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Case Report

Henoch-Schönlein Purpura in Young Adult Male - Is Vitamin C the Culprit?

Saurabh Gupta

MBBS Student, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India.
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I N F O

E-mail Id:
saurabhg1811@gmail.com
Orcid Id:
https://orcid.org/0000-0003-2664-3082
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A B S T R A C T

A 21 year old male patient presented with bilateral lower and upper limb rashes, polyarthralgia, hematemesis, per rectal bleeding, abdominal pain, suggesting systemic vasculitis. He developed bilateral subconjunctival haemorrhage. His Vitamin C analysis was done using ELISA method and it revealed significantly low level of Vitamin C. Tissue biopsy was consistent with IgA vasculitis/Henoch-Schönlein purpura. Also, the cause of Henoch-Schönlein Purpura is unknown.

Keywords: Ascorbic Acid (Vitamin C), Henoch-Schönlein Purpura, Maculopapular Rashes, Polyarthralgia, Subconjunctival Haemorrhage

Introduction

Vitamin C, also known as ascorbic acid is a water-soluble vitamin which plays an important role in the synthesis of collagen.[1] Vasculitis is an inflammation of blood vessels. There are a few cases reported which state the involvement of Vitamin C deficiency in the manifestation as systemic vasculitis.[2,3] Henoch-Schönlein Purpura or IgA vasculitis is a systemic hypersensitivity disease that is characterised by purpuric rash, colicky abdominal pain, polyarthralgia, and acute glomerulonephritis. All these changes result from deposition of circulating immune complexes within vessels throughout the body and within the glomerular mesangial regions. The cause of Henoch-Schönlein Purpura (HSP) is unknown.

This case report has been prepared with the objective that presentation of systemic vasculitis could be because of deficiency of Vitamin C.

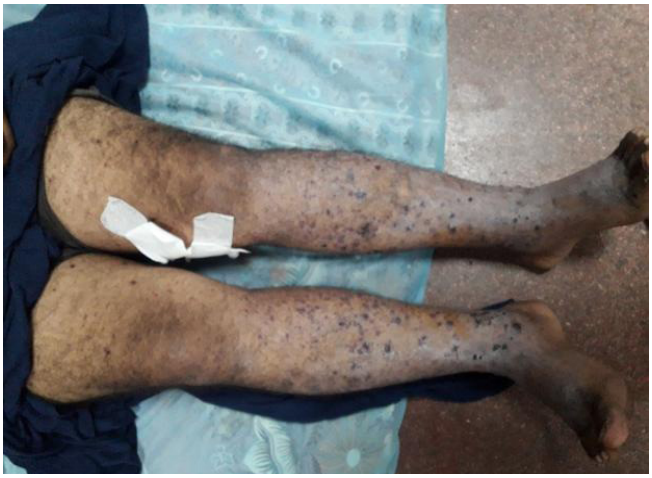
Patient was informed before by taking his verbal consent for using his photographs and case history. The institutional ethical committee was communicated regarding the presentation of case.

Case Presentation

A 21 year old male, who happened to be apparently well before the onset of symptoms, presented to hospital with complaints of palpable purpura with maculopapular rashes with polyarthralgia and swelling that initially started in left leg and gradually progressed to right leg and then involved both of the upper limbs followed by weakness and decreased power in all the extremities that gradually aggravated. Initially he consulted private physician for his initial symptoms and was admitted in the private hospital. Few days after the appearance of the first symptoms he had hematemesis, per rectal bleeding, stomach ache and intermittent epistaxis. Thereafter, he was referred to our hospital, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi-110029 (a tertiary care centre) for further treatment and management. By this time, he had developed rashes over the bilateral lower and upper limbs and trunk, swelling in the bilateral lower and upper limbs, mild fever and profound weakness that resulted him unable to sit from supine position.

