Cureus
Part of SPRINGER NATURE

Open Access
Abstract

Cureus

The Link Between Alcohol Withdrawal And Hemochromatosis - Revelations From The National Inpatient Sample

Open Access
Abstract
Published 05/09/2024

Jayalekshmi Jayakumar [1], Manasa Ginjupalli [2], Bhavyakumar Vachhani [3], Francis Gacek [4], Rishav Sinha [3], Viswanath Vasudevan [5]

1. Internal Medicine Resident, The Brooklyn Hospital Center, 11201, USA 2. Internal Medicine Resident, The Brooklyn Hospital Center, Brooklyn, USA 3. Internal Medicine, The Brooklyn Hospital Center, Brooklyn, USA 4. Internal Medicine Resident, The Brooklyn Hospital Center, New York, USA 5. Pulmonology, The Brooklyn Hospital Center, New York City, USA

Corresponding author: Jayalekshmi Jayakumar, jaya.jithu1808@gmail.com

Categories: Psychiatry, Gastroenterology, Internal Medicine
Keywords: drug, alcohol withdrawal syndrome, withdrawal, liver function, liver, hemochromatosis, autoimmune hemo, alcohol use, alcohol, alcohol related cirrhosis

How to cite this abstract
Jayakumar J, Ginjupalli M, Vachhani B, et al. (May 09, 2024) The Link Between Alcohol Withdrawal And Hemochromatosis - Revelations From The National Inpatient Sample. Cureus 16(5): a1267

Abstract

Background:

The synergistic effect of alcohol and iron in the pathogenesis of cirrhosis is well studied. This could be due to oxidative stress and lipid peroxidation resulting in liver injury. The interaction of alcohol with hepcidin and ferritin is also in theory. However, the incidence of alcohol withdrawal in hemochromatosis and the impact of alcohol withdrawal on the in-hospital outcomes of hemochromatosis is understudied. The higher inflammatory state in hemochromatosis can upregulate the stress hormones, possibly increasing susceptibility to acute withdrawal. Conversely, stress and anxiety in acute withdrawal upregulates inflammatory cytokines and catecholamines which can also worsen outcomes.

Objectives:

The prevalence of alcohol withdrawal in hemochromatosis is assessed in this study and the influence of alcohol on the in hospital outcomes of hemochromatosis is estimated.

Methods:

We queried the National Inpatient Sample database from 2016-2020 and used ICD-10 codes to identify hospitalized patients with hemochromatosis. Patients with and without alcohol use disorder were identified and the prevalence of alcohol use disorder in hemochromatosis is estimated. Impact of hemochromatosis on healthcare utilization is assessed using univariate analysis and multivariate logistic regression analysis was used to study the mortality of hemochromatosis in alcohol withdrawal hospitalisations after adjusting for relevant confounders and various hospital and patient characteristics..

Results:

210,835 hemochromatosis hospitalizations were identified, out of which 18,730 developed alcohol withdrawal (prevalence 8.88%). Mean age of hemochromatosis patients who developed alcohol withdrawal is 56.06 while those who didn't develop alcohol withdrawal are 54.38. Among all alcohol withdrawal hospitalizations in hemochromatosis, 53.4 % were males. Multivariate regression analysis showed higher odds of mortality [OR 1.78, CI (1.41-2.24), p value 0.000] and univariate analysis showed higher resource utilization in hemochromatosis hospitalizations with alcohol withdrawal [increased mean length of stay by 0.15 days and increased total hospitalization cost by 2366 $) .

Conclusion:

The prevalence of alcohol withdrawal is high in hemochromatosis hospitalizations associated with worse outcomes. This interplay between iron and alcohol can be generalized as a predictor for acute withdrawal in underlying liver disease due to hemochromatosis. Additional prospective research based on this hypothesis is needed to customize future treatment approaches in this population.