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Coma, seizure and unstable bradycardia induced by gamma-hydroxybutyrate

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Objective: Gamma-hydroxybutyrate (GHB) has become a common drug of abuse and can result in serious neurological and cardiovascular toxicity. We report two cases of GHB-induced bradycardia, seizure and coma presenting to an emergency department (ED).

Case report: 30-year-old male was drinking at a bar with his 41-year-old boyfriend when both of them collapsed on the floor. The bar owner said that the younger man vomited once then fell down from the chair and never woke again, while the older fell on the floor and developed generalized convulsion. When paramedics arrived at the scene, both men were unconscious but still breathing normally. On arrival at the ED, the older man had regained consciousness but could not recall the event. His physical examination only revealed a new lateral tongue bite wound which indicated the probability of having true seizure. On contrary, bradycardia and coma with Glasgow Coma Scale (GCS) score of 3 and pinpoint pupils were observed in the younger man. His initial vital signs were: body temperature 36 ^{o}C, blood pressure 109/63 mmHg, heart rate 44/min, respiratory rate 14/min and SpO_2 98%. Intubation was postponed since he could breathe spontaneously with the oxygen saturation ranging from 98 to 100%. However, his heart rate rapidly and progressively dropped to 39/min and his blood pressure also decreased to 90/60 mmHg. ECG 12 leads showed sinus bradycardia with U wave. He was diagnosed with unstable bradycardia, received 0.6 mg of intravenous atropine and became more stable with heart rate of 90 to 100/min. CT brain and all the lab results were unremarkable. Urine morphine screening test was also negative. One hour and a half later, he suddenly woke up and asked where he was. A complete physical examination was repeated on both of them and no abnormality was found. They admitted that they had ingested GHB with beers in the hope of feeling high before they blacked out. Both of them declined to stay overnight in the hospital and left against medical advice to home with full recovery.

Conclusion: GHB toxicity should be considered as one of differential diagnosis in any case presented at ED with unknown cause of severely depressed both neurological and cardiovascular activity.