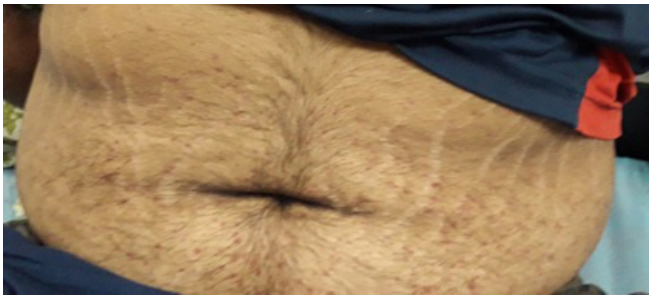
He was given steroids along with symptomatic treatment. His weakness was due to severe joint pain and nerve

conduction velocity (NCV) test was done which showed involvement of multiple nerves and was not in consistent with Guillain-Barré syndrome. Also, his weakness improved over time. In a few days his oedema subsided and he regained appreciable power in his limbs (score 4/5). His reflexes were intact.



Photograph showing maculopapular rashes over the lower limbs

But the rashes still prevailed and he still was complaining of intermittent epistaxis, occasional headaches, colicky abdominal pain, and some episodes of per rectal bleeding and haemoptysis. He complained of diffuse hair fall since past few days. He also developed bilateral subconjunctival haemorrhage (left > right), and blurring of vision in temporal field of the left eye, however no retinopathy was noted.



Photograph showing rashes over the abdomen

There was no history of smoking, alcohol intake or any drug abuse. Also, there was no history of blood transfusion. No history of insect bite or any drug ingestion.

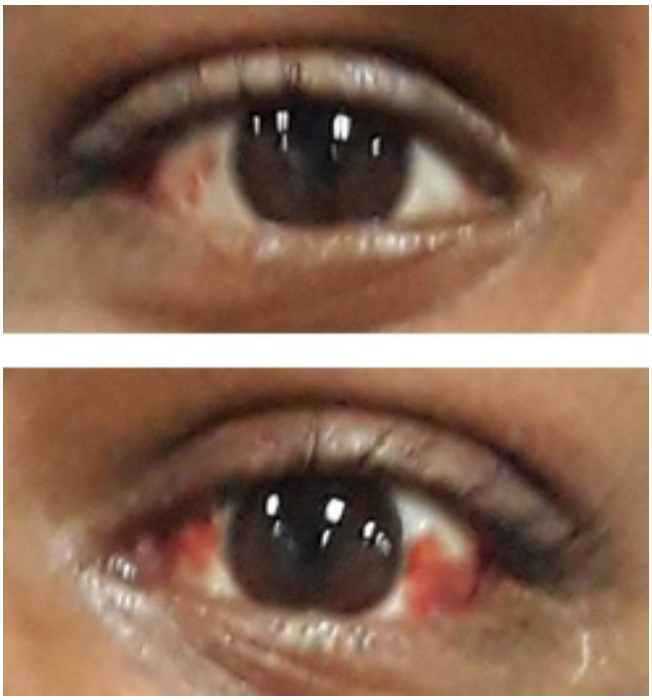
He had no sensory disturbances, no complaint of bowel or bladder incontinence, no history of diabetes or hypertension, no history of smoking or alcohol consumption, no family history of any bleeding disorder. His coagulation profile and CBC were within normal limits. His p-ANCA report was negative. His 2-D echocardiography reports were within normal limits. His urine analysis showed proteinuria and RBC.

A provisional diagnosis of systemic small vessel vasculitis was made.

Patient's condition improved with treatment.

His histopathology report was compatible with leucocytoclastic vasculitis and immunofluorescence studies showed IgA antibody deposits and was consistent with IgA vasculitis (Henoch-Schönlein Purpura).

However, serum Vitamin C level when tested (ELISA method used), was found to be significantly low.



Photographs showing subconjunctival haemorrhage; above-right eye and below-left eye

Discussion

The given case report underlies the possibility that the presentation of systemic vasculitis could be because of deficiency of vitamin C. Also, the subconjunctival haemorrhage as noted in this case could be taken as a clue that implies some underlying bleeding disorder.[4] Subconjunctival haemorrhage in Henoch-Schönlein Purpura (HSP) is itself an uncommon presentation.[5] Some cases have been reported where vitamin C deficiency was manifested as systemic vasculitis.[2,3] Also, article has been published that underline the role of adjuvant therapy of using Vitamin C in treatment of ANCA associated systemic vasculitis.[6]

Conclusion

Large scale study needs to be done to analyse the levels of vitamin C in patients presenting with systemic vasculitis and the role of adjuvant therapy of using Vitamin C in the treatment. Vitamin C estimation is an important parameter

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to be checked in these cases with supportive research studies.

Conflicts of Interest: None

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