Content available at: https://www.ipinnovative.com/open-access-journals

IP Indian Journal of Clinical and Experimental Dermatology

Journal homepage: https://www.ijced.org/

Case Report

Acenocoumarol induced ecchymosis and multidermatomal haemorrhagic herpes zoster

Samuel Jeyaraj Daniel[1], Balaji Ganesh J[1], Saranya Selvam[1], K Desingh[1]*

[1]Dept. of Dermatology, Venereology and Leprosy, Thanjavur Medical College, Thanjavur, Tamil Nadu, India

Abstract

A 65-year-old male presented with haemorrhagic skin lesions over the right buttock region and thighs for the past five days. He also had multiple ecchymotic patches of variable size in the body. Patient gave an history of surgery one month before the onset of haemorrhagic lesions, left iliac vein angioplasty for May Thurner syndrome. Subsequently, he was started on Acenocoumarol (Tab. Acitrom 2mg once daily). Dermatological examination revealed multiple grouped haemorrhagic vesicular skin lesions distributed along the L3,L4 and L5 dermatomes in the right side of the body. There were multiple asymmetrical ecchymotic patches over both the upper limbs and the abdomen. Investigations revealed prolonged coagulation profile. Patient was treated with standard acyclovir therapy for one week along with ascorbic acid. Subsequently, the ecchymotic patches completely disappeared and the vesicles started to resolve. Review of literature with clinical and laboratory correlation suggested Acenocoumarol to be the cause of Haemorrhagic skin lesions including those of herpes zoster in our case, so the drug was withdrawn.

Keywords: Acenocoumarol, Ecchymosis, Haemorrhagic herpes zoster, Haemorrhagic vesicles, Multidermatomal zoster, Coumarin derivatives, Oral anticoagulants, Nicoumalone, Acitrom.

Received: 04-10-2024; **Accepted:** 03-05-2025; **Available Online**: 26-05-2025

1. Introduction

Herpes zoster results from the reactivation of latent varicella zoster virus in the dorsal root ganglion. The classic clinical presentation consists of clear vesicles in a dermatomal distribution. Haemorrhagic herpes zoster is an atypical form of herpes zoster that is generally seen in immunosuppressed, haematological malignancies, elderly individuals, people who are taking antiplatelets and/or anticoagulants, and in patients with severe thrombocytopenia due to any cause.[1-3] Acenocoumarol is a coumarin derivative oral anticoagulant and vitamin K antagonist that prevents carboxylation of Vitamin K-dependent clotting factors II, VII, IX and X and interferes with normal coagulation. Coumarin derivatives are developed for prevention of thromboembolic disorders and are one of the most common medications responsible for drug induced ecchymosis.[4]

2. Case Report

A 65-year-old male presented with a haemorrhagic vesicular rash for five days duration involving the right buttock and thigh which was initially red in colour later became bluish black. It was associated with pain and burning sensation. The patient also had multiple ecchymotic patches in the body which initially started over the right mid-arm, then involved the right forearm, left arm and the lower abdomen (**Figure 1**, **Figure 2**), which were deep purple in colour, non-blanchable, tender and progressive. Patient was previously diagnosed with left deep vein thrombosis secondary to May Thurner syndrome. After all the necessary investigations including the coagulation profile which was normal, the patient was operated with left iliac vein angioplasty and stenting. Subsequently, the patient was prescribed tablet Acitrom (acenocoumarol) 2 mg once daily which the patient is taking for one month duration. Patient is a known case of hypertension for the past five years and on regular treatment

*Corresponding author: K Desingh
Email: desingh99@gmail.com

http://doi.org/: 10.18231/j.ijced.2025.047

with tablet amlodipine 10mg once daily and atorvastatin 20 mg. On dermatological examination, unilateral multiple grouped purpuric vesicles with few clear vesicles on an erythematous base was seen over the right buttock region, extending to the anterior and lateral aspect of right thigh in a dermatomal pattern involving the L3, L4 and L5 dermatomes without crossing the midline (**Figure 3**A,B,C). Patient also had multiple ecchymotic patches over the upper extremities involving the medial aspect of right arm, right forearm and left arm, and over the lower abdomen.

The patient's INR was 4.5 and PT and APTT were prolonged (more than 60 seconds). Complete blood count and other routine blood investigations were normal except for mild thrombocytopenia (platelets 1,15,000 cells/mm3). Viral markers were negative. Medical history and investigations were negative for HIV, malignancy, solid organ transplant, diabetes mellitus, systemic corticosteroids and immunosuppressive drugs. A Tzanck smear was done which showed multinucleated giant cells with abundant red blood cells. Dermoscopy of the haemorrhagic lesions showed unique central purplish globules with peripheral white halos (**Figure 4**A,B,C). Biopsy was not considered since the coagulation parameters were prolonged for the patient.

