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A CASE REPORT ON - ATENOLOL AND TELMISARTAN INDUCED ORTHOSTATIC HYPOTENSION IN HYPERTENSION CASE

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Abstract: Beta blockers (eg: Atenolol) also called beta adrenergic blocking agents, block the release of the stress hormones adrenaline and noradrenaline in certain parts of the body. This results in slowing of the heart rate and decreases the force at which blood is pumped around the body. Beta blockers also block kidneys from producing a hormone called angiotensin II. This results in lowering the blood pressure. Angiotensin receptor blockers (eg: Telmisartan) dilate the blood vessels, and are used in the treatment of conditions such as high blood pressure, heart failure, or kidney diseases. They work by blocking the action of angiotensin II whichresults in low blood pressure. A 74 years old female patient was admitted in general medicine ward in tertiary care hospital in Hyderabad. As above mentioned complaints it came to know that patient is suffering with orthostatic hypotension and admitted in emergency department proceed for further management. Patient present with chief complaints like vomiting multiple episodes since 5 days, shortness of breath

According to her past medical history she was taking Atenolol (Beta blockers),Telmisartan(ARBs).On examination her vitals: BP-90/60mmhg,Pulse rate:75 bpm, Spo2:98% on 2co2 ,Temp:98.6.Her systemic examination was found to be as CVS: s1s2+,BAE+,GRBS:155mm/dl. As her blood pressure decrease than the normal physicians suggest to stop the anti-hypertensive This adverse reactionis considered as drug related type ADR as per WHO scale.

KEY WORDS: Atenolol, Telmisartan, antihypertensive, orthostatic hypotension

INTRODUCTION: Orthostatic hypotension also called postural hypotension is a form of low blood pressure that happens when standing after sitting or lying down.Orthostatic hypotension which is caused by medication also called as drug induced orthostatic hypotension. It can be mild. Episodes might be brief. However, long- lasting orthostatic hypotension can signal more-serious problems.

CAUSE: Hypovolemia, vomiting, diarrhea, cardiac disorders, bradycardia, hypothyroidism, diabetes, Alcohol

Medication causes : Alpha blockers, Nitrates, ACE inhibitions(Atenolol), Beta blockers, calcium channel blockers, sedatives, Hypnotics ,Muscle relaxants, Dopaminergic agents, angiotensin receptor blockers (telmisartan) anticholinergic ,opioids ,cardiac glycosides.

SYMPTOMS: Lightheadedness or dizziness upon standing, Blurry vision, Weakness, Fainting (syncope), Confusion.

Hypertension is a condition in which the force of the blood against the artery walls is too high. Usually above 140/90.Antihypertensive drugs are used to treat this condition. Centrally-acting antihypertensive decrease blood pressure by diminishing sympathetic outflow from the vasomotor center Peripherally-acting antihypertensive act by depleting or inhibiting the release of catecholamine's from the peripheral nerve ending or altering the response at alpha 1- and alpha 2- receptor sites. In Antihypertensive drugs Telmisartan (angiotensin receptor blockers) it works

by relaxing blood vessels and lowers the blood pressure. Initial dose- 40 mg once a day To lower the risk of heart attack or stroke.80 mg once in a day is given side effects of Telmisartan include dizziness and Lightheadedness. Atenolol (beta blockers) Beta blockers cause the heart to beat more slowly and with less force, which lowers blood pressure. Beta blockers also help widen veins and arteries to improve blood flow initial dose: 25 – 50 mg/kg once a day. It may be increased to 100mg.side effects include hypotension, bradycardia, postural hypotension, Lightheadedness, depression. The prolonged use of antihypertensive causes drug Induced orthostatic hypotension. Drug-induced orthostatic hypotension is an important clinical problem. When symptomatic, it is poorly tolerated by the patient, and can be a cause for discontinuing treatment. It may have more serious consequences if it leads to syncope, falls and injury, or to sustained loss of perfusion of vital organs resulting in heart attack or stroke. Hypertension affects two-thirds of elderly patients. Orthostatic hypotensionis an infrequent adverse effect of most of the drugs in current use in the treatment of hypertension; it is, however, more common with alpha 1-blockers (first dose), adrenergic blockers and centrally acting drugs. Sudden loss of blood volume, or excess diuresis, may precipitate orthostatic hypotension in any hypertensive patient. symptoms include dizziness, chest pain, Shortness of breath, nausea, headache, heart palpitations. This condition is managed by discontinuing the antihypertensive drugs.

CASE REPORT:

A 74 years old female patient was admitted In general medicine ward of tertiary care hospital in Hyderabad. AS above mentioned complaints it came to know that patient is suffering with orthostatic hypotension and admitted in emergency department proceed for further management. Patient present with chief complaints like vomiting multiple episodes since 5 days, shortness of breath According to past medical history say that she was taking Atenolol (Beta blockers), Telmisartan (ACE RECEPTOR ANTAGONIST).On examination her vitals: BP-90/60mmhg,Pulse rate:75 bpm, Spo2:98% on 2co2 ,Temp:98.6.Her systemic examination was found to be as CVS: s1s2+,BAE+,GRBS:155mm/dl. As her blood pressure decrease than the normal physicians suggest stopping the anti-hypertensive

DISCUSSION:

The uncritical prescription of Anti-hypertensive (Beta blockers, angiotensin 2 receptor inhibitors) neglecting crucial contraindications hence these lead to risk of Orthostatic hypotension mainly in geriatric patients as discussed in the above case in which her past medication history shows that she is on anti-hypertensive drugs(Atenolol, Telmisartan) which is considered as probable ADR as per WHO scale. Thus, there is a need for alternative therapeutic concepts that minimize the risk of orthostatic hypotension in geriatric patients with Hypertension.

CONCLUSION: The main aim of this report is to create an awareness on adverse drug reactions and necessity to provide patient counseling of long term administration of Anti-hypertensive drugs such as Beta blockers (Atenolol), Angiotensin 2 receptor inhibitor (Telmisartan).

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