

UNCOMMON ADVERSE DRUG REACTION OF AMLODIPINERatan Kumar¹¹Associate Professor, Department of Pharmacology, MGM Medical College, Jamshedpur.**ABSTRACT****BACKGROUND**

Amlodipine is a calcium channel blocker widely used as antihypertensive drug. It has main action on vascular smooth muscle, cause vasodilatation. Erythematous rash and peripheral neuropathy are very rare and uncommon adverse effects of amlodipine. A 70 years old patient has shown these type of adverse effect by the use of amlodipine for the treatment of hypertension.

KEYWORDS

Amlodipine, Adverse Drug Reaction, Erythematous Rash, Paraesthesia.

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BACKGROUND

Amlodipine belongs to class dihydropyridine calcium channel blocker binds to the α -1 subunit of L-type calcium channel preferably on vascular smooth muscle, block calcium entry and reverse vasospasm as it is majorly used in hypertension and variant angina.¹ The major side effects of amlodipine are flushing, headache, peripheral oedema, constipation, hepatitis, hyperglycaemia, angioedema, erythema multiforme, pruritus, rash erythematous, hypoesthesia, peripheral neuropathy, paraesthesia, purpura, thrombocytopenia, dysgeusia, gingival hyperplasia¹ are very uncommon and rare adverse drug reaction.² These rare adverse effects are found less than 1% in placebo-controlled trials, but incidence of these side effects was between 1% and 2% in all multiple dose of studies.^{2,3}

CASE REPORT

A 70 years old male, weight-62 kg, height-167 cm, consulted for complain of mild reeling, occasional unsteady gait and disturbance in sleep with anxiety. Clinical Exam: Nothing detected abnormal except isolated systolic hypertension (BP: 170/80).

Investigations

CBP, Blood Glucose F/PP, S. creatinine, lipid profile, TSH, urine R/D done. Reports were within normal range or not very specific.

Treatment

Started with S-amlodipine (2.5) daily; then, follow up the case for 100 days.

DISCUSSION

The common side effects of calcium channel blocker is ankle oedema, palpitation and vascular headache, which are

higher with dihydropyridine (nifedipine amlodipine).⁴ Approx. 30% patients show ankle oedema and approx. 15% show other common side effects in therapeutic dose of amlodipine, usually oedema relieved by co-prescription of hydrochlorothiazide.

Idiosyncratic or allergic response (skin rash) and intolerance^{5,6} are rare adverse effects seen with amlodipine recipients. Although, these are not very serious clinical problem and also reversible, oedema is reduced by the co-prescription of diuretic or oedema and other adverse effects can also be relieved after withdrawal amlodipine. In this case, appearance of rashes and paraesthesia of feet, not relieved even after subsiding oedema by diuretic is not clear; can be hypothesised that vascular dilatation persisting in minor level in feet maybe responsible for localised rash and paraesthesia or neuropathy like symptoms.

SUMMARY

According to prolonged experience of use of amlodipine and various literature <1% to 1% patient show uncommon or rare type of adverse drug reaction along with very common one and amlodipine is required to withdraw in about 3% of the patients.⁶ In this case study, patient recovered completely from rash and 90-95% in peripheral neuropathy/paraesthesia by cessation of amlodipine.

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Period	Patient's Complaint	Clinical Exam and Investigation	Advice	Result/Remark
After one month	Ankle oedema both side	BP :160/80	Added- Hydrochlorothiazide (6.25) 1 tab. daily with S-amlodipine	Oedema subsided in few days
After two months (60 days)	Burning sensation of toes after walking, better in rest	Investigation: a) Vit. D3 Estm. done: 22 ng/mL b) BP 150/76 c) Oedema of feet very less	Added- 1) Calcium, 2) Vit. D3, 3) B1+B6+B12	No remarkable relief in burning feet symptom
After 75 days	Burning sensation of feet continues, now develops redness of both feet/erythematous rashes nonpruritic with paraesthesia of both feet	Invest- 1) Uric acid- Within normal limit 2) Platelet- Adequate BP: 140/76	Added- 1) Pregabalin (75) daily for 10 days 2) Inj. Methylcobalamine+B1+B6 One amp daily for 10 days. 3) Local application for skin (aloe vera)	Not very satisfactory improvement
After 85 days	As Above	BP 140/74	a) First S- amlodipine and all drugs are stopped. b) Hydrochlorothiazide continuing.	Erythematous rash and paraesthesia starts reducing
After 100 days	95% relief in burning sensation, rash, paraesthesia	BP 160/80	a) Hydrochlorothiazide stopped. b) Olmesartan (20) one tab daily started	BP 146/70 Occasional complain of mild burning sensation of feet in prolong walking