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VASCULITIS UNVEILED: A DETAILED CASE REPORT

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ABSTRACT
Vasculitis is characterized by inflammation of the blood vessels that usually presents with fever, arthralgias, itching, purpural rashes, ulcers, weakness, and other symptoms [(1)]. It can be classified in various ways and the age of presentation will depend on the type of vasculitis. However, regardless of the type, it commonly occurs in adults older than 50 years old. The exact causative factors or agents for vasculitis are unknown but they are usually classified under autoimmune diseases and infections, which includes rheumatoid arthritis, lupus, and hepatitis [(2)]. In this report, we describe the case of a 50-year-old female who presented to OPD of a tertiary care hospital in Islamabad that was a diagnosed case of chronic gastroenteritis from 2 months, with complaints of fever, vomiting, diarrhea, itching, painful blisters on feet, thigh, and abdomen in addition to arthralgias in both knees. The patient was conscious and admitted to female medical ward. She was treated with systemic corticosteroids, topical corticosteroids, emollients, and anti-histamines for her skin blisters. Co-Amoxiclav was administered in IV form for chronic gastroenteritis. NSAID was given for arthralgias. She was also given Ringer Lactate in IV form to treat dehydration, loperamide for vomiting and domperidone for diarrhea. Serum ANA IgG came out as Non-Reactive. CBC indicated anemia and thrombocytopenia. ESR and CRP were raised. The diagnosis was made clinically.

Keywords: vasculitis, inflammation of blood vessels, c-ANCA, p-ANCA, serum ANA IgG

INTRODUCTION
The generalized symptoms of vasculitis are weight loss, fever, body aches, arthralgias, loss of appetite, skin rashes, blisters, ulcers, and tiredness [(1)]. It can cause significant mortality in individuals with underlying risk factors such as autoimmune diseases, drug use, and infections [(2)]. Vasculitis can

occur in an acute form or develop as a chronic condition that can lead to morbidity and mortality, if not treated promptly [3]. The onset of the disease can be rapid with symptoms developing over period of few days to weeks. Some types of vasculitis include giant cell arteritis, ANCA-associated vasculitis, Kawasaki disease, polyarteritis nodosa, microscopic polyangiitis, and Behcet's disease [4].
Vasculitis can cause variety of complications ranging from severe myocardial infarction, stroke, and infarction of ophthalmic artery to aortic syndromes, alveolar hemorrhage, and renal failure [5]. Treatments are continuously evolving with current approaches mainly dependent on immunosuppressive therapies such as steroids and cytotoxic drugs [6].
Here, we present a case report of a female patient with vasculitis who was treated successfully with aim of emphasizing that vasculitis is a disease requiring wide range of approaches for treatment which includes variety of immunosuppressants in oral and topical form.

CASE REPORT

On the 1st of July 2024, a 50-year-old female came to the OPD with complaints of fever, itching, rashes, blisters that progressed to papules, and joint pain in both knees. She was a resident of Bagh in Kashmir, married, mother of two daughters out of which one passed away and a house wife by profession. She went to a local allergy clinic followed by a homeopathic clinic for treatment but there was no relief of symptoms rather her condition worsened. The blood pressure on admission was 140/90 mmHg, oxygen saturation was 95%, pulse and respiratory rate were normal. The fever was present from 2 months which was intermittent, sudden, and documented up to 101◦F. It was not associated with rigors and chills but was relieved by paracetamol. It was associated with severe body aches and arthralgias in both knees. There was no association with night sweats and diurnal variation. The patient vomited once in a day usually in morning, vomitus was spoonful without any sputum and blood. Diarrhea was associated with abdominal pain without any blood or mucus in the stool. After 1 and half month of chronic gastroenteritis diagnosis, the patient started to itch the skin on her buttocks and legs along with feet, which slowly led to formation of painful blisters developing into papules as shown by **Figure 1**. The patient did not have any past medical history; however, she was taking losartan potassium due to hypertension for 4 years. There was a past surgical history of C-section. She did not suffer from any co-morbidities such as diabetes, tuberculosis except hypertension.

