New-onset obesity after liver transplantation - outcomes and risk factors: the Swiss Transplant Cohort Study

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Weight gain after liver transplantation (LTx) facilitates development of new-onset obesity; however, its risk factors and outcomes are poorly understood. We identified the impact of new-onset obesity on cardiovascular events (CVEs) and patient survival, and risk factors for new-onset obesity. Multiple Cox regression models examined risk factors for CVEs, patient survival, and new-onset obesity in 253 adults (mean age 52.2 ± 11.6 years, male gender 63.6%, mean follow up 5.7 ± 2.1 years). Cumulative incidence of post-LTx CVE was 28.1%; that of new-onset obesity was 21.3%. Regardless of CVE at LTx, post-LTx CVEs were predicted by new-onset obesity [Hazard Ratio (HR), 2.95; P = 0.002] and higher age at LTx (HR, 1.05; P < 0.001). In patients without known pre-LTx CVEs (n = 214), risk factors for post-LTx CVEs were new-onset obesity (HR, 2.59; P = 0.014) and higher age (HR, 1.04; P = 0.001). Survival was not associated with new-onset obesity (P = 0.696). Alcoholic liver disease predicted new-onset obesity (HR, 3.37; P = 0.025), female gender was protective (HR, 0.39; P = 0.034). In 114 patients with available genetic data, alcoholic liver disease (HR, 12.82; P = 0.014) and hepatocellular carcinoma (HR, 10.02; P = 0.048) predicted new-onset obesity, and genetics remained borderline significant (HR, 1.07; P = 0.071). Early introduction of post-LTx weight management programs may suggest a potential pathway to reduce CVE risk.

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