

## Alimemazine/amitriptyline overdose

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**Brugada syndrome: case report**

A 40-year-old man developed Brugada syndrome following ingestion of an overdose of alimemazine and amitriptyline [*time to reaction onset not stated*]; he had also ingested an unknown quantity of olanzapine.

The man, who had a history of anxiety and psychotic depression, was found shaking and groaning following ingestion of amitriptyline 1.2g and unknown quantities of alimemazine and olanzapine [*dosage not stated*]. Further investigations revealed that he had taken amitriptyline 800mg two days earlier and had been taking higher dosages than those prescribed as he felt his symptoms were not controlled [*duration of treatment not stated*]. He reported abdominal discomfort. On presentation, he was agitated with a Glasgow Coma Scale score of 15 and mild tachycardia (104 beats/min). Chest examination revealed vesicular breathing throughout both lungs and mild bibasal inspiratory crepitations. He had epigastric tenderness. CNS analysis bilateral nystagmus, past pointing and intention tremor. Chest x-ray revealed right-base atelectasis and 12-lead ECG demonstrated narrow complex sinus tachycardia (rate ~100), left axis deviation (which had been previously observed), ST elevation and inverted T waves in leads V1–V3. He was diagnosed with type 1 Brugada ECG pattern caused by mixed overdose. He was admitted and monitored with telemetry. Repeat ECG the following morning showed resolution of the ST segment elevation and T wave inversion. He was discharged after psychiatric review. Subsequent analysis of his amitriptyline concentrations revealed that even though his Brugada pattern had resolved, his serum TCA concentrations had increased over this period. Therefore amitriptyline was considered unlikely to be the sole cause of the abnormal ECG findings.

**Author comment:** *"The main clinical findings were tachycardia and cerebellar signs which are more in keeping with alimemazine overdose. . . In this case, our patient had taken excessive quantities of two drugs known to cause a Brugada pattern, amitriptyline and alimemazine. . . The resolution of the ECG changes with the concurrent rise in amitriptyline levels suggests that maybe the ECG changes in this scenario were due to the action of the significant amount of alimemazine ingested."*

Ley S, et al. Brugada Syndrome and Brugada ECG pattern: Unusual causes of ST elevation. *Scottish Medical Journal* 55: No. 2, May 2010 - United Kingdom

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