A Rare Side Effect of Pimavanserin

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INTRODUCTION

Parkinson's Disease-related psychosis, known to be associated with increase in morbidity and mortality, had no FDA-approved treatment until approval of pimavanserin in 2016. The most common reported adverse effects of pimavanserin-treated patients are nausea, peripheral edema, confusion, constipation, prolonged QT interval and gait disturbances.

CASE PRESENTATION

79-year-old male with PMH of Parkinson's Disease-related psychosis, pre-diabetes presented with AMS and acute hypoxemic respiratory failure. Patient's wife reported tongue and lip swelling on presentation. Pimavanserin was recently started outpatient for treatment of Parkinson's related psychosis. Home medications were reconciled and none had a clear link to angioedema; physical exam with clear lung fields and unremarkable blood work. CT Head showed mild chronic microvascular changes and chest x-ray was unremarkable, ruling out pulmonary causes of hypoxemia. ENT was consulted and indirect laryngoscopy was unsuccessful due to patient agitation. Patient was admitted to hospitalist service for suspicion of Pimavanserin-related angioedema and the medication was held. Neurology was consulted and agreed to hold pimavanserin. Supportive treatment with oxygen therapy was initiated that led to clinical improvement.

DISCUSSION

Most antipsychotics' mechanism of action involve dopamine receptors. Pimavanserin has a unique mechanism of action with no affinity for dopamine receptors and is a combination of inverse agonist and antagonist activity at the serotonin 2A receptors. This offers advantages in regards to the potential worsening of motor symptoms in Parkinson's disease. It is not recommended to use pimavanserin with CKD IV or hepatic impairment. Coadministration of pimavanserin and strong CYP3A4 inhibitors increases the plasma concentration of pimavanserin. This drug significantly reduced PD-associated psychotic symptoms compared with placebo in clinical studies and is the only FDA-approved treatment for this condition. Angioedema is listed as a potential adverse effect of pimavanserin on the package insert. However, there have been no reports of angioedema as an adverse event in any of the pimavanserin clinical trials in PD psychosis. This is the first case in literature to report such a rare adverse effect.

	NUPLAZID n=202	Placebo n=231
Sedation-related events	6.4%	5.2%
Orthostatic hypotension–related events	6.9%	10.4%

	NUPLAZID n=202	Placebo n=231
GASTROINTESTINAL DISORDERS		
Nausea	7%	4%
Constipation	4%	3%
GENERAL DISORDERS		
Peripheral edema	7%	2%
Gait disturbance	2%	<1%
PSYCHIATRIC DISORDERS		
Hallucination	5%	3%
Confusional state	6%	3%

No differences in safety were reported based on age, gender, or MMSE score (MMSE 21-24 vs ≥25)[1]

CONCLUSIONS

This case describes a rare presentation of pimavanserin related side effect, angioedema.

REFERENCES

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