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Case Report

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Vortioxetine-induced toxic hepatitis: a case report

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ABSTRACT

A 43-year-old male presented to the emergency department with complaints of abdominal pain and nausea. The patient had been on vortioxetine 20 mg daily for one year due to a diagnosis of depressive disorder. Laboratory findings revealed elevated liver enzymes, and other etiologic factors were excluded. The patient was diagnosed with toxic hepatitis and was admitted to the gastroenterology department for further management.

Keywords: Vortioxetine, toxic hepatitis, antidepressant

INTRODUCTION

Vortioxetine is a serotonergic antidepressant commonly used in the treatment of major depressive disorder. According to the literature, it is associated with low rates of mild serum aminotransferase elevations during therapy and has not previously been linked to clinically significant acute liver injury. However, in this case, we report that long-term use of vortioxetine may be associated with acute toxic hepatitis.[1]

CASE

A 26-year-old male presented to the emergency department with abdominal pain and nausea. His medical history was notable for a prior appendectomy and ongoing treatment with vortioxetine 20 mg/day for the past year due to depression. Physical examination revealed mild tenderness in the right upper quadrant. Initial laboratory tests demonstrated the following values: WBC 11.43 x10^9/L, platelet count 271 x10^9/L, INR 1.1, AST 179 U/L, ALT 171 U/L, ALP 109 U/L, GGT 435 U/L, total bilirubin 1.16 mg/dl, direct bilirubin 0.4 mg/dl, and albumin 5 g/dl. Follow-up labs obtained 8 hours later showed progressive elevation: AST 469 U/L, ALT 420 U/L, GGT 586 U/L, total bilirubin 2.09 mg/dl, and direct bilirubin 1.0 mg/dl, while INR and ALP remained stable.

Imaging with abdominal ultrasonography and contrast-enhanced computed tomography revealed normal hepatic parenchyma and biliary anatomy. Viral and autoimmune hepatitis panels were negative. The patient denied alcohol use and had no history of exposure to other hepatotoxic agents. A diagnosis of toxic hepatitis was made. Vortioxetine was discontinued, and the patient was treated with intravenous acetylcysteine (1200 mg/day) and supportive care.

DISCUSSION

Toxic hepatitis is frequently caused by medications or herbal supplements and may present with a spectrum ranging from mild transaminase elevations to acute liver failure.[2] Drug-induced liver injury (DILI) is a rare but potentially severe condition associated with significant morbidity and mortality. Genetic predisposition and environmental factors contribute to individual susceptibility. Although long-term vortioxetine therapy has been associated with aminotransferase elevations in less than 1% of patients, these are generally mild, asymptomatic, and reversible without drug discontinuation.[1]

To date, no published reports have described acute liver injury with jaundice directly attributed to vortioxetine. However, data on its hepatic safety profile remain limited. Notably, other selective serotonin reuptake inhibitors (SSRIs) have been implicated in rare cases of clinically significant hepatotoxicity.[3]

CONCLUSION

This case suggests that vortioxetine, although generally considered hepatologically safe, may be a potential cause of drug-induced liver injury in susceptible individuals.

ETHICAL DECLARATIONS

Informed Consent

The patient signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement
The authors have no conflicts of interest to declare.

Financial Disclosure
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Author Contributions
All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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