

Choking caused by a homeopathic drug

In a previously healthy infant

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There are few reports of an association between homeopathic medications and severe respiratory distress.¹ We describe the case of an infant presenting with choking clearly associated with the ingestion of the first dose of a homeopathic medicine for infantile colic. Acute-onset choking is also one part of an apparent life-threatening event (ALTE), which is an episode frightening to the observer and characterized by some combination of apnea (central or occasionally obstructive), colour change (usually cyanotic or pallid but occasionally plethoric), a marked change in muscle tone (usually limpness), and choking or gagging.^{2,3} An explanation for an ALTE is found in only 50% of cases. Our case emphasizes the potential of homeopathic medications to cause severe respiratory symptoms, possibly via aspiration or direct local toxicity. There is a specific need to increase awareness that even if medical and homeopathic preparations are available without a prescription, they can still have serious adverse effects.²

Case

A previously healthy 20-day-old male infant presented to the emergency department (ED) with increased respiratory rate, nasal flaring, and irritability. He had been born at 38 weeks' gestation after a normal pregnancy and uncomplicated delivery. He had been well until 2 hours before admission when, several minutes after his first dose of a homeopathic medication for infantile colic (Gali-col Baby), he coughed, choked, and became plethoric and limp, prompting his parents to bring him to the ED. There was no history of trauma and the medication was not given close to a feeding. On examination he was irritable, tremulous, and diaphoretic, but still active and alert. He manifested considerable respiratory distress, with tachypnea, nasal flaring, and use of accessory respiratory muscles. His temperature was 36.5°C, blood pressure was 90/40 mm Hg, respiratory rate was 65 breaths/min (99th percentile for this age), and oxygen saturation was 80% in room air, rising to 95% with 40% oxygen supplementation. There were no signs of trauma and there was no subcutaneous emphysema. Auscultation of the lungs revealed bilateral rales and crackles. Heart sounds were normal and the abdomen was soft with no hepatosplenomegaly. A neurologic examination revealed equal-sized and reactive pupils, and normal and symmetric tone and reflexes. The rest of the clinical examination findings were unremarkable. The capillary blood glucose level was 6.5 mmol/L (125 mg/dL; normal level 70 to 110 mg/dL). Plasma ammonia and lactate levels, renal function, liver test results, and urine dipstick results were normal. Urine toxicology results were negative. Venous blood gas levels showed respiratory acidosis and hypoxemia (pH 7.18, Pco₂ 59 mm Hg, bicarbonate level 20 mmol/L, Po₂ 75 mm Hg, and fraction of inspired oxygen 1). A chest x-ray scan showed pulmonary edema and signs of pneumonitis (Figure 1).

Amoxicillin-clavulanate was administered owing to presumed severe aspiration pneumonia, and the infant was admitted to the pediatric intensive care unit, where he continued to show respiratory distress. An arterial line was placed and he was treated with 100% oxygen. His dyspnea gradually

EDITOR'S KEY POINTS

- The use of homeopathic remedies is increasing, without any meaningful regulation of manufacturing, and without evidence of efficacy or safety. It is also incorrectly believed by many of the public and some medical practitioners that because of the very low concentration of active ingredients, homeopathic preparations are free of toxic effects.
- This case emphasizes the potential of homeopathic medications to cause severe respiratory symptoms, possibly via aspiration or direct local toxicity. There is a specific need to increase awareness that even if medical and homeopathic preparations are available without a prescription, they can still have serious adverse effects.

POINTS DE REPÈRE DU RÉDACTEUR

- L'utilisation des remèdes homéopathiques se répand, sans que leur fabrication soit réglementée de manière significative et sans données probantes de leur efficacité ou de leur sécurité. Le public et certains médecins croient à tort qu'en raison de la concentration très faible de leurs ingrédients actifs, les préparations homéopathiques sont sans effets toxiques.
- Ce cas met en évidence le potentiel qu'ont les médicaments homéopathiques de provoquer des symptômes respiratoires graves, possiblement par aspiration ou par toxicité locale directe. Il est particulièrement nécessaire de mieux faire comprendre que bien que certaines préparations médicales et homéopathiques soient accessibles sans ordonnance, elles peuvent quand même avoir des effets indésirables sérieux.

improved, obviating the need for endotracheal intubation. A follow-up chest x-ray scan 8 hours after admission showed no substantial change. Dyspnea resolved after 16 hours and by 30 hours he was breathing normally, with no rales or crackles on auscultation. A chest x-ray scan at this point showed clearing of the lung fields and resolution of the radiographic findings (**Figure 2**). He was discharged the following day, and the parents were instructed to avoid the homeopathic medicine. No further episodes of choking were reported during 6 months of follow-up.

Discussion

This patient presented with a history of sudden-onset choking that began minutes after being given his first dose of a homeopathic medicine for infantile colic. This episode did not occur in relation to any food intake, as the previous feeding had been several hours before and he had no history of vomiting after feeding. After probable aspiration of the compound he developed severe respiratory distress.