In view of the possible role of acenocoumarol in the development of ecchymotic patches and haemorrhagic lesions of herpes zoster, the drug was withdrawn. With the classic features of unilateral dermatomal distribution of painful haemorrhagic vesicles of recent onset, a clinical diagnosis of haemorrhagic herpes zoster involving L3,L4 and L5 dermatomes was made. He was started on tablet acyclovir 800 mg five times per day for seven days and tablet ascorbic acid 1000mg once per day. After 1 week of therapy, most of the haemorrhagic vesicles had crusted and the ecchymotic patches resolved completely (**Figure 5**, **Figure 6**). The coagulation profile also came back to normal values.

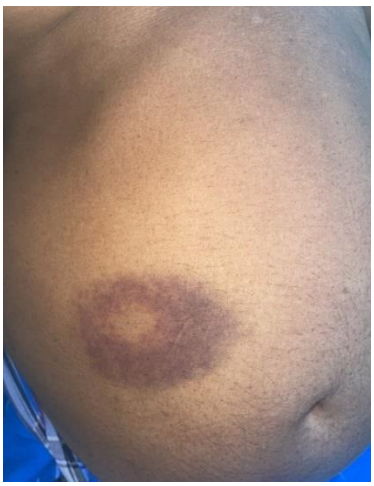

Figure 1: Ecchymotic patch over the left side of lower abdomen.

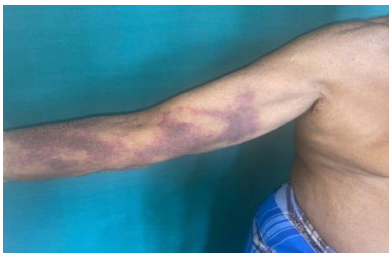

Figure 2: Multiple ecchymotic patches over the medial aspect of right arm and forearm.

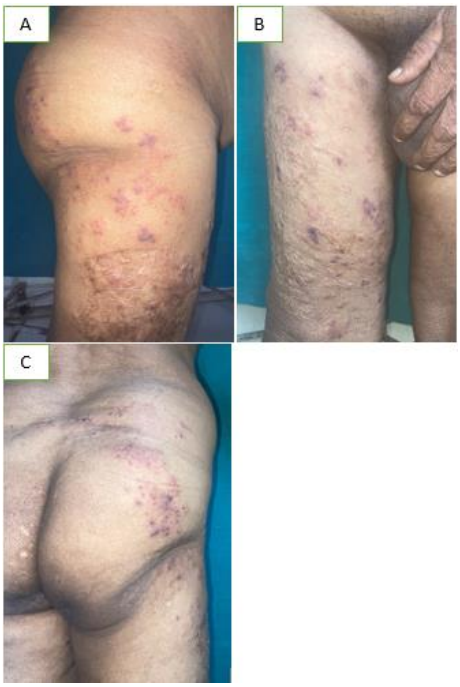

Figure 3: A: Multiple grouped purpuric and vesicular lesions over the right buttock and lateral aspect of thigh with the typical zosteriform distribution along the L3-L5 dermatomes; **B:** Unilateral multiple purpuric and vesicular herpes zoster lesions visible in the right thigh along the L3 and L4 dermatomes; **C:** Multiple haemorrhagic papules and vesicles in the right buttock along the L5 dermatome.

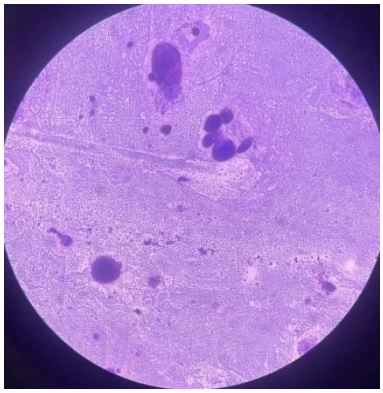

Figure 4: Tzanck smear showing abundant red blood cells with multinucleated giant cell.

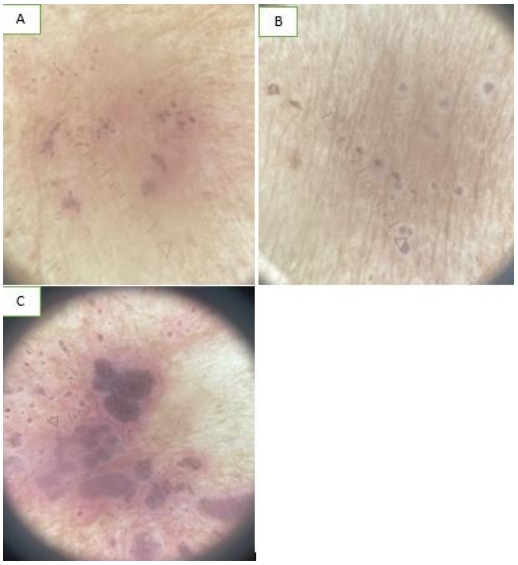

Figure 5: A, B: Dermoscopy of the haemorrhagic lesions showed unique central purplish globules with peripheral white halos.(Heine 30 dermatoscope); **C:** Dermoscopy of the haemorrhagic lesions showing purplish globules with peripheral white halos.(Heine 30 dermatoscope at 10x magnification)

