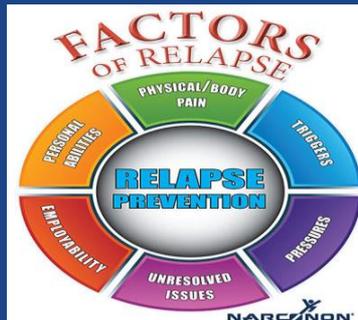


Alcohol Consumption and its Effect on Liver Transplant Failure

There is a stringent process to determine who can receive liver transplants. Alcohol use is an important part of this process, with US transplant centers requiring a period of abstinence prior to transplant, lack of access to livers for alcoholics due to beliefs about their ability to stay sober, and monitoring of people considered "high risk" for recidivism after the transplant. While there is clear data on post transplant alcohol use in transplant recipients with alcoholic hepatitis, more recent data has shown comparable alcohol use rates in non-alcoholic hepatitis patients, which makes the impact of alcohol use on transplant failure rates regardless of primary diagnosis an important area to explore. Additionally, the factors that cause transplant recipients to use alcohol post-transplant have begun to be further explored expanding the group that is at "high risk". Identifying these individuals and providing them with professional help has been shown to decrease rates of relapse. Preventing relapse is vital because research has shown that even one drink increases the risk of liver rejection and death.

PICO question:

In liver transplant patients, does alcohol exposure compared to no alcohol exposure increase the risk of liver transplant failure?



Study 1 Overview

- Purpose: the purpose of this study was to determine the effects of alcohol recidivism on alcoholic liver transplant patients
- Design: retrospective study
- Sample: a group of 92 liver transplant patients that were diagnosed with alcoholism and split in two groups
 - Group A: did not follow up with an expert
 - Group B: followed up with a alcoholic addiction unit

Study 1 Results

- Group B had significantly lower prevalence of recidivism (16.4% vs 35.1%) due to mandatory therapy they received.
- Group B also had a lower mortality rate of 14.5% compared to group A which was 37.8%

Strength of the Study

Level of the Study: 4
Quality of the Study: Good

Study 1 Clinical Significance

The significance of this study emphasizes the importance of alcohol recidivism and the effects a relapse can have on a newly transplanted liver. With this study, the understanding of the effects of alcohol recidivism and its consequences can be better understood. Further studies and implementation of this studies findings will also help to save lives.

Addolorato, G., Mirijello, A., Leggio, L., Ferrulli, A., D'Angelo, C., Vassallo, G. Gemelli OLT Group. (2013, September). Liver transplantation in alcoholic patients: impact of an alcohol addiction unit within a liver transplant center. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4977094/>

Study 2 Overview

- Purpose of the study: The purpose of this study was to examine the impact that alcohol recidivism had on liver graft and patient survival among transplant recipients for alcoholic cirrhosis.
- Design: Meta-analysis of quantitative studies
- Sample: Seven studies were utilized which were comprised of 995 transplant recipients for alcoholic cirrhosis.:

Study 2 Results

The main results of this meta-analysis showed that patients who relapsed had a higher prevalence of liver graft failure and lower survival rates than those who abstained from alcohol.

This was demonstrated by the higher rates of:

- Steatosis
- Steatohepatitis
- alcoholic hepatitis
- Fibrosis

There was also a lower 10 year survival rate among relapsers. These results were reported as odds ratios with a 95% confidence interval.

Strength of Study

Level of Study: Level 4
Quality of Study: Good

Study 2 Clinical Significance

This study is a strong that pulls from a wide variety of studies that were statistically shown to be heterogeneous. It focuses on a large population that is considered to be high risk for recidivism following a transplant, which is a population that is of large concern in the transplant community. The study has a clear focus and applied objective criteria in demonstrating showing results for all clinically significant outcomes. The way the study was conducted can also be easily recreated to ensure the results are reproducible.

Kodali, S., Kaif, M., Tariq, R., Singal, A. (2018). Alcohol Relapse After Liver Transplantation for Alcoholic Cirrhosis- Impact on Liver Graft and Patient Survival: A Meta-analysis. Alcohol and Alcoholism, 53(2), 166-172. Doi: 10.1093/alcalc/axg098