

CORRESPONDENCE

Intoxication and Deaths From Diethylene Glycol Present in Brazilian Craft Beers

Dear Editor:

Since December 30, 2019, Brazil has had several cases of poisoning from drinking beer (State Health Secretariat, 2020a), the alcoholic beverage most consumed by Brazilians (World Health Organization, 2018). An ongoing investigation, coordinated by the Center for Strategic Information in Health Surveillance of Minas Gerais (CIEVS-Minas), the Brazilian state where the poisoning happened, has detected diethylene glycol (DEG) in a specific craft beer brand, “Belorizontina” produced by Cervejaria Baker, a small company founded in 1999 (Secretaria de Estado de Saúde, 2020a).

DEG is an odorless, colorless, viscous, hygroscopic liquid with a sugary taste, and it is extremely toxic (Winek et al., 1978). The substance is not used in the regular formulation of beer but can be industrially applied in solvents, resins, antifreeze, inks, and glues (Snellings et al., 2017). Historically, since 1937, DEG has also been involved in other cases of mass poisonings in several countries. However, nearly all the documented cases involved the contamination of pharmaceutical preparations or medicines, most of which occurred in low- and middle-income countries (Schep et al., 2009).

The poisoning victims in Brazil presented with acute renal failure, neurological symptoms (facial paralysis, visual blurring, amaurosis, sensory changes, descending paralysis, and seizures), and gastrointestinal symptoms (nausea, vomiting, and/or abdominal pain) (Secretaria de Estado de Saúde, 2020a), all clear indicators of DEG intoxication (Alfred et al., 2005). The first death was registered on January 8, 2020.

Brazil is a country with a limited set of alcohol policies, most of which are poorly implemented (World Health Organization, 2018). However, Law 8,918/1994 and Decree 6,871/2009 provide guidance for the standardization, classification, registration, production and inspection of beverages [all types], and assigns responsibility of enforcement on the matter of alcoholic beverage production to the Ministry of Agriculture (MAPA; Brasil, 1994, 2009).

After one month of investigation, MAPA is still finding new batches of contaminated Backer beers, totaling 41 batches (Istoé, 2020), which led the company to disclose on its website the judicial decision to recall the distributed beers

and encourage its customers to avoid any consumption of the recalled product (OGlobo, 2020).

As of February 5, 2020, 30 suspected cases of exogenous DEG poisoning have been reported. Of these, 26 patients are male and 4 are female. Four cases were confirmed and the remaining 26 are still under investigation, as they presented signs and symptoms compatible with intoxication by DEG and exposure to the beer. Six patients died. One of these deaths was among the four cases in which the presence of the substance DEG in the blood had been confirmed. All the cases are geographically located in Minas Gerais (Secretaria de Estado de Saúde, 2020a).

Despite all the evidence obtained during the investigation, Backer continues to affirm that they do not use DEG in any stage of the manufacturing process of their products, and do not recognize the presence of the substance in their beers. The company’s production remains paralyzed and the products are prohibited from being sold in all Brazilian territory, as determined by the Brazilian federal government’s National Health Surveillance Agency (ANVISA) (Secretaria de Estado de Saúde, 2020b).

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Conflict-of-Interest Statement

The authors have no conflicts of interest to declare.

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