

Systemic lupus erythematosus in human immunodeficiency virus: An unusual association

Sir,

A 48-year-old female patient with human immunodeficiency virus (HIV) on regular treatment was admitted for abdominal pain, loose stools. She was taking TLE regimen. On examination, the patient had pallor, icterus, and hepatosplenomegaly. There were multiple, white verrucous plaque lesions on labial mucosa [Figure 1]. The patient treated for diarrhea along with a continuation of HAART (Highly Active Antiretroviral Therapy). Her hemoglobin was 3.9 gm% with indirect hyperbilirubinemia, increased LDH and reticulocyte count, and presence of spherocytosis in peripheral smear [Table 1]. Considering these, she was evaluated for hemolytic anemia. On inquiry, the patient gave a history of low-grade fever for 3 months, a history of Raynaud's phenomenon for 3 years. There was no history of hair loss, joint pain, photosensitivity, malar rash, oral ulcerations, seizure, behavioral changes, and bleeding tendencies. Her direct Coomb's test and ANA blot were positive [Table 2] Punch Biopsy study of oral lesion shows oral leukoplakia (stratified squamous epithelium with variable degree of dysplasia). According to the EULAR/ACR 2019 criteria, our patient had a total score



Figure 1: Oral cavity showing multiple, white verrucous-plaque lesions on labial mucosa

of 12; Fever (2), Auto-immune hemolysis (4), Anti-ds-DNA antibody (6). As the patient has a total score of >10, she was diagnosed as a case of ICH (Immunocompromised host) on ART with SLE. Drug-induced lupus was unlikely as most features entertain diagnosis of idiopathic SLE. She was started on tablets omnacortil, cyclosporine, and hydroxychloroquine. Patient responded well to therapy and was discharged in a stable condition [Table 3].

Table 1: Biochemical parameters

Parameters	Values
CBC	
WBC	12,600 cu/mm
HB	3.9 g %
MCV	103 fl
MCH	28.2 pg
MCHC	34.1 g/dl
PLT	1.23 Lakh
Bilirubin	
Total	4.4 mg/dL
Direct	1.8 mg/dL
Indirect	2.2 mg/dL
Urea	28 mg%
Creatinine	0.6 mg%
AST	130 U/L
ALT	44 U/L
ALP	108 U/L
COVID RT-PCR	Negative
USG abdomen	Mild hepatosplenomegaly
Chest X-ray	WNL
CD4 count	441 (November 2020)
Sickling test	Negative
Reticulocyte count	25%
LDH	2907 U/L
Serum ferritin	1062 ug/L
Peripheral smear: RBC	Anisopoikilocytosis, polychromatophils cells macrocytic, microcytic with severe hypochromia Spherocytes +, RBC agglutination ++
TLC	12,000/cumm DLC: P: 38%, L: 58%, E: 1%, M: 3%
PLT	Adequate

PLT: Platelets, CBC: Complete blood count, WBC: White blood count, HB: Hemoglobin, MCV: Mean corpuscular volume, MCHC: Mean corpuscular hemoglobin concentration, PLT: Platelets, AST: Aspartate aminotransferase, ALT: Alanine aminotransferase, ALP: Alkaline phosphatase, RT-PCR: Reverse transcription polymerase chain reaction, RBC: Red blood cell, TLC: Total leucocyte count, DLC: Differential leucocyte count, WNL: Within normal limit

Table 2: Antinuclear autoantibody blot

Parameters	Values
Coombs (direct)	Positive
ANA	1:1000 speckled

ANA blot		
Test	Strength of titer	Disorder
KU	Positive	SLE, Sjogren, scleroderma
Sm-RNP	Strong positive	MCTD, Sharp syndrome
RO 52	Positive	Sjogren
Ds-DNA	Borderline	SLE
Nucleosome	Borderline	SLE
Ribosome	Positive	SLE

ANA: Antinuclear autoantibody, SLE: Systemic lupus erythematosus, MCTD: Multiple connective tissue disease, KU: DNA binding protein, Ds-DNA: Double stranded DNA

Table 3: Response to therapy

Investigation	On admission	On treatment	On discharge
LDH	2907	833	500
Hemoglobin	3.9	4.6	7.0

LDH: Lactate dehydrogenase

The coexistence of HIV infection and systemic lupus erythematosus (SLE) is a rare but noteworthy event because it provides an interesting glimpse into the pathogenesis of these two conditions.^[1] Both diseases are characterized by multisystem involvement and immune dysfunction. In patients with HIV, autoimmune hemolytic anemia secondary to no obvious triggering etiology has been found and hence the association between autoimmune hemolytic anemia (AIHA) and HIV infection itself has been suggested.^[2] About 20%–40% incidence of positive results on direct antiglobulin tests has been reported for patients with AIDS but overt hemolysis is rare. The frequent lack of reticulocytosis, despite bone marrow erythroid hyperplasia, may lead to the underdiagnosis of AIHA in HIV-infected patients.^[3] The immunosuppression due to low CD4 count in HIV infection can prevent the emergence of SLE. ART initiation leads to the recovery of CD4+ T-cells with the restoration of protective immunity. Coexistence of HIV with SLE is uncommon. Retroviral infections including HIV have been proposed as etiologies in SLE due to antibodies to retroviral proteins.

The treatment of patients with coexistent SLE and HIV infection is challenging as well-established therapeutic guidelines not available.^[4] Associated to Antiretroviral therapy, Hydroxychloroquine (ART, HCQ) seems to be a reasonable and safe approach, with low-dose corticosteroids may be considered with caution. For SLE patients with confirmed HIV infection, anti-HIV therapy should be considered before immunosuppressive treatment with monitoring of CD4 T-cell count. The present case illustrates a female living with HIV on Highly active antiretroviral therapy (HAART) presenting with features of SLE and treated with steroids and immunosuppressant drugs. AIHA as the primary clinical presentation of SLE is extremely rare; a high degree of clinical suspicion is the key to early diagnosis and management.

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Conflicts of interest

There are no conflicts of interest.

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References

- Carugati M, Franzetti M, Torre A, Giorgi R, Genderini A, Strambio de Castilla F, *et al.* Systemic lupus erythematosus and HIV infection: A whimsical relationship. Reports of two cases and review of the literature. *Clin Rheumatol* 2013;32:1399-405.
- Corley PA. AIDS and SLE: A reverse process of the same disease. *Med Hypotheses* 1992;37:85-91.
- Telen MJ, Roberts KB, Bartlett JA. HIV-associated autoimmune hemolytic anemia: Report of a case and review of the literature. *J Acquir Immune Defic Syndr* (1988) 1990;3:933-7.
- Hax V, Moro AL, Piovesan RR, Goldani LZ, Xavier RM, Monticelio OA. Human immunodeficiency virus in a cohort of systemic lupus erythematosus patients. *Adv Rheumatol* 2018;58:12.

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