Section: General Medicine

Case Report

SYSTEMIC LUPUS ERYTHEMATOSUS WITH URTICARIAL VASCULITIS IN A YOUNG FEMALE

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ABSTRACT

Summary: A 35-year-old woman presented with prolonged low-grade fever, joint pain, myalgia, and recent weight loss. She developed erythematous rashes on her thighs, legs, and palms. Investigations revealed iron deficiency anemia, positive ANA, anti-dsDNA, and skin biopsy suggestive of urticarial vasculitis. She was diagnosed with SLE and managed with supportive therapy.

Systemic Lupus Erythematosus (SLE) is a chronic autoimmune disease with diverse systemic manifestations including dermatologic, hematologic, musculoskeletal, and renal involvement.

Its diagnosis relies on clinical suspicion supported by serological markers like ANA and anti-dsDNA.

Urticarial vasculitis is a rare but significant cutaneous manifestation of SLE, often underrecognized.

Keywords: Systemic Lupus Erythematosus; Urticarial Vasculitis; Autoimmune Disease; Antinuclear Antibody; Anti-dsDNA; Cutaneous Manifestation.

INTRODUCTION

CASE PRESENTATION

35-year-old female presented with 1-month history of low-grade continuous fever, joint pain, generalized fatigue, myalgia, and weight loss (~3 kg).

Developed non-blanching, non-pruritic erythematous rash on thighs, legs, and palms five days prior to admission.

Vitals: BP 110/60 mmHg, Pulse 115 bpm, Temp 100.1°F, SpO_2 98%, RBS 121 mg/dL.

Pallor noted. Joint tenderness in knees, wrists, MCPs without effusion. No lymphadenopathy or organomegaly.

INVESTIGATIONS

Parameter	Result	Normal Range	Interpretation
Hemoglobin A1c	5.0%	< 5.7%	Normal glycemic control
Reticulocyte Count	2.0%	0.5–2.5%	Normal
Vitamin B12	159 pg/mL	180–914 pg/mL	Low
Vitamin D	24.9 ng/mL	30–100 ng/mL	Insufficient
Serum Iron	21 µg/dL	50–170 µg/dL	Low
Ferritin	3.96 ng/mL	15–150 ng/mL	Low (suggesting iron deficiency)
Peripheral Smear	Microcytic hypochromic anemia	—	Suggestive of iron deficiency
C-Reactive Protein (CRP)	31.78 mg/L	0–10 mg/L	Elevated, indicating inflammation
RA Factor	8 IU/mL	< 14 IU/mL	Negative
Thyroid Profile (FT3)	Low	2.0–4.4 pg/mL	Possible subclinical hypothyroidism
Thyroid Profile (FT4)	Normal	0.93–1.7 ng/dL	—
24-hour Urine Protein	219 mg/day	< 150 mg/day	Borderline proteinuria
Urine Volume	3000 mL	—	Polyuria

Urine Culture	E. coli	—	Sensitive to meropenem, nitrofurantoin
Blood Culture	No growth	—	No bacteremia

Skin Biopsy & Histopathology:

- Mild spongiosis in epidermis
- Moderate perivascular infiltrate (neutrophils, lymphocytes, eosinophils)
- Extravasation of RBCs
- Swollen endothelial lining and fibrin deposition
- Direct Immunofluorescence: Mild deposition of IgM and C3 in vessel walls

Impression: Urticarial vasculitis

DIFFERENTIAL DIAGNOSIS

- Drug-induced lupus (no drug history)
- MCTD (less likely due to specific serology)
- Dermatomyositis (no muscle weakness)
- Adult-onset Still's disease (no typical rash or sore throat)
- Infective causes ruled out (negative cultures)

TREATMENT

- Antibiotics: based on urine culture sensitivity
- Oral iron, Vitamin D & B12 supplementation
- Awaiting immunosuppressive therapy (hydroxychloroquine ± corticosteroids)
- Multidisciplinary involvement: Rheumatology, Nephrology

OUTCOME AND FOLLOW-UP

Fever resolved and rash improved with supportive care.

Patient under regular follow-up for immunomodulatory initiation and renal function monitoring.

RESULTS

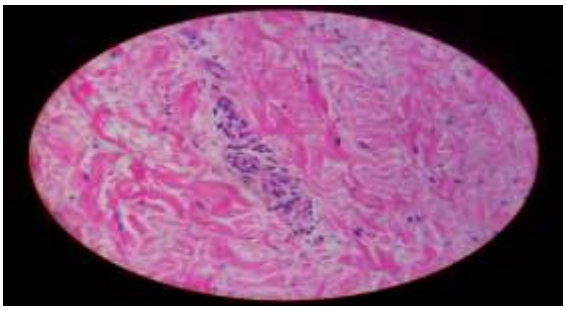

Figure 1: Clinical image of erythematous rash on thighs and palms

Figure 2: Histopathology showing urticarial vasculitis features

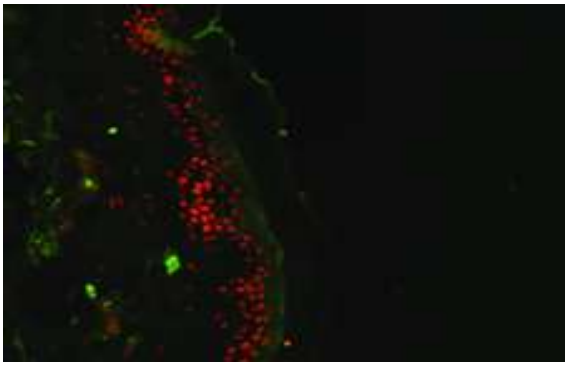

Figure 3: Direct immunofluorescence showing IgM and C3 vessel wall deposits

DISCUSSION

This case illustrates a rare cutaneous manifestation—urticarial vasculitis—in an otherwise classical presentation of SLE.

Prompt autoimmune testing and skin biopsy helped confirm the diagnosis early.

Management of cutaneous vasculitis in lupus requires recognition of systemic involvement and careful immunosuppressive planning.

LEARNING POINTS/TAKE HOME MESSAGES

- Consider SLE in young females with fever, joint symptoms, and cutaneous rashes.
- ANA and anti-dsDNA are pivotal for diagnosis.
- Urticarial vasculitis may be the initial presentation of lupus.
- A multidisciplinary approach ensures comprehensive management.

CONCLUSION

PATIENT'S PERSPECTIVE

Not available at the time of report preparation.

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