Drug-Induced Lupus Erythematosus Associated with Proton Pump Inhibitor

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J Health Allied Sci [NU]:2020;10:132–134

Abstract

Drug-induced lupus erythematosus is an autoimmune phenomenon where the drug exposure leads to the development of systemic lupus erythematous like clinical features. Drug-induced lupus erythematosus can be divided into systemic lupus erythematous, subacute cutaneous lupus erythematous, and chronic cutaneous lupus erythematous. Here, we report a case of a 29-year-old female presented with systemic lupus erythematous due to chronic use of proton pump inhibitors, which is considered to be very rare.

Keywords
- drug-induced lupus
- pantoprazole
- proton pump inhibitors

Introduction

Drug-induced lupus erythematosus (DLE) is a rare adverse reaction to a large variety of drugs with features resembling those of idiopathic systemic lupus erythematosus (SLE). It comprises up to 10% of new lupus cases annually.[1] The first case described in 1995 was associated with treatment with sulfadiazine,[2] since then more than 90 drugs have been related to DLE and the number is continuously increasing. Recently proton pump inhibitors (PPIs) have been found to be associated with DLE.[3] The presentation is vague and needs a high index of suspicion resulting in a costly workup. Given that the prognosis is usually good if therapy with offending drug is stopped, it is important to identify this clinical entity promptly.

Case Report

A 29-year-old female patient was admitted to our department with 2 months history of pain in small joints of both upper limb, multiple skin lesions, and painless ulcers on oral cavity. On examination, prominent annular nonscarring erythema was present on the thigh, knees (►**Fig. 1**), and extensor surface of elbow (►**Fig. 2**). No other abnormalities were found on physical examination except for tenderness in the metacarpophalangeal joints of bilateral upper limbs and a painless ulcer over the palate (►**Fig. 3**). Routine investigations were conducted, including a complete blood count, renal function test, urine examination. Since she is a young female in the early reproductive age group, she was screened for connective tissue disorders. The laboratory investigations revealed normal hemogram, liver and kidney function test, and serum electrolytes. Rheumatoid factor was negative. Antinuclear antibody (ANA), antihistone antibody, and anti-dsDNA were positive. Above findings along with lack of systemic involvement raised the suspicion of drug-induced SLE; on further probing of history, we found that she was using pantoprazole tablet for the past 6 months for gastroesophageal reflux disease before her skin lesions appeared. She had no other concomitant diseases and did not take any other drug. She was diagnosed to have drug-induced SLE. The drug was discontinued and tab. hydroxychloroquine 200 mg twice daily and prednisone 0.5 mg/kg/day was started. The therapy was continued for 4 weeks and then the corticosteroid dose was tapered. Complete clearance of skin lesions was noted within 4 weeks of the treatment even the pain over the joints and oral ulcers had healed

Discussion

DLE is a lupus-like syndrome temporally related to continuous drug exposure that resolves upon drug discontinuation. There are currently no standard diagnostic criteria for DLE. Findings include skin manifestations, arthritis, serositis, antinuclear, and antihistone antibodies positivity.[1] Similarly to

published online
September 6, 2020

DOI https://doi.org/10.1055/s-0040-1716601
ISSN 2582-4287.

Fig. 1 Erythematous lesions around knee.

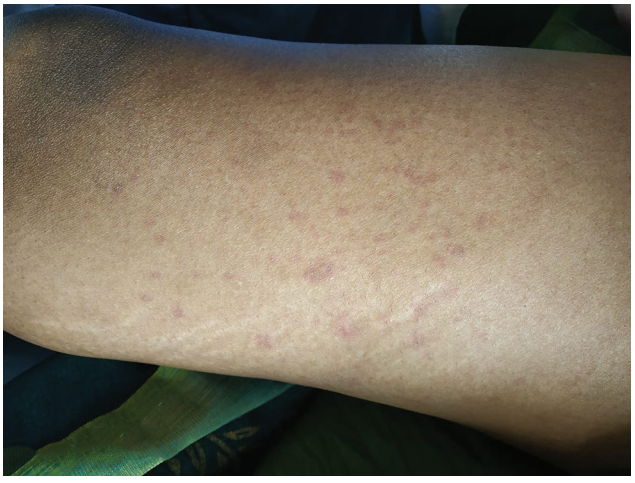

Fig. 2 Erythematous lesions predominantly over extensor surface of elbow.

