



ORIGINAL RESEARCH PAPER

Dermatology

UNUSUAL LOCALIZATION OF DRUG-INDUCED CUTANEOUS VASCULITIS FOLLOWING AMOXICILLIN USE: A CASE REPORT FROM A CLINICAL SETTING

KEY WORDS: Leukocytoclastic vasculitis, Amoxicillin, Drug hypersensitivity, Upper limb vasculitis, Purpura, Unani medicine.

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ABSTRACT	Background: Drug-induced leukocytoclastic vasculitis (LCV) is a rare inflammatory condition often presenting with palpable purpura, typically on the lower limbs. However, involvement of the upper limbs is less common and may lead to diagnostic confusion. Case Presentation: A 23-year-old male presented to the OPD of Amraz-e-Jild wa Zohrawiya, AKTC, AMU, Aligarh, with non-blanching purpuric lesions localized to the right upper limb and shoulder region, following six days of amoxicillin therapy for a febrile illness. Laboratory evaluation revealed neutrophilic leucocytosis and elevated ESR, with no systemic involvement. The diagnosis of drug-induced cutaneous vasculitis was made clinically. Withdrawal of amoxicillin led to spontaneous resolution. Conclusion: This case underscores the importance of recognizing atypical presentations of drug-induced vasculitis and highlights the role of clinical judgment in early diagnosis and management.
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INTRODUCTION

The lower limbs are most frequently affected by leukocytoclastic vasculitis (LCV), a small-vessel vasculitis. It may be related to infections, medications, or systemic illnesses, or it may be idiopathic. Amoxicillin and other beta-lactam antibiotics are among the drugs that have been linked to hypersensitivity vasculitis. Localized lesions on the shoulder and upper extremities are examples of unusual distributions of cutaneous vasculitis that might make diagnosis difficult and postpone treatment. Here, we describe a case of amoxicillin-induced cutaneous vasculitis that visited in a dermatology clinic of Unani Medicine and affected the right upper arm and shoulder.

CASE PRESENTATION



Patient Profile
 Age: 23 years
 Gender: Male
 Presented to: OPD, Department of Amraz-e-Jild wa Zohrawiya, AKTC, AMU, Aligarh

Complaint: Sudden onset of reddish, raised skin lesions on right upper arm and shoulder
 History

The patient had a recent low-grade febrile illness for which he was prescribed amoxicillin 500 mg Thrice a day by a local practitioner. After 6 days of therapy, he noticed multiple non-itchy, non-blanching purpuric spots on the right shoulder and upper arm, without systemic symptoms.

No history of:
 Similar past episodes
 Joint or abdominal pain
 Allergy or autoimmune disease
 Illicit drug use or recent vaccination

Examination
 General condition: Stable, afebrile
 Skin findings: Discrete palpable purpuric lesions involving the right deltoid area, lateral shoulder, and proximal upper arm; no mucosal involvement

Systemic examination: Normal
 Investigations

PARAMETER	RESULT	NORMAL RANGE
Haemoglobin	13.8 g/dL	13–17 g/dL
Total Leukocyte Count	12,500 / μ L	4,000–11,000 / μ L
Neutrophils	82% $\square$	40–70%
ESR	42 mm/hr $\square$	<20 mm/hr
Platelets	280×10^9 /L	280×10^9 /L
CRP	Mildly elevated	<6 mg/L
LFT, RFT	Within normal limits	
Urine Examination	Normal	
ANA, ANCA	Negative	
Blood Cultures	Negative	
Skin biopsy was not performed due to classical presentation and resolution after withdrawal of amoxicillin.		

DIAGNOSIS

Clinical Diagnosis: Cutaneous leukocytoclastic vasculitis
 Etiology: Drug-induced (amoxicillin)
 Distribution: Right upper limb and shoulder (atypical site)

DISCUSSION

Leukocytoclastic vasculitis (LCV), a type of drug-induced vasculitis, is an inflammatory disease that mostly affects the skin small blood vessels. Although it is somewhat uncommon, this illness is frequently brought on by drugs, such as

antibiotics like amoxicillin. The root cause is a kind of immunological reaction called a type III hypersensitivity reaction.

In this reaction, the drug or its metabolites cause the body to produce immunological complexes, which are collections of antigens and antibodies. These complexes enter the bloodstream and are deposited in the small blood vessels, especially the dermal postcapillary venules. This sets off the body's defence mechanism, which includes the release of inflammatory chemicals, the activation of complement proteins, and the recruitment of neutrophils, a kind of white blood cell. Damage to the blood vessel walls results in the basic symptoms of LCV, which include inflammatory cells accumulating around vessels, fragmented white blood cells (leukocytoclasia), and fibrinoid necrosis (death of tissue in vessel walls).

According to medical literature, amoxicillin can occasionally result in LCV. Thankfully, the majority of them only affect the skin and resolve well when the medicine is stopped. Elevated inflammatory markers such as erythrocyte sedimentation rate (ESR) and a high neutrophil count—both indicators of inflammation—supported the diagnosis in the case described. They supported the diagnosis and suited the clinical picture, although not being unique to vasculitis.

Although a skin biopsy is the most reliable method of confirming LCV, it may not be required in mild cases if the diagnosis is evident from the patient's history, symptoms, and lab results. The quick recovery observed after quitting amoxicillin was a crucial hint in this case, providing compelling evidence for the diagnosis of drug-induced vasculitis. When reintroducing the drug (a re-challenge) is not safe or moral, this type of response—known as a "dechallenge"—can be highly telling. The mainstay of treatment is quitting the substance that was the source of the issue. Supportive therapy, such as rest, area affected elevation, and symptom relief, is typically sufficient if the vasculitis is minor and just affects the skin. Only when there is significant involvement of organs like the kidneys or intestines, the stronger treatments like steroids or immunosuppressive medications are employed. In this instance, no steroids were required because the rash was only on the skin and was not severe; it went away on its own soon after the medication was stopped.

This scenario emphasizes several crucial lessons:

If someone has a fresh skin rash, especially after starting a medicine, always think of a drug reaction. Blood tests may reveal symptoms of inflammation, but they are insufficient to diagnose vasculitis; the entire clinical picture is crucial. Vasculitis typically affects the legs, although it can also affect the arms or other regions of the body.

Results are better when the medicine is stopped early, and additional treatment is frequently not required.

CONCLUSION

This case report documents a rare presentation of amoxicillin-induced cutaneous vasculitis localized to the right upper limb and shoulder region, an uncommon site. It highlights the need to consider drug-induced vasculitis in patients with localized purpura and recent antibiotic use, even when lesions occur outside typical dependent areas.

Patient Consent

Informed consent was obtained from the patient for publication of this case and any accompanying clinical details.

Conflict of Interest

None declared.

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