

# Treatment of patient with cutaneous lupus erythematosus with roflumilast cream 0.3%

Morgan McCarty<sup>1</sup>, DO

Austin Regional Clinic, Round Rock, TX, USA

## INTRODUCTION

- Cutaneous lupus erythematosus (CLE) is the cutaneous form of a common autoimmune disease, lupus erythematosus, driven by a dysfunction within the adaptive and innate immune system.<sup>1</sup>
- Chronic CLE (CCLE), one of the 3 subcategories of CLE per histopathology and clinical findings. The most common clinical subtype of CCLE is Discoid Lupus Erythematosus (DLE) in which lesions are often hypopigmented and atrophic and can lead to scarring.<sup>1,2</sup>
- Treatment typically includes preventative approaches, topicals (corticosteroids or calcineurin inhibitors), and systemic therapies.<sup>1</sup>
- Here we report a case of a patient with systemic and refractory cutaneous disease with improvement in manifestations demonstrating efficacy following treatment with roflumilast cream 0.3% in a complex chronic CLE patient with uncontrolled disease, intense pruritus and scarring.

## CASE PRESENTATION

- A 48-year-old Asian female with history of smoking, chronic refractory SLE since 2008 with a new onset of pruritic rash.
- Previous therapies including thalidomide, hydroxychloroquine, methotrexate, mycophenolate mofetil, numerous research trials, oral and intramuscular steroids that failed to control her systemic LE.

## REFERENCES

1. Okon, LG and Werth VP. *Best Pract Res Clin Rheumatol*. 2013; 27:391-404. 2. Walling, HW and Sontheimer RD. *Am J Clin Dermatol*. 2009; 10(6):365-381.

### TABLE 1. Office Visit Timeline

Date	Office Visit Notes	Treatment(s) Prescribed
October 2021	A Rheumatology colleague referred the patient for new onset cutaneous manifestations. Initial presentation revealed lesions involving 2% of the occipital scalp. Pathology confirmed the diagnosis of discoid lupus.	Intralesional triamcinolone, plus topical betamethasone dipropionate 0.05% twice daily (BID) and timolol 0.5% OP solution for wound healing were initiated.
January 2023	Fifteen months later the patient had disease progression of her CLE on to her scalp, face, legs and arms, with the chief complaint of persistent pruritus despite oral prednisone, hydroxychloroquine and thalidomide. The patient's rheumatologist requested alternative treatment for cutaneous disease without use of long term topical high potency steroids (Figure 1A and 1B).	A second series of intralesional triamcinolone injections plus betamethasone dipropionate 0.05% BID for 3-4 weeks and titrate down to 2-3 applications per week  Roflumilast cream 0.3% was initiated once daily to her face, scalp, and lower legs.
March 2023	On the third office visit, four weeks later, the patient reported pruritus and cutaneous manifestations in lower legs controlled and scalp and face have marked improvement	No change in treatments
April 2023	After 8 weeks on this regimen, the patient return reported that scalp and face continued to improve and disease on the legs continue to be controlled despite not using topical treatment for four weeks.	Roflumilast cream 0.3% once daily was continued as monotherapy
June 2023	Two months later, the patient reported that her skin was fully controlled was starting to repigment with monotherapy (Figure 1C and 1D).	

## DISCLOSURES

Medical writing support was provided by Arcutis Biotherapeutics, Inc.

### FIGURE 1. Before and after 3 months of treatment with roflumilast cream 0.3%



## CONCLUSIONS:

- This case report of a 48-year-old female with refractory treatment resistant chronic SLE and CLE treated with roflumilast cream 0.3%, a phosphodiesterase-4 (PDE-4) inhibitor, resulted in disease control, the symptom improvement of improved pruritus as well as repigmentation of the skin.
- The results observed in this patient suggest this topical intervention, if implemented at the beginning of treatment for cutaneous onset of disease, may have the potential to halt the progression of cutaneous involvement.
- This case report serves to highlight a promising intervention that may lead to better cutaneous control without long term side effects of topical steroid use