

MASLD IN LT PATIENTS

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Background : Metabolic dysfunction-associated steatotic liver disease(MASLD) focuses on its metabolic causes. Liver transplant (LT) recipients are a unique group for studying MASLD because they follow strict alcohol restrictions, minimizing confusion with alcohol-related liver disease (ALD). After transplantation, changes in metabolism and the use of immunosuppressive drugs provide a controlled environment to examine how MASLD develops and affects cardiovascular health.

Methods : This study looked back at 355 liver transplant patients from 2003 to 2013. Patients were divided into MASLD(n=122) and non-MASLD(n=233) groups based on imaging and metabolic data. Pre-transplant factors, such as BMI, alcohol use, and metabolic health, were compared. Cardiovascular outcomes, like myocardial infarction(MI) and heart failure(HF), were tracked during follow-up. The results were also compared with data from non-transplanted MASLD patients.

Results : Patients with MASLD had higher BMI before transplant (25.1 ± 4.1 vs. 23.9 ± 3.2 , $p=0.0035$) and more current alcohol use (27.9% vs. 13.3%, $p=0.0034$) than those without MASLD. After transplantation, MI and HF were more common in MASLD patients (MI: 11.5% vs. 5.6%; HF: 6.5% vs. 0.86%, $p=0.0056$ for HF), similar to trends seen in non-transplanted MASLD patients. MASLD patients were 2.6 times more likely to have cardiovascular events than non-MASLD patients ($p=0.0126$). However, CKD rates were similar in both groups (19.6% vs. 13.7%, $p=0.277$).

Conclusions : MASLD in liver transplant patients is linked to higher rates of MI and HF, resembling trends in non-transplanted MASLD populations. This highlights MASLD's impact on cardiovascular health, regardless of transplantation. It emphasizes the need for careful cardiovascular monitoring and management in post-transplant care for MASLD patients.