

Reducing Alcohol Craving

Using fecal matter transplant to change gut microbiota

Alcohol use and alcohol use disorder are currently one of the major causes of morbidity worldwide. Current treatments rely on patients overcoming their disease using strategies, support, and in some cases psychoactive agents to prevent them from consuming alcohol. Unfortunately, neither of these significantly help reduce the craving for alcohol that many feel during their treatment. This is because these changes are physiological as much as psychological. In patients with cirrhosis and liver disease, a physical change in their gut microbiota occurs. Researchers at Virginia Commonwealth University (VCU) have examined this change and found that by manipulating the gut microbiota they can significantly reduce cravings and improve recovery in a patient from alcohol use disorder.

The technology

Using a fecal matter transplant (FMT), an FDA approved randomized clinical trial was performed to manipulate the microbiota of patients who suffer from liver cirrhosis and have alcohol use disorder but were previously unresponsive to prior efforts of relapse prevention. 30 days after the intervention, 90% of patients who received the (FMT) reported a reduction in cravings for alcohol compared to 30% of patients who did not receive the FMT. In addition, patients who received the FMT also showed a reduction in their sickness impact profile (SIP) score, suggesting these patients improved over all well-being over the course of the treatment. Results also found a 50% improvements in cognitive function as measured by the Psychometric Hepatic Encephalopathy Score (PHES) assessment between the FMT treatment group and the group that did not receive the FMT intervention. Typical alcohol cessation programs, pharmaceuticals such as baclofen and acamprosate, and other treatment options have shown limited success, especially in patients with cirrhosis, and are extremely expensive. This novel technology provides a lower cost option, with clinically proven results, for the treatment of patients suffering from alcohol use disorder and have liver cirrhosis.

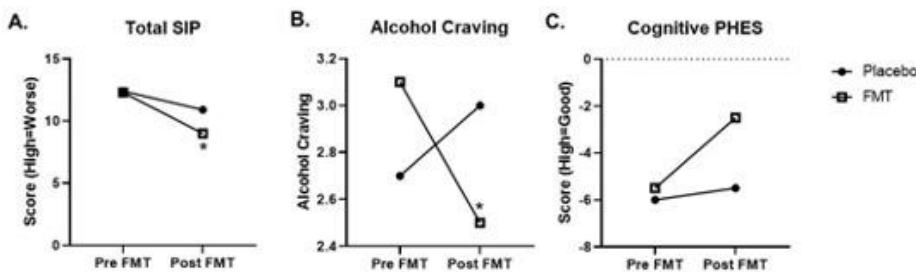


Figure 1. Treatment scores for (A) Total sickness impact profile (SIP) score, (B) Alcohol Craving, and (C) Cognitive Psychometric hepatic encephalopathy score (PHES) pre FMT and post FMT in patients with cirrhosis who are suffering from alcohol use disorder.

Benefits

- » Lower cost option
- » Reduces alcohol craving in 60% more patients
- » Increases cognitive function 50%
- » Improves psychological well-being
- » Effective in patients with cirrhosis typically unresponsive to other treatments

Applications

- » Treatment of alcohol use disorder

Patent status:

Patent pending: U.S. and foreign rights are available.

License status:

This technology is available for licensing to industry for further development and commercialization.

Category:

Biomedical

VCU Tech #:

19-108

Investigators:

[Jasmohan Bajaj, MD](#)

Contact us about this technology

Brent Fagg, MS
Licensing Associate
bfagg@vcu.edu
(804) 827-2211