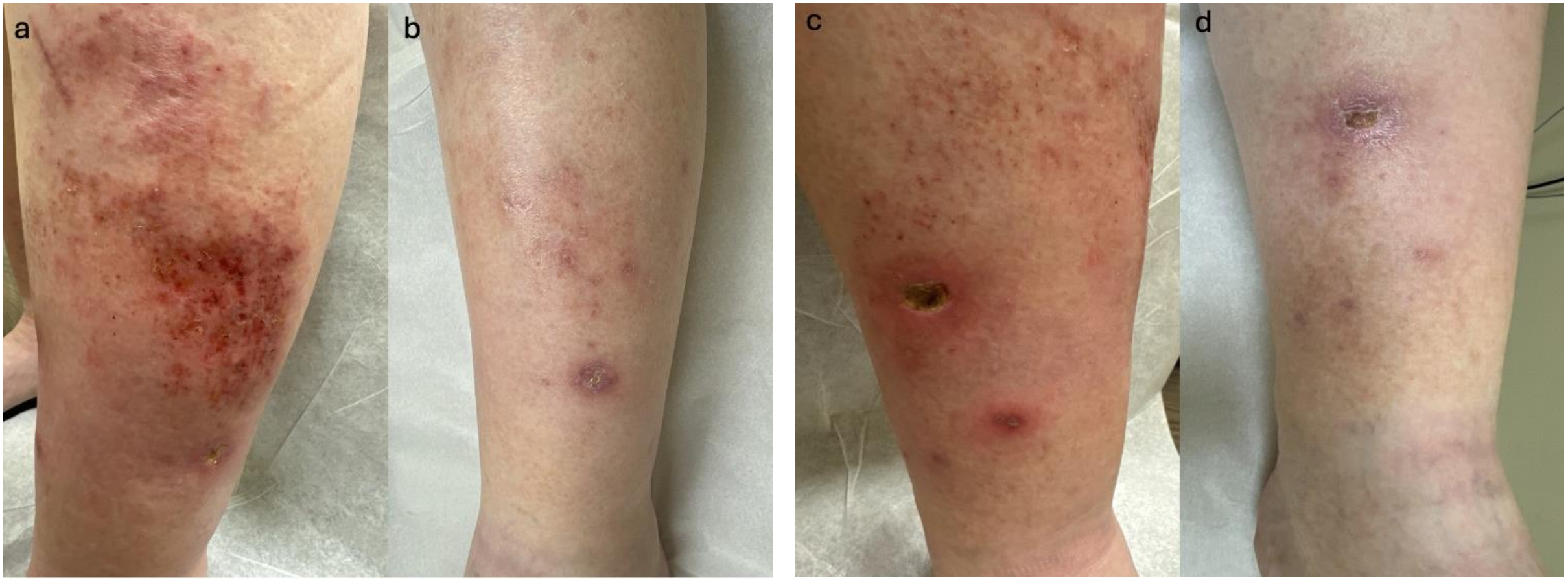
- No improvement with triamcinolone 0.1% ointment twice a day for two months.
- Punch biopsy showed dense and diffuse dermal neutrophilic infiltrates with epidermal ulceration; PAS and gram stains were negative for any changes.
- Direct immunofluorescence and tissue culture were not supportive for small vessel vasculitis, medium vessel vasculitis, or infectious etiology.
- Labs negative for any secondary causes: antinuclear antibody (ANA), anti-neutrophilic cytoplasmic antibody (ANCA), anti-streptolysin, serum electrophoresis, hepatitis panel, and HIV antibodies
- Patient was up to date with age-appropriate malignancy screening. Recent colonoscopy was negative for any inflammatory or malignancy changes.

Case Report

- Due to his significant comorbidities, the patient was averse to initiating systemic corticosteroids, dapsone, and cyclosporine. We could not initiate TNF, spesolimab, and IL-1 inhibitors because of disapproval by insurance, so bimekizumab samples from manufacturer were trialed.

