

**AMLODIPINE INDUCED PETECHIAL RASH, COLD AND COUGH IN
BREASTFEEDING YOUNG LADY-A CASE REPORT**Eva Lorel Kouassi^{*1} and Sheethal Kuriakose²¹PharmD, Post Baccalaureate, Acharya & BM Reddy College of Pharmacy affiliated to Rajiv Gandhi University of Health Sciences, Bengaluru, Karnataka 560107 India.²Assistant Professor, Acharya & BM Reddy college of Pharmacy, affiliated to Rajiv Gandhi University of Health Sciences, Bengaluru, Karnataka 560107, India.***Corresponding Author: Eva Lorel Kouassi**

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ABSTRACT

Introduction: Amlodipine is a calcium channel blocker that is widely used in mild to moderate hypertension, chronic stable angina and vasospastic angina. Although many studies have reported its association with remarkable complications such as peripheral edema, flushing and headache, hypersensitivity reactions, cold and cough remain rare adverse reactions of this drug. **Case report:** This study presents a case of a 29 year old female lady with 38 weeks period of gestation. She was diagnosed with gestational hypertension 6 months ago for which antihypertensive (tablet nifedipine and labetalol) were prescribed. She was stabilized on 5 mg amlodipine once daily after which she developed cold, brownish black petechial rash over her neck and hands. History, clinical examinations and lab investigations revealed no abnormalities. The patient denied any previous use of medications other than the ones prescribed; consequently the diagnosis made was a diagnosis by exclusion. WHO ADR causality assessment was performed which placed this reaction as a probable adverse reaction to amlodipine. Hence the dose of amlodipine was decreased to 2.5 mg and lastly stopped. The rash resolved gradually over a period of three weeks. **Discussion:** The petechial rash experienced by the patient can mainly be explained by the increased hydrostatic pressure. The best management provided was withdrawal of the responsible drug. **Conclusion:** Amlodipine-induced cough; cold and petechial rash is a rare and cosmetically disagreeable adverse reaction which requires profound study for better understanding and management. This case highlights the necessity of rational drug use in vulnerable population like breastfeeding ladies.

KEYWORDS: amlodipine, petechial rashes, cold.**INTRODUCTION**

Amlodipine is a calcium channel blocker that is widely used in treatment of mild to moderate hypertension, chronic stable angina and vasospastic angina. However it is only given to breastfeeding women when the benefits outweigh the risks since it belongs to the category C of drugs.

Thanks to its longer duration of action and better tolerability, amlodipine is the preferred drug of choice among the CCBs. Although many studies have reported its association with remarkable complications such as peripheral edema, flushing and headache, hypersensitivity reactions, cold, skin rash remain rare adverse reactions of this drug.

Here we report a rare case of a breastfeeding female patient with cold, petechial rash on the neck and hands induced by amlodipine.

CASE PRESENTATION

A 29 year old female lady with 38 weeks period of gestation reported to the obstetrics and gynecology department in view of high BP readings. She was diagnosed with gestational hypertension 3 months ago. On admission to the hospital she was afebrile but had a very high blood pressure of 140/90 mmhg and she also complained of swelling in the limbs.

She was prescribed tablet labetalol 100mg; tablet Nocardia (Nifedipine) 20 mg before giving birth while monitoring any signs and symptoms of increased heart rate, pulse rate or any decrease in the blood pressure. Tablet Amlong (amlodipine) 5 mg twice daily was initiated 5 days after her delivery. Three days after initiation of amlodipine therapy, the patient started complaining of cold and developed brownish black spots all over her neck and hands.

On investigation, erythrocyte sedimentation rate, bleeding time, clotting time and platelet count were

found to be within normal limits. Examination of the affected area revealed petechial rash which was non itchy in nature. The diagnosis of amlodipine induced rash was a diagnosis by exclusion, since the patient did not give history of any other illness or drug use. She was immediately started on cetirizine 10 mg once daily, syrup ambrolite 100 ml thrice daily and amlodipine dose was decreased to 2.5 mg. Though the rash decreased in size after decreasing the dose of amlodipine, it did not completely disappear which made the patient very anxious. She was thus reassured and antihypertensive therapy was removed and rash resolved completely three weeks after.

DISCUSSION

The most commonly observed adverse reactions associated with Dihydropyridine calcium channel blockers are: ankle edema, hypotension, tachycardia, headache, constipation and gastro-oesophageal reflux as adverse effects. Allergic rash, cutaneous hyperpigmentation, granuloma annulare-like eruptions erythema multiforme and toxic epidermal necrolysis by dihydropyridines are rare adverse reactions induced by this group of drugs.^[1,2,3] Amlodipine is known to be mostly associated with peripheral edema, headache and flushing. In this case the patient only experienced cold cough and petechial rash as adverse effects of the drug.

History, physical and clinical examinations, lab investigations being normal, inability to explain the rash by natural history of hypertension and resolution of rash on dechallenge classified this reaction to be a probable adverse drug reaction of amlodipine based on WHO ADR causality assessment. Pharmacologically amlodipine acts by increasing the capillary hydrostatic pressure which relatively relaxes the precapillary sphincter therefore creating rash of blood spot (purpura) on the surface of the skin. The increased hydrostatic pressure causes a few red blood cells to migrate to the extravascular space giving the appearance of petechial rash.^[4] Another possible cause of the rash could be explained by the allergy to starch glycolate, one important ingredient in amlodipine composition.^[5] But since the patient denied any allergy to starch glycolate or any other ingredient in amlodipine composition, the petechial rash goes more in favour of rash due to increased hydrostatic pressure.

The patient experienced cough and cold as an adverse reaction of amlodipine. In fact cough is listed as one of the side effects of amlodipine in prescription formularies though rare.^[6] The patient condition was managed with withdrawal of the drug facilitating absorption of exuded red cells over and hence resolution of the petechial rash. Long-term treatment with dihydropyridines in such patients can cause permanent staining of limbs.^[4]

The literature search revealed reports of dihydropyridines induced petechial rash like in case of nifedipine and diltiazem-induced non-thrombocytic

purpura presenting as petechial rash.^[7] But in this case nifedipine could not have been the causative drug since she was monitored throughout the initiation of nifedipine therapy. Indeed the authors suggest that, petechial rashes are not idiosyncratic but occur as a result of increased hydrostatic pressure.^[8] Another study reported the association of amlodipine with petechial rashes.^[9] The major difference between the previous report and our report is the absence of cough and cold accompanying petechial rashes. This might probably due to difference in immune systems, genetic factors and tolerability to medicines.

CONCLUSION

Amlodipine-induced cough, cold and petechial rash in breastfeeding population is a rare adverse reaction which requires profound study for better understanding and management. The symptoms are very disagreeable cosmetically and may render the patient anxious. If the adverse drug reaction is early detected and the drug is removed at the earliest it is possible to achieve complete non-consequential resolution of petechiae and this adverse reaction does not require any specialized treatment. Increased awareness about the occurrence of such a reaction to a commonly used drug like amlodipine can help the treating physician in arriving at the right diagnosis, appropriate management of the reaction.

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