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Insufficient evidence that agitation is common in y-hydroxybutyrate toxicity

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Abstract

Zvosec and Smith have reported that agitation is common in patients who present with c-hydroxybutyrate (GHB) toxicity. Previously, many clinicians would be aware that people withGHBtoxicity typically present with sedation, respiratory depression, and, potentially, coma if severely intoxicated. The authors' finding that agitation is common in patients with GHB toxicity should alert physicians to other previously unreported potential clinical manifestations of GHB intoxication or to consider intoxication with other agents that cause agitation, such as amphetamine derivatives. However, the data the authors have presented from their observational study do not support their conclusion that agitation is common in people with GHB toxicity.

Keywords

y, hydroxybutyrate, common, toxicity, agitation, that, evidence, insufficient

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Insufficient evidence that agitation is common in *γ*-hydroxybutyrate toxicity

To the Editor,

Zvosec and Smith [1] have reported that agitation is common in patients who present with *γ*-hydroxybutyrate (GHB) toxicity. Previously, many clinicians would be aware that people with GHB toxicity typically present with sedation, respiratory depression, and, potentially, coma if severely intoxicated [2]. The authors' finding that agitation is common in patients with GHB toxicity should alert physicians to other previously unreported potential clinical manifestations of GHB intoxication or to consider intoxication with other agents that cause agitation, such as amphetamine derivatives. However, the data the authors have presented from their observational study do not support their conclusion that agitation is common in people with GHB toxicity.

In their prospective observational study, the authors managed to identify 66 patient episodes of confirmed GHB toxicity, based on either a "reliable history of GHB ingestion by the patient or by a friend or by a family member present at the time of ingestion and/or by gas chromatography/mass spectrometry detection of urine or serum GHB levels higher than 10 mg/L." Of the 66 patient episodes identified with confirmed GHB toxicity using these criteria, 62.1% were based on a history alone. The reliability of a history after other drug ingestions has been shown to be low [3]. In our clinical experience, the reliability of history of drug ingestion in patients presenting with ingestion of drugs of abuse is even lower.

The authors have concluded that agitation was common in people presenting with GHB intoxication because in 40 of the 66 patient episodes, agitation was recorded as a clinical feature either before presentation to hospital or during the hospital admission. Of these 40 patient episodes with agitation, in only 12 (30%) was the presence of GHB in urine and/or blood confirmed with laboratory investigation. In addition, the ingestion of GHB is often associated with ingestion of other stimulant drugs and/or alcohol, and in this study, 50.8% (29/57) of patient episodes that were screened for the presence of other drugs were found to be positive for co-ingestion of stimulants which could potentially explain the agitation seen in some of these patients. Therefore, it is important that the subgroup of patient episodes of laboratory- confirmed GHB toxicity and the confirmed absence of other stimulant drugs should be used to determine whether agitation is common in patients presenting with GHB toxicity. In the study reported here, laboratory-confirmed GHB toxicity was present in only 12 of the 40 patient episodes with a final diagnosis of GHB intoxication and agitation. Of these 12 patients episodes, only 4 were negative for the presence of other co-ingestion of stimulants that could have explained the agitation. Therefore, the true incidence of agitation in people with GHB intoxication due to the GHB alone is only 6.1% (4/66 patient episodes).

Therefore, the data presented are insufficient to support their conclusions that agitation is a common clinical feature in people presenting with GHB intoxication. Further studies are therefore required with the measurement of GHB concentrations and other potential stimulants in blood and/ or urine in all patients presenting with GHB intoxication to determine whether agitation is a common clinical feature of GHB toxicity.

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