

Medically Unexplained Myopathy Due to Ipecac Abuse

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The use of ipecac, once recommended as an emetic for use in toxic ingestions, has more recently been discouraged for use in home and emergency room settings. It remains readily available, and has been associated with abuse in eating disorders and Munchausen syndrome by proxy. This case discusses an adolescent boy who surreptitiously abused ipecac in the context of distress over parental conflict, and the extensive medical workup undertaken to evaluate unexplained symptoms of proximal muscle weakness, abdominal pain, and, eventually, cardiomyopathy that are sequelae of ipecac toxicity. Clinicians should be alerted to ipecac ingestion with similar presentation.

(Psychosomatics 2006; 47:167–169)

Although ipecac, an emetic, is frequently kept in households for use in accidental toxic ingestions, the American Association of Pediatrics has released new guidelines discouraging this practice.¹ Ipecac, which contains the active alkaloids emetine and cephaelin, may only be useful with certain types of ingestions; there is little evidence of therapeutic benefit, and it can do more harm than good by decreasing gastric motility after repeated emesis. Activated charcoal is now the preferred treatment for acute poison ingestion, and it is superior to the use of both ipecac and gastric lavage in emergency room settings.² Inappropriate use of ipecac has been typically reported in the context of eating disorders, or in cases of Munchausen's syndrome by proxy, in which caregivers intentionally induce vomiting in children.^{1,3} This report demonstrates the dangers of ipecac ingestion in the context of intentional production of symptoms by an adolescent patient.

Case Report

A previously healthy, 14-year-old Hispanic American boy was admitted to the hospital after head trauma from an automobile accident. The patient experienced no loss of consciousness, and computed tomography (CT) and magnetic resonance imaging (MRI) were normal, along with

normal mental status and neurological examination. After admission, the patient began to experience unremitting nausea, vomiting, diarrhea, and abdominal pain. Gastrointestinal studies were negative for obstruction, revealing only colon air/fluid levels on X-ray indicative of ileus. Esophagogastroduodenoscopy provided no additional diagnostic information. A nasoduodenal tube was placed for nutrition, but the patient continued to experience nausea, abdominal pain, and constipation. An abdominal sonogram and increased serum amylase and lipase suggested pancreatitis, which was confirmed with magnetic resonance cholangiopancreatography. A gastric-emptying study was not tolerated because of nausea. In addition to gastrointestinal symptoms, mild lower-extremity symmetric muscle atrophy, attributed to the long hospital stay, was observed. After a week, the pancreatitis had resolved, and nausea and vomiting were decreased. Stool studies and cultures were negative, and no explanation for the symptoms was evident. Vital signs had remained stable throughout the hospitalization, except for mild tachycardia.

A psychiatric consultation was requested to investigate the patient's depressed mood as well as the unclear etiology of symptoms. In general, the patient was quiet, mildly anx-

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Case Reports

ious and sad, although not severely depressed. The patient reported having had a difficult year because of the recent divorce of his mother and stepfather. His school performance had declined over the course of the year, as well. No previous psychiatric history was noted. Mirtazapine was started in the hospital to improve sleep and appetite and address potential underlying mood or anxiety disturbances. The patient was subsequently discharged once his abdominal symptoms resolved except for mild tachycardia and sporadic nausea, with a recommendation to continue the mirtazapine and consider outpatient psychotherapy to help deal with the difficulties of the past year. The diagnosis of psychological factors affecting a medical condition was considered.

The patient was readmitted to the hospital again 32 hours after discharge, with complaints of dyspnea on exertion, fatigue, and feeling unsteady when walking. Physical exam was notable for weak proximal muscle strength and mild tenderness. Creatine kinase level of 5,400 and elevated liver-function enzymes were found on laboratory screening. At this point, the differential diagnosis included myositis of viral origin, dermatomyositis, and, less likely, connective tissue disease or muscular dystrophy. Cardiology reported sinus tachycardia, borderline elevated QTc, and, by echocardiogram, decreased left-ventricular functioning, with an ejection fraction of 34%. The patient was diagnosed with acute myocarditis and ruled out for myocardial infarction and pulmonary embolism. The patient received additional consultations from gastroenterology, rheumatology, physical medicine and rehabilitation, and neurology, and was ruled out for carnitine deficiency, Lyme disease, a variety of rheumatologic illnesses, endocrine dysfunction, tuberculosis, clotting disorder, and Coxsackie virus. Electromyography was suggestive of inflammatory or toxic myopathy, and muscle biopsy was negative for acute myositis or dystrophy. The patient was initially unable to walk, working his way up his legs with his hands in order to stand (Gower's sign), with a resting heart rate in the 110s–120s when sitting and in the 160s when standing. Within 1 week, muscle strength was slowly improving; by this time, the patient was diagnosed with a cardiomyopathy. By 10 days after admission, the patient was able to get out of bed into a chair.

