

## Pyoderma Gangrenosum Associated with IgA Nephropathy

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### Case Report

A 54-year-old African American man presented to rheumatology clinic with chief complaint of sub-acute bilateral foot ulcerations for the past four weeks. He denied any associated symptoms. He had history of hypertension on losartan. Clinical exam revealed bilateral large ulcerations on the medial and lateral malleoli consistent with pyoderma gangrenosum (PG) (Figure 1A). Blood tests were notable for elevated C- Reactive Protein (CRP) of 19 (reference value, 0.0-8.0 mg/dl) and Erythrocyte Sedimentation Rate (ESR) of 63 (reference value, 0-20 mm/h). Rheumatology, infection, and malignancy workups were negative. Serum Protein Electrophoresis (SPEP) and Urine Protein Electrophoresis (UPEP) showed no monoclonal gammopathy. Urine analysis revealed persistent hematuria without casts. Chest x-ray was unremarkable. Patient underwent renal biopsy, which was consistent with IgA nephropathy. He was treated with prednisone 60 mg/day and Methotrexate (MTX) 12.5 mg weekly and folic acid 1 mg daily with complete resolution of PG (Figures 1B and 1C). Patient was tapered of prednisone and continued on MTX only. Hematuria disappeared with treatment.

### Discussion

PG is a rare noninfectious neutrophilic dermatosis condition that can be idiopathic or associated with systemic diseases like inflammatory bowel disease, connective tissue disease, paraproteinemia, and hematological malignancy [1]. There are four different clinical variants of PG, namely, ulcerative, pustular, bullous and vegetative PG. The most common sites of PG is lower legs on the pretibial area [2]. The diagnosis of PG made by exclusion of other disorders like vasculitis, cancer and infection, and recognizing the clinical signs. Biopsy for histopathology can be used to support diagnosis. Treatment of PG can be either topical or systemic depending on severity of PG. Topical high potent corticosteroid and topical calcineurin inhibitors like tacrolimus and or pimecolimuse were used with successful response. Various systemic treatment like corticosteroid, Cyclosporin A, Tacrolimus, azathioprine, mycophenolate mofetil, and Thalidomide have been used in widespread and progressive cases. Tumor necrosis  $\alpha$  inhibitors like infliximab are used in PG associated with inflammatory bowel diseases [2].



**Figure 1:** (A) Clinical exam revealed bilateral large ulcerations with pyoderma gangrenosum; (B,C) Image after treated with prednisone 60 mg/day and Methotrexate (MTX) 12.5 mg weekly with folic acid 1 mg daily.

The association between PG and IgA nephropathy is extremely rare. We reviewed the English literature and we found only one case with acute renal failure attributed to IgA nephropathy in association with PG [3]. PG is a challenging medical condition to treat and an extensive workup is required to identify any potential underlying associated disease.

### References

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