Benzodiazepines (BZO), including chlordiazepoxide, are the first line treatment for alcohol withdrawal syndrome (AWS).

BZO overdose can be iatrogenic and can cause encephalopathy or respiratory depression.

Flumazenil IV push is the first line treatment for BZO overdose. Rarely, a continuous infusion has been used.

A 63-year-old female with multiple hospital admissions for AWS, obesity & hepatitis C presented with acute alcohol intoxication (ethanol level 279 mg/dL) & bilateral pneumonia.

She was treated for AWS with a chlordiazepoxide-based AWS protocol using fixed & symptom triggered therapy.

1375 mg of chlordiazepoxide was administered over 4 days.

Concern for overdose when patient became lethargic.


Albumin 2.5 g/dL, total bilirubin 0.8 mg/dL, ALT 34 U/L AST 13 U/L, ammonia 41 umol/L, INR 1.24, Cr 0.62 mg/dL, pH 7.23, pCO2 72.0 mmHg pO2 63 mmHg.

ABG, EEG, CT of the brain, MRI of the brain, cultures & LP showed no explanation for patient's encephalopathy. CT abdomen: Liver was 24 cm with moderate hepatic steatosis.

Admitted to ICU and required mechanical ventilation.

Patient extubated after day 3 of flumazenil continuous infusion.

Blood chlordiazepoxide and nordiazepam level 21 days post final administration of chlordiazepoxide were 513 ng/mL and 324 ng/mL respectively.

Repeat urine benzodiazepine testing was positive 35 & 55 days after last administration of chlordiazepoxide.

No seizure activity or other adverse effects from continuous infusion.

Patient is doing well 10 months after discharge.

References