

# Opsoclonus with Amitriptyline Overdose

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Amitriptyline overdose can produce ataxia, tremors, seizures, alterations of the electroencephalogram, extrapyramidal symptoms, cardiac conduction disturbances, various electrocardiographic changes, and most recently has been reported to cause total gaze paresis [4]. We report here a case of amitriptyline overdose associated with opsoclonus.

A 17-year-old woman was found at home in the evening with generalized seizures. She was brought to the hospital unresponsive with a temperature of 37.1°C rectally. On examination her blood pressure was 126/90 mm Hg, the pulse was 160 and regular, and respirations were 20 per minute and regular. Her skin was dry, warm, and flushed.

The most notable feature on examination was the presence of rapid, random, chaotic, conjugate multidirectional movement of her eyes. The movements occurred in the horizontal, vertical, and oblique directions, at times with a rotating component. Full ductions and versions were present. On command the patient would occasionally make a voluntary horizontal or vertical saccade. Her pupils were 6 mm in size, were equal, and reacted sluggishly to light. Funduscopy was normal.

The patient responded to her name by moaning and turning her head to the direction of sound. She had purposeless movements of her extremities, appeared agitated, and had proper withdrawal to painful stimuli in all extremities. Deep tendon reflexes were hyperactive throughout and plantar reflexes were extensor bilaterally. The remainder of her general examination was unremarkable.

An EKG revealed left axis deviation, left bundle-branch block, and sinus tachycardia at 150 beats per minute. She was given two 1 mg injections of physostigmine, which led to resolution of the left bundle-branch block followed by the appearance of an incomplete right bundle-branch block, a normal axis, and a rate of 120 beats per minute. A lumbar puncture showed no abnormality.

By the next morning, following appropriate supportive medical therapy, the patient was alert and responsive to verbal commands. Her ophthalmological examination was normal, as was the EKG. A urine drug screen indicated the presence of amitriptyline and its metabolites but no evidence of other drugs, including phencyclidine.

Amitriptyline is a tricyclic antidepressant whose activity includes inhibition of reuptake of monoamine neurotransmitters, anticholinergic effect, and stimulation of serotonin activity. Adverse central nervous system reac-

tions reported include insomnia, agitation, restlessness, myoclonus, ataxia, seizures, and coma [3]. Our patient had the new finding of opsoclonus. We were unable to perform electrooculographic studies to confirm and better define these movements.

Horizontal and vertical nystagmus associated with hypertension in patients who are agitated or in coma has been reported in phencyclidine overdose [1]. Striking bursts of irregular, shuddery, jerk nystagmus in the direction of gaze have been reported in a patient with phencyclidine poisoning [2] and the authors postulated that the eye movements might be characteristic of phencyclidine poisoning. The description, however, resembles the findings in our patient, implying that opsoclonus is not a specific sign.

## References

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Accepted for publication Feb 26, 1979.

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