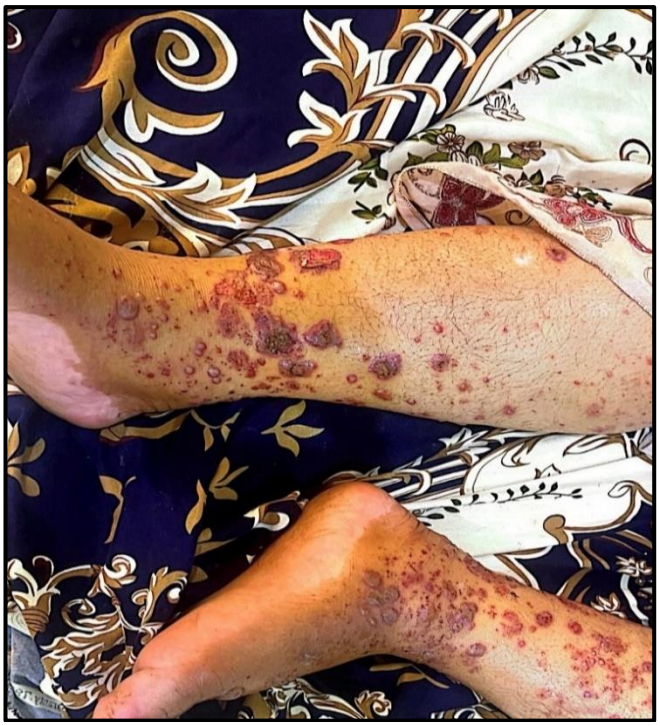

Figure 1: Blisters on feet and legs

Different laboratory tests were carried out that includes complete blood count, ESR, CRP, renal function test, serum electrolytes, and serum ANA IgG. The complete blood count indicates hemoglobin at 12.3g/dl, WBC of 9.9×10^3/uL, neutrophils of 80% and platelet count of 152×10^3/uL. The ESR and CRP were raised. The serum urea was 34 mg/dL, serum creatinine was 0.9 mg/dL, serum sodium was 149 mmol/L, serum potassium was 4.1 mmol/L, serum chloride was 106 mmol/L; however, serum ANA IgG was non-reactive as shown in **Table 1**.

Laboratory Investigations	Results	Reference Range
Complete Blood Count		
Hemoglobin (g/dL)	12.3	13-18
Platelet count ($\times10^3$/uL)	152	150-450
WBC ($\times10^3$/uL)	9.9	(4.0-10.0)
Neutrophils (%)	80	(41-65)
Renal Function Test		
Serum Urea (mg/dL)	34	15-40
Serum Creatinine (mg/dL)	0.9	0.6-1.2
Serum Electrolytes		
Serum Sodium (mmol/L)	149	135-145
Serum Potassium (mmol/L)	4.1	3.5-5.0
Serum Chloride (mmol/L)	106	98-108
Serum ANA		
Serum ANA IgG	0.10 (Non-Reactive)	Negative: <0.9 Positive: >0.9

Table 1: Results of Laboratory Investigations

She was admitted to the ward for two days and was given IV ringer lactate for dehydration due to chronic gastroenteritis. She received an injection of Co-Amoxiclav 1.2 g for infection, loperamide for vomiting, domperidone for diarrhea, oral prednisolone of 5 mg BD with 4 tablets in the morning and 4 tablets in the evening, NSAID was given for joint pain, azathioprine 50 mg BD, a combination of fusidic acid and betamethasone cream twice a day, oral cetirizine hydrochloride 10 mg BD and emollients along with petroleum jelly was applied on blisters.

FOLLOW UP AND OUTCOME

After initiation of treatment with oral and topical immunosuppressive therapies, the patient was monitored for changes in her overall condition which improved. Analgesics reduced the severity of pain in both knees. A follow-up appointment was scheduled for two weeks to assess the progression of the disorder.

DISCUSSION

Vasculitis is a complex condition that occurs due to three main pathological changes which are exaggerated inflammatory reaction that occurs systematically, dwindling of blood vessel walls, and shrunken or occluded blood vessels [(7)]. It causes palpable purpura, hyperpigmentation, arthralgias, shortness of breath, anemia, chronic sinusitis, scleral thinning, headaches, numbness, and hematuria [(8)].

Steroids primarily cause their therapeutic effects by attaching to the glucocorticoid receptors intracellularly which modifies gene transcription, leading to the suppression of inflammatory cytokines such as interleukins and tumor necrosis factor-alpha. It also inhibits the production of prostaglandins and leukotrienes which are the key mediators of inflammation [(9)].

We would like to explain the fact that the earlier the vasculitis is diagnosed the better is the prognosis and is less likely to cause systemic complications. Furthermore, it is necessary to admit the patient and do a follow up to, decrease the morbidity and mortality of the patient. According to the patient history there may be a possibility that vasculitis may have occurred in this patient as a complication of

chronic gastroenteritis thus making infections especially chronic, a causative factor for vasculitis. Whatever the cause of vasculitis is, the treatment modalities lie on reducing and treating the cause of inflammation.

CONCLUSION

It is very important to understand that vasculitis is a complicated disorder with variety of symptoms divided over a wide spectrum. It can cause severe morbidity in patients regardless of their age and immunosuppressants are very important in treating the disease. This case report may help in opening a pandora box for doing research to know whether chronic gastroenteritis causes vasculitis or not.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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DATA AVAILABILITY STATEMENT

None

COMPLIANCE WITH ETHICAL STANDARDS

A consent form in accordance to BMJ guidelines was signed for permission.

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