

## CASE REPORTS

# Negligible therapeutic effects of enalapril in a 65-year-old black man of essential hypertension

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**This is a case report of negligible therapeutic effects of enalapril in a patient of essential hypertension for a period of 3 months. Negligible therapeutic effects of enalapril response in this patient was unexpected as patient claimed complete adherence to the treatment regimen and could possibly be attributed to counterfeit medication which is a recognised problem in some developing nations. Eventually, the patient developed dangerously high blood pressure with the systolic pressure above 200 mmHg. The patient was rescued with sublingual nifedipine and later maintained on monotherapy with another calcium channel blocker. This report has demonstrated that when physicians acquire adequate knowledge and skills in clinical pharmacology and therapeutics, they would be able to adjust drug treatment appropriately. In addition, this report has also highlighted the need to investigate factors that may influence poor response to medications.**

## Background

Angiotensin-converting enzyme inhibitors (ACEIs) such as enalapril are established drugs used to control blood pressure in hypertensive patients [1,2]. It is now established that ACEIs reduce BP in essential

hypertensive patients with normal or low renin levels [1]. Poor therapeutic response to enalapril in a 65-year-old patient is rather unexpected especially if a patient claims complete adherence to the treatment regimen. Therefore, poor therapeutic effect to drug treatment could possibly be attributed to counterfeit medication which is a recognised problem in some developing nations [3-5].

Ankle oedema is well recognised adverse reaction of amlodipine medication [6,7] and prompt recognition would ensure appropriate drug use and avoid inappropriate polypharmacy with associated problems such as additional adverse reactions. In case of hypertensive crises, sublingual nifedipine is well documented and commonly used treatment option [8].

## Case Presentation

A 65 year old male black hypertensive patient was commenced on monotherapy with enalapril daily dose orally and titrated from 5mg to 20mg once daily over a period of 2 months. The 20 mg enalapril dose was maintained for 1 month but without any clinically significant reduction in blood pressure (BP). Eventually, the patient's blood pressure was dangerously raised particularly the systolic blood pressure (SBP) to above 200 mmHg. The patient also experienced a mild headache and generally felt unwell.

The patient urgently attended a local clinic and was successfully rescued with a sublingual dose of standard nifedipine. Thereafter, the patient was commenced on once daily oral dose of amlodipine that was slowly titrated from 5 mg to 20 mg. At 20 mg dose, the patient noticed ankle oedema that was particularly noticeable in the evening after a day's work. The patient reported the adverse event to his physician who recognised the reaction of ankle oedema to be related to amlodipine medication. Consequently, the dose was reduced and ankle oedema quickly resolved. The patient's BP was adequately controlled on a lower dose of amlodipine monotherapy without experiencing any further adverse

effects.

## Conclusion

This report has demonstrated that when physicians acquire adequate knowledge and skills in clinical pharmacology and therapeutics, they would be able to adjust drug treatment appropriately in order to optimise drug treatment and minimise unwanted effects. This report has also highlighted the need to investigate factors that may influence poor response to medications. For example, what is the prevalence and distribution pattern of poor quality, counterfeit and substandard, drugs in Zambia? Findings from such research would be important and relevant in promoting effective and safe use of drugs in Zambia.

## References

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