

Abnormal Spontaneous Eye Movements as Initial Presentation of Organophosphate Poisoning

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Abstract

Background: Atypical ocular bobbing may result from an intentional poisoning from an organophosphate compound.

Phenomenology Shown: The patient exhibited conjugated, slow, arrhythmic, unpredictable eye movements in all directions, diagnosed as atypical ocular bobbing.

Educational Value: This is a rare, well-documented, clinically relevant case for medical students for correct diagnosis and appropriate treatment of organophosphate intoxication.

Keywords: ocular bobbing, organophosphate, coma

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Ethics Statement: All patients that appear on video have provided written informed consent; authorization for the videotaping and for publication of the videotape was provided.

Abnormal spontaneous eye movements may occur in the setting of intentional poisoning, paraneoplastic disease, and other etiologies, including multiple sclerosis, toxic metabolic states, and infectious diseases, such as the human immunodeficiency virus.^{1–3} A 70-year-old female was found unconscious. On examination, she was comatose, with tremors, miotic pupils, eyelid ptosis, tearing, salivation, hyporeflexia, and fasciculations. Her eye movement examination revealed conjugated, slow, arrhythmic, unpredictable eye movements in all directions, diagnosed as atypical ocular bobbing (Video 1).

We considered poisoning with organophosphates, and intravenous atropine was administered. The next day, the patient had improved, with only eye redness and mild eyelid ptosis. At that point, the patient's relatives reported that she had ingested 20 ml of acaricide, containing chlorpyrifos, an organophosphate, in a suicide attempt. Drug tests confirmed organophosphate intoxication. Similar eye movements have been reported previously in the setting of organophosphate poisoning.³ The possible mechanism of action is unknown; however, acetylcholine could play a role.³



Video 1. Eye movement disorder after organophosphate poisoning and after 12 hours of treatment, showing complete reversal of clinical symptoms. Atypical ocular bobbing due poisoning from an organophosphate.

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