idiopathic lupus erythematosus, DLE can be divided into systemic (SLE), subacute cutaneous (SCLE), and chronic cutaneous lupus (CCLE). Systemic DLE presents as a milder version of idiopathic SLE, and the drugs most frequently implicated are hydralazine, procainamide, and quinidine, but in recent years, PPIs are also found to be associated. Drug-induced lupus is generally seen in older age and there is no female preponderance. It is very similar to idiopathic SCLE in terms of clinical and serologic characteristics.[3] Drug-induced CCLE is very rare and usually caused by fluorouracil agents and nonsteroidal anti-inflammatory drug.[4] There are currently no standard diagnostic criteria for DLE and in many cases patients do not fulfill the American College of Rheumatology criteria for SLE. The four most common features (arthritis, serositis, antinuclear antibodies [ANA], and antihistone antibodies) could be employed as diagnostic criteria; in addition, the symptoms must have begun after initiation of the treatment with a drug and must resolve after discontinuation.[1,5,6] PPIs most commonly cause SCLE type of DLE. PPI causing SLE-type DLE is a rare presentation.[7]

High levels of anti-dsDNA antibodies are rare and should raise doubts about the diagnosis. In fact, high titers of antihistone antibodies in the absence of high levels of anti-dsDNA antibodies have been proposed as a major criterion.[1,5] The laboratory finding include an increased erythrocyte sedimentation rate and an elevated C-reactive protein; leukopenia is present in 5 to 25% of the cases; anemia is detected in up to 35% of the patients; and thrombocytopenia is rare in the majority of the cases.[8] In severe cases, the treatment should include corticosteroids or other immunosuppressive drugs. However, in most cases with the withdrawal of the causative agent symptoms are reversible within weeks or months, although the serologic abnormalities may resolve more gradually.[8]

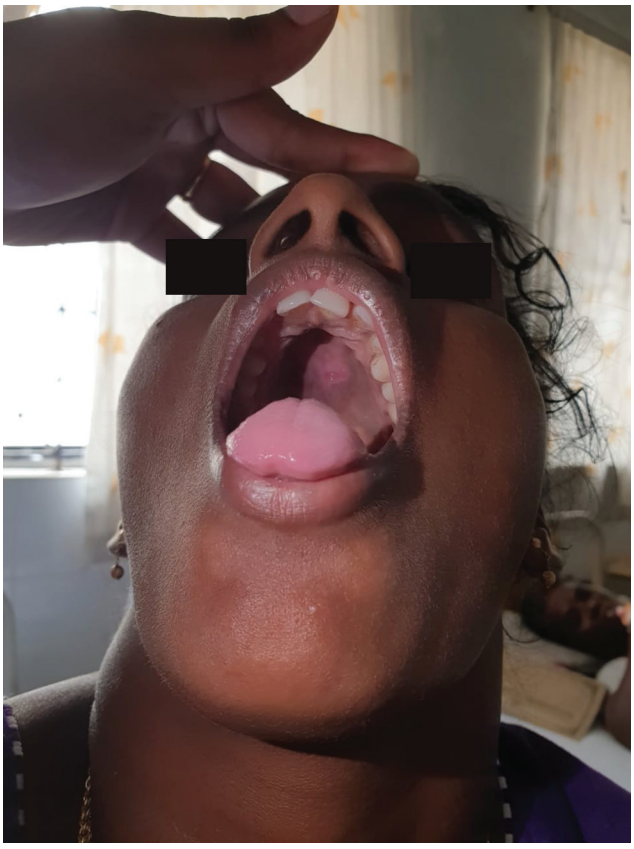

Fig. 3 Painless mouth ulcer found on the hard palate.

Conclusion

This case highlights the need to be vigilant for this potential hazardous disease that can be cured in majority by discontinuing the offending drug and the need to be differentiated from SLE.

Conflict of Interest
None declared.

References

1 Hess E. Drug-related lupus. N Engl J Med 1988;318(22): 1460–1462
2 Hoffman BJ. Sensitivity to sulfadiazine resembling acute disseminated lupus erythematosus. Arch Derm Syphilol 1945;51: 190–192

3 Dam C, Bygum A. Subacute cutaneous lupus erythematosus induced or exacerbated by proton pump inhibitors. Acta Derm Venereol 2008;88(1):87–89
4 Yoshimasu T, Hiroi A, Uede K, Furukawa F. Discoid lupus erythematosus (DLE)-like lesion induced by uracil-tegafur (UFT) Eur J Dermatol 2001;11(1):54–57
5 Pramatarov KD. Drug-induced lupus erythematosus. Clin Dermatol 1998;16(3):367–377
6 Antonov D, Kazandjieva J, Etugov D, Gospodinov D, Tsankov N. Drug-induced lupus erythematosus. Clin Dermatol 2004;22(2):157–166
7 Sandholdt LH, Laurinaviciene R, Bygum A. Proton pump inhibitor-induced subacute cutaneous lupus erythematosus. Br J Dermatol 2014;170(2):342–351
8 Solhjoo M, Ho CH, Chauhan K, Gossman W, Drug-Induced Lupus Erythematosus. Treasure Island: StatPearls Publishing; 2019