Several homeopathic remedies are recommended to calm fussy infants during the first months of life.² A retrospective case-control study by Aviner et al

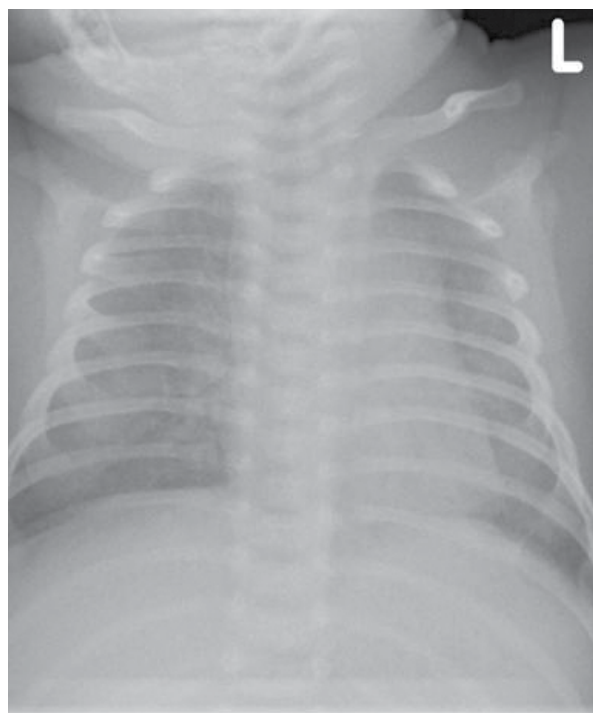
suggests that Gali-col Baby, a homeopathic preparation recommended for this indication, is associated with ALTEs in some infants⁴ but the mechanism is unknown. There are no published controlled trials on the efficacy or safety of this preparation, but 3 of the active ingredients have been associated with toxicity. The first is *Citrullus colocynthis*, which has been known since 1983 to reduce the ability of the liver to synthesize protein, to induce kidney dysfunction, and to lead to hemoconcentration; it has also been associated with colitis in 3 patients.⁵ *Veratrum album*, the second active ingredient, has been associated with toxic effects involving the gastrointestinal tract and cardiovascular system (bradyarrhythmia, atrioventricular dissociation, and vasodilation).⁶ The third component in Gali-col Baby known to cause toxicity is *Strychnos nux-vomica*, which can cause strychnine poisoning that manifests as muscle spasms or convulsions.⁷ No medications have been shown in a controlled trial to improve the symptoms of infantile colic, which is a self-limited condition with no known complications. Thus, drug therapy is not indicated.⁸

The use of homeopathic remedies is increasing, without any meaningful regulation of manufacturing, and

Figure 1. Chest x-ray scan showing bilateral diffuse alveolar infiltrates, with patches on the apical area indicative of pulmonary edema and signs of pneumonitis



Figure 2. Chest x-ray scan showing clearing of the lung field with no evidence of infiltration or consolidation



without evidence of efficacy or safety.⁹ It is also incorrectly believed by many of the public and some medical practitioners that because of the very low concentration of active ingredients, homeopathic preparations are free of toxic effects.¹⁰


Medications reported to be associated with ALTEs include acetaminophen, amphetamines, benzodiazepines, cocaine, codeine, meperidine, methadone, phenobarbital, and phenothiazines.⁹ Dimenhydrinate, which is specifically marketed for infantile colic, should also be included in this group of drugs; it probably produces its adverse effects via anticholinergic and central nervous system depressive actions.⁹ Approximately half of the positive toxicology screening results in infants with ALTEs were because of ingredients found in over-the-counter cold preparations.¹¹ Reasons for the poisonings associated with ALTEs include overtly attempting to harm the infant, attempting to sedate a fussy infant, or grossly misunderstanding the potential risk of various agents.¹²

Acute-onset choking is one part of an ALTE. However, coexisting pathology discovered on workup of these patients, such as gastroesophageal reflux, does not necessarily constitute the cause of the ALTE.¹ Possible causes of ALTE include infectious diseases such as pneumonia, viruses, meningitis, and sepsis; gastrointestinal disorders such as gastroesophageal reflux,

gastric volvulus, and intussusception; neurologic disorders such as seizures, intracranial hemorrhage, brain malformation, and hydrocephalus; metabolic diseases; respiratory and cardiovascular disorders; and poisoning, whether intentional or unintentional.¹³ It is important to consider factitious illness if an ALTE recurs.⁹

Apparent life-threatening events are not uncommon, and infants are frequently brought to the ED after a “blue episode” or “funny turn.” Parents are understandably anxious, even though the infant often appears perfectly well by the time of arrival. An ALTE is not a diagnosis but rather a description of an event for which there can be any number of underlying causes ranging from minor to serious.¹⁴ This poses a management dilemma regarding the extent of investigation and observation needed. Knowledge of the more common causes, and factors associated with a higher chance of substantial clinical findings, can result in a more targeted approach to investigation and improved decision making, benefiting both infants and parents.¹⁵ As poisoning, whether purposeful or accidental, is a potential cause of ALTEs, drug screening of urine should be considered in the workup of these events.¹⁰

Our patient experienced an episode of respiratory distress after receiving a dose of homeopathic medicine for infantile colic, and developed pneumonitis and negative-pressure pulmonary edema. This case highlights the need

to remind the public, and indeed medical practitioners, that even though medical and homeopathic preparations might be available without prescription, they can have serious adverse effects.² We echo the calls for studies into the efficacy and safety of homeopathic preparations¹⁵ in an effort to prevent unfavourable occurrences such as the one described in this report. This episode of pneumonitis and acute respiratory distress syndrome might be related to the content of the drug, but it is also possible the presentation in this case is more related to the effects of choking and aspiration of a liquid. 

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Competing interests

None declared

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