Diphenhydramine Overdose Related Delirium: A Case Report

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Diphenhydramine (DPHM) overdose is one of the most common causes of acute poisoning encountered in the emergency department. DPHM possesses both anticholinergic and sedative effects. Many authors have reported that topical and oral doses have led to hallucinatory psychosis, delirium, wide-complex tachycardia, hyperthermia, seizures and rhabdomyolysis, and the well-known anticholinergic syndrome has been well documented.

We report on a young female patient who presented with delirium after ingesting 24 pills (one pill contains 50 mg) of DPHM to attempt suicide. Although the patient was treated with early gastric emptying followed by activated charcoal and general supportive care, she developed mental confusion, disorientation and short-term memory loss three hours after ingestion of DPHM. These symptoms subsided about seven hours after ingestion without neuropsychiatric sequelae.

Key words: antihistamine, diphenhydramine (DPHM), delirium, overdose

Introduction

Diphenhydramine (DPHM) is one of many antihistamine agents and is a common component in many over-the-counter medications for allergies, the common cold and as a sleeping aid. The USA’s Food and Drug Administration (FDA) approved DPHM for use as a nonprescription antihistamine and hypnotic in doses up to 50 mg[9]. Some authors have reported life-threatening problems with DPHM overdose[2-11]. Tejera reported a case of delirium in an elderly patient that was associated with a high blood level of the anticholinergic drug[10]. Sexton described a case of DPHM-induced psychosis after therapeutic doses[11]. We report on a young woman who had delirium after ingesting 24 pills (one pill contains 50 mg) of DPHM to attempt suicide. We also discuss DPHM, its adverse effects and overdose management.

Case Report

A previously healthy young woman was sent to our emergency department (ED) after ingesting 24 tablets of DPHM to attempt suicide. Details of the patient’s drug ingestion history were obtained from her mother, who brought in four empty cards of DPHM that were found at the patient’s bedside. Ingestion of the drug was confirmed by the patient herself. She denied any history of psychiatric disorders, any underlying medical problems or previous trauma. The patient had taken 24 tablets of DPHM after an argument with her family, without coingestion of other drugs or alcohol.

On presentation, her vital signs and physical examination were unremarkable except for slight anxiety, mild fever, tachycardia and mildly dilated, reactive pupils bilaterally. Complete blood count, electrolyte levels, liver function test and renal