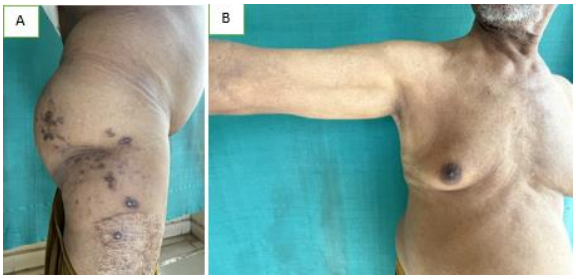

Figure 6: A: The herpes zoster lesions started to resolve after one week of treatment; **B:** Ecchymotic patches resolved completely after one week of treatment.

3. Discussion

Haemorrhagic Herpes Zoster (HHZ) is a rare presentation of herpes zoster. This case emphasizes the possibility of developing HHZ in immunocompetent patients using oral anticoagulants. Previously, haemorrhagic herpes zoster has been documented with oral anticoagulants like Clopidogrel, dabigatran and rivaroxaban.[5-8] HHZ has also been reported in a patient with severe idiopathic thrombocytopenic purpura treated with high dose corticosteroids and in a patient with COVID-19.[9] Acenocoumarol induced HHZ has not been reported in literature so far. Prompt diagnosis and treatment of HHZ and ecchymotic skin lesions and immediate discontinuation of Acenocoumarol prevented serious complications like skin necrosis in our patient. Patients on coumarin derivative based anticoagulant treatment have a 0.1% incidence of developing skin necrosis.[10] Acenocoumarol carries a relatively low risk of skin necrosis. However, those with underlying risk factors such as a history of thromboembolic events, are more likely to experience skin necrosis.[11]

4. Conclusion

In summary, we report this case of HHZ occurring in an immunocompetent patient on treatment with acenocoumarol. Other established associations of HHZ were not noted in our case. HHZ responds well to the standard therapy with acyclovir. This case has been reported for Acenocoumaral induced multi-dermatomal HHZ occurring in an immunocompetent patient with unique dermoscopic manifestations which is not documented in literature so far.

5. Patient consent

Informed and written consent form the patient is taken.

6. Conflict of Interest

None.

7. Source of Funding

None.

References

1. Chhetri PK., Montasir AA, Gupta R, Alam S, Rahman S, Rahman F. A Case of Haemorrhagic Herpes Zoster. *Int J Med Stud*. 2023;10:S221. DOI: 10.5195/ijms.2022.1804
2. Reichl A, Yao M, Spiker M. Hemorrhagic Herpes Zoster as a Harbinger of Malignant Transformation. *J Brown Hospital Med*. 2023;2(4). DOI: 10.56305/001c.87786
3. Fernandes S, D'Souza M, Nandakishore B. Hemorrhagic herpes zoster: A rare presentation. *Indian J Dermatol Venereol Leprol*. 2023;89(2):292–3.
4. Arshi R. Anticoagulants Induced Ecchymosis. Int J Sci Res (IJSR). 2019;8(4):1138-9.
5. Miller AC, Thompson A, Mattia A, Temiz LA, Adjei S, Tyring SK. Hemorrhagic herpes zoster duplex unilateralis in a patient taking clopidogrel. *JAAD Case Rep*. 2023;36:54–55.
6. Rapallo ADM. Thrombocytopenia Possibly Induced By Dabigatran: A Case Report. *J Pharmacovigilance*. 2015;3(4). DOI: 10.4172/2329-6887.1000170
7. Sowell J, Reynolds H, Sowell J. Hemorrhagic herpes zoster with contralateral multidermatomal distribution associated with rivaroxaban: An unusual presentation. *JAAD Case Rep*. 2021;9(1):31–3.
8. Veraldi S, Beretta AE, Spigariolo, CB. Four cases of hemorrhagic herpes zoster associated with dabigatran therapy. *Dermatol Ther*. 2022;35(5):e15413.
9. Vitale J, Carbone F. Haemorrhagic herpes zoster. *Lancet*. 2011;378(9799):1324.
10. Brooks LW Jr, Blais FX. Coumarin-induced skin necrosis. *J Am Osteopath Assoc*. 1991;91(6):601–5.
11. Shah K, Gupta S, Malhotra S. Acenocoumarol-induced skin necrosis. *National J Pharmacol Therapeutics*. 2023;1(2):103–5.

Cite this article: Daniel SJ, Balaji GJ, Selvam S, Desingh K. Acenocoumarol induced ecchymosis and multidermatomal haemorrhagic herpes zoster. *IP Indian J Clin Exp Dermatol.* 2025;11(2):275-277.