Twelve days after admission, a serum toxicology screen obtained at the beginning of the previous admission was finally obtained—after a delay in the transfer of this information for administrative reasons. The report showed a level of serum emetine, the measured alkaloid in ipecac, at 28 mg/ml (the normal limit is 2.5 mg/ml or less). The

patient admitted to purposely purchasing and ingesting ipecac before both hospitalizations. He denied that his mother had given him the substance or that she had somehow coerced him into ingesting it. The patient reported that these ingestions took place in the context of intense arguments between his mother and stepfather, in order to make himself sick enough to distract them from fighting with each other and instead come together to address his needs. He reported that others in his school obtain ipecac to induce gastrointestinal upset and skip classes, which gave him the idea. He ingested an entire small bottle of ipecac, reasoning that it is used in small children and therefore could not be particularly dangerous; he stated that he had even read the back of the bottle to ensure avoidance of serious harm. He also strongly and repeatedly denied any intent to injure or kill himself, and there was no evidence of continued ipecac ingestion while in the hospital. The patient was discharged 2 weeks after admission with recovery of cardiac and skeletal muscle function, with a plan for cardiology follow-up and instructions to avoid sports and other strenuous physical activity for 3 months. The mirtazapine was discontinued after the first hospitalization, and no further psychotropic medications were given. The patient and his mother agreed to individual psychotherapy for him, as well as family counseling with his stepfather. The patient appeared hopeful that this process would result in a reunited family; the mother was cautioned to be realistic with the patient rather than maintain his fantasy and risk inevitable disappointment. She was also counseled to be vigilant for signs of depression in her son.

Discussion

The abuse of emetics such as ipecac is reported in eating-disorder patients and in patients who utilize factitious symptoms to receive attention, as in Munchausen syndrome by proxy. This case highlights medically unexplained myopathy eventually found to result from ipecac used in a deliberate self-harm gesture. That the patient learned about ipecac abuse from peers is noteworthy and suggests that this abuse may be more common than previously realized. Clinicians should consider ipecac abuse in similar cases but should also utilize careful toxicology screening in such cases.

Serious myopathic toxicity may result from excessive ipecac ingestion. The cardiomyopathy from this agent has been described extensively in the literature, and it may in-

clude dysrhythmias, T-wave abnormalities, QTc prolongation or other ECG changes, ventricular dysfunction, precordial chest pain, enlarged heart, reduced ejection fraction, and tricuspid or mitral valve insufficiency.^{4,5} The often-reversible skeletal myopathy may manifest as proximal muscle weakness, myalgias, hypotonia, absent deep tendon reflexes, or abnormal muscle biopsy or electromyography.^{6,7} Leukocytosis, elevations in creatine kinase (including the MB fraction), and elevated liver-function enzymes are among reported lab abnormalities. Interestingly, pancreatitis is one complication that has not been encountered in ipecac-toxicity reports. Extensive work-ups are often undertaken to exclude infectious, metabolic, and other causes. In most cases, as in this one, full recovery is expected, although deaths have occurred. Factitious disorder appears to be the most appropriate diagnosis in this case, based on the conscious production of symptoms, provided that the toxic ingestion is interpreted as an unconscious desire to assume the sick role, with its consequent benefits. Primary psychological gain in such a formulation would be attempting to solve the discord between the parents. Alternately, malingering could account for the behavior, if bringing his parents together is conceived as a type of secondary gain intentionally sought by the patient; this would be a variation on the conscious seeking of material gain or avoidance of responsibility usually associated with the term. Third, the gesture could be interpreted as a “cry for attention;” the divorce of his parents was likely more disturbing to the patient than he was able to recognize or admit, resulting in school difficulties and, eventually, in self-harm, to draw attention to his emotional pain.

Management of this type of patient on a consultation-liaison psychiatry service raises a number of issues; among

them, the dilemma of whether to confront the patient’s manipulative behavior and risk damaging a nascent therapeutic alliance, or to instead focus on the establishment of a working relationship and forgo confrontation. Because cases of this nature often require ongoing outpatient intervention, we chose the latter approach, so that, optimally, the patient would remain open to therapy after discharge, rather than avoid it because of feelings of anger, guilt, or shame that might follow an unpleasant confrontation. The patient and his mother were engaged in several sessions of supportive psychotherapy focusing on more positive ways to communicate and process family conflicts. Often, factitious behaviors elicit strong countertransference reactions of anger and frustration from staff.

The diagnostic uncertainty in this particular case, combined with the patient’s relatively cooperative behavior in the hospital and acknowledged system errors in the communication of clinically significant data, likely mitigated such reactions, although, in general, the consulting psychiatrist must be aware of potentially destructive retaliatory staff behaviors in the context of patients felt to be “lying” about medical symptoms. It is significant that not one of the multiple consultants in the case had suspected the possibility of ipecac or any other intentional toxicity. The fact that the emetine level was elevated was communicated only after extensive medical evaluation, and awareness of this could have led to a direct and more parsimonious treatment. This case illustrates the medical consequences that may result from late or inadequate availability of clinical data. Furthermore, it raises questions about the appropriateness of the over-the-counter availability of a substance that is clinically obsolete and possesses a potential for misuse.

References

1. American Academy of Pediatrics Committee on Injury, Violence, and Poison Prevention: Policy Statement: Poison Treatment in the Home. *Pediatrics* 2003; 112:1182–1185
2. American College of Emergency Physicians: Clinical Policy for the Initial Approach to Patients Presenting With Acute Toxic Ingestion or Dermal or Inhalation Exposure. *Ann Emerg Med* 1995; 25:570–585
3. Palmer EP, Guay AT: Reversible myopathy secondary to abuse of ipecac in patients with major eating disorders. *N Engl J Med* 1985; 313:1457–1459
4. Manno BR, Manno JE: Toxicology of ipecac: a review. *Clin Toxicol* 1997; 10:221–242
5. Schneider DJ, Perez A, Knilans TE: Clinical and pathological aspects of cardiomyopathy from ipecac administration in Munchausen’s syndrome by proxy. *Pediatrics* 1996; 97:902–906
6. Mateer JE, Farrell BJ, Chou SM: Reversible ipecac myopathy. *Arch Neurol* 1985; 42:188–190
7. Carraccio C, Blotny K, Ringel R: Sudden onset of profound weakness in a toddler. *J Pediatr* 1993; 122:663–667