

# Curanderismo

## Consequences of Folk Medicine

Renato Rocco DeBellonia, MD/CSPI,\* Steven Marcus, MD,\* Richard Shih, MD,† John Kashani, DO,\*  
Joseph G. Rella, MD,‡ and Bruce Ruck, PharmD\*

**Abstract:** Curanderismo, folk medicine, is an important and common aspect of Hispanic culture. Its use is not well understood by US medical physicians and is often overlooked when Hispanic patients present to US hospitals. We present a case of isopropyl alcohol toxicity in a 4-year-old child due to the use of a curanderismo treatment of “espanto” (evil spirits).

**Key Words:** isopropyl alcohol, espanto, folk medicine

A multitude of different cultures coexists within the US. This cultural mosaic brings not only a great diversity to our country but also a diverse group of culture-specific medical interventions. These practices are often very different from conventional US medical practices and frequently lack rigorous and objective evidence of efficacy or safety. The medicinal preparations used are often produced in the home or are purchased in shops specializing in cultural products particular to a specific region of the world. In addition to a general lack of uniform quality production, they may be contaminated with known poisons and may vary in the concentrations and composition of active ingredients.

We present a case of a 4-year-old Mexican child who developed systemic toxicity after being exposed to an isopropyl alcohol and a chamomile preparation during a Mexican folk healing ritual. This form of cultural medicine performed by a curandero or folk healer is known as curanderismo.

### CASE

A 4-year-old female Mexican child was diagnosed by a curandero with “espanto.” Espanto is the severe form of “susto,” or “fright,” an emotional illness caused by an event that traumatizes an individual and causes an individual significant distress. This may lead to somatic complaints. The family believed she was plagued by espanto after an automobile accident. To treat her espanto, she was bathed in a preparation of chamomile in an isopropyl alcohol

base. After the bath, she was wrapped, while still wet, in a blanket where she fell asleep for approximately 3 hours. At this time, the mother reported that she was unable to wake the child. Shortly afterward, the mother reported that the child experienced generalized tonic-clonic motor seizure-like activity that lasted approximately 2 to 3 minutes.

On presentation in the emergency department, the patient was unresponsive but was breathing on her own with no abnormal motor activity. The parents were with the child on arrival and provided the medical history through Spanish-speaking staff members. Vital signs were as follows: blood pressure, 83/43 mm Hg; heart rate, 132 beats per minute; respiratory rate, 24 breaths per minute; temperature, 98°F; and oxygen saturation, 98% on room air. The pupils were midsize and sluggish to light. The rest of the physical examination was normal. Initial laboratory values included were unremarkable except the following: bicarbonate, 20 mEq/L; measured serum osmolality, 356 mOsm; calculated serum osmolality, 295 mOsm; osmolar gap, 61 mOsm; isopropyl alcohol level, 9 mg/dL; and serum acetone level, 146 mg/dL. A non-contrast-enhanced computed tomography scan of the head was normal. The child was admitted to the hospital, and for the next 2 days, her symptoms resolved, and she was discharged fully recovered.

### DISCUSSION

Folk medicine plays a prominent role in many cultures living in the US. The term folk medicine in the US is a form of complimentary and alternative medicine. According to the 2002 National Health Interview Survey, conducted by the National Center for Health Statistics, 75% of adults in the US have used some form of complementary and alternative medicine (CAM). Complementary and alternative medicine has become a prevalent part of everyday life. The most common form of CAM is prayer used for a person's own health (43%). Nineteen percent used natural products including herbal medicine. In that survey, ethnicity was a significant factor in CAM usage. Seventy-one percent of African Americans, 61% of Asian and Hispanic, and 60% of whites use CAM.

Curanderismo is a form of Hispanic folk medicine associated with spiritual and psychic healing.<sup>1</sup> A prominent belief is that good health is a gift from God. The folk healer, known as a curandero, is believed to have healing powers and is a common appearing figure in a Mexican community. The curandero's role is intertwined with religion and traditional health beliefs. This person is not only a medicine healer but is also often a religious leader. In addition to religious ceremonies and incantations, a curandero may also use herbal remedies, prayer, rituals, or elixirs. The most important

\*Department of Preventive Medicine and Public Health, University of Medicine and Dentistry of New Jersey, Newark; †Department of Emergency Medicine, Morristown Memorial Hospital, Morristown; and ‡Department of Surgery, University of Medicine and Dentistry of New Jersey, Newark, NJ.

Address correspondence and reprint requests to Renato Rocco DeBellonia, MD/CSPI, Department of Preventive Medicine and Public Health, University of Medicine and Dentistry of New Jersey, 140 Bergen Street, Newark, NJ 07101-1709. E-mail: rdebellonia@njpij.org.

Copyright © 2008 by Lippincott Williams & Wilkins  
ISSN: 0749-5161/08/2404-0228

factor in this system of practice is the belief and faith in the curandero.

Folk remedies using isopropyl alcohol have been previously reported. One case documents a mother originally from the Azores, who applied isopropyl alcohol to the umbilicus of her neonate with diaper changes. This form of umbilical care is common among Portuguese populations and is performed to ensure that the child's navel will become attractive.<sup>2</sup>

Another example, which is a popular practice in Argentina, is the application of isopropyl alcohol-soaked cloths to the belly to relieve abdominal pain.<sup>3</sup> In an adult, absorption of alcohol through intact skin has been reported and is negligible.<sup>4</sup> In children, alcohol intoxication has been described after dermal application.<sup>2</sup> Transdermal absorption may be enhanced during a hot bath when cutaneous blood vessels are dilated. In addition, this absorption can be augmented by wrapping the child in an alcohol-soaked blanket limiting alcohol evaporation. In addition, inhalational absorption may play a role in all of these cases.

Our case demonstrates how curanderismo or folk medicine can directly lead to systemic toxicity in a child. In addition, our case involved a patient who spoke little or no English. A common problem with assessing patients having a different cultural background is obtaining accurate historical information due to a language barrier. In the case presented, Spanish-speaking staff members of similar cultural background were available to translate. In addition, the individuals had an understanding of the cultural significance surrounding curanderismo treatment. This process

was essential in the assessment and subsequent treatment plan. Without understanding the significance of curanderismo, the diagnosis of isopropyl toxicity would likely not have been made, and/or the patient would have had a significantly more intensive diagnostic workup such as a full sepsis evaluation.

## CONCLUSIONS

Complementary and alternative medicine is commonly used in the US. Curanderismo is a form of alternative medicine commonly used by the Hispanic community.

We present a case of a young child who experienced severe isopropyl toxicity due to curanderismo. Knowledge and understanding of this cultural practice was integral in establishing the diagnosis.

Understanding cultural diversity and the different forms of folk medicine is integral in providing optimal medical care for diverse patient populations.

## REFERENCES

1. Trotter RT. Curanderismo: a picture of Mexican-American folk healing. 2001;7(2):129–133.
2. Vivier, Lewander WJ, Martin HF, et al. Isopropyl alcohol intoxication in a neonate through chronic dermal exposure: a complication of a culturally-based umbilical care practice. 1994;10:91–93.
3. Puschel K. Percutaneous alcohol intoxication. *Eur J Pediatr*. 1981;136:317–318.
4. Ritchie JM. The aliphatic alcohols. In: Gilman AG, Goodman LS, Rall TW, et al, eds. *The Pharmacological Basis of Therapeutics*. 7th ed. New York, NY: Macmillan; 1985:372–386.