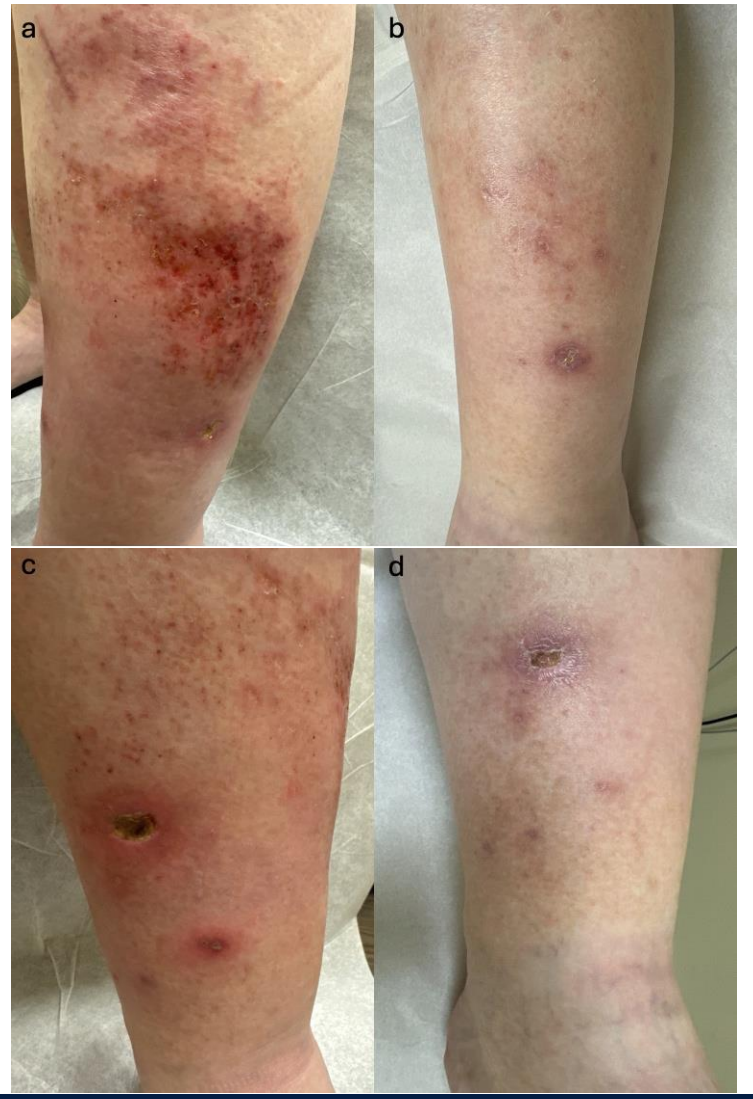
- The patient began once monthly 320 mg subcutaneous injection of bimekizumab

Before and After Treatment with Bimekizumab for 2 months



After Treatment of PG with Bimekizumab

- After two months of treatment, the patient endorsed significant improvement of pain from a level of 10/10 to a level of 2/10.
- The patient stopped developing new erythematous plaques and pustules
- He was able to ambulate for the first time in 8 months.
- Pt has been on bimekizumab treatment for the last 10 months and tolerating well without any adverse effects



Discussion

- Bimekizumab is an IL-17 A and F inhibitor that was recently FDA-approved for treatment of moderate-to-severe plaque psoriasis.
- Although the mechanism of its efficacy is not fully understood, bimekizumab likely immunomodulates imbalances in T helper-17 and IL-17, which are involved in neutrophilic infiltration [2].
- One of the proposed PG pathogenesis mechanisms involves imbalances in the levels of T helper (Th) 17 and IL-17[2].

Discussion

- Another IL-17 inhibitor, ixekizumab, has successfully been used to treat PG [3]. However, our patient reports a more rapid improvement of symptoms compared to the cohort in the case series.
- The impressive speed of symptom improvement of our case is comparable to the speed reported in the pivotal trials for treatment of plaque psoriasis with bimekizumab [4].
- While exciting, further controlled studies are needed to evaluate bimekizumab as a treatment option for PG.

Sources

1. Schmieder SJ , Krishnamurthy K. Pyoderma Gangrenosum. StatPearls. Treasure Island (FL) ineligible companies. Disclosure: Karthik Krishnamurthy declares no relevant financial relationships with ineligible companies.: StatPearls Publishing Copyright © 2024, StatPearls Publishing LLC.; 2024.
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