

HBP SURGERY WEEK 2021 NOT A CONSITE

MARCH 25-27, 2021 GRAND WALKERHILL HOTEL, SEOUL, KOREA www.khbps.org

& The 54<sup>th</sup> Annual Congress of the Korean Association of HBP Surgery



**EP057** 

## Impact of PNPLA3 (rs738409-G) polymorphism on post-transplant outcomes after liver transplantation for alcohol-related liver disease

Tae YOO<sup>1</sup>, Kwang Woong LEE<sup>\* 2</sup>, Nam-Joon YI<sup>2</sup>, Suk Kyun HONG<sup>2</sup>, Kyung-Suk SUH<sup>2</sup>

<sup>1</sup>Surgery, Dongtan sacred heart hospital, Korea
<sup>2</sup>Surgery, Seoul National University College of Medicine, Korea

**Introduction** : We aimed to evaluate the association between PNPLA3 polymorphism and post-liver transplantation (LT) outcomes related to alcohol relapse (AR).

**Methods** : We retrospectively analyzed data from patients receiving LT for alcoholic liver disease (ALD) from 04/2014 to 12/2017. Liver-related clinical outcomes were assessed by the gamma-glutamyltransferase (GGT) level and alcohol-related liver failure (ARLF). Genotyping was performed using prospectively collected DNA samples in both donors and recipients.

**Results** : A total of 83 recipients were enrolled. Post-LT AR occurred in 31 patients (37.3%). Thirty-one patients (14 AR, 9 abstainers) showed elevated GGT levels, and 3 AR patients experienced ARLF. In the multivariate analysis, rs738409 G allele carrier and heavy drinking (HRAR score $\geq$ 4) were independent risk factors for elevated GGT levels (odds ratio [OR]=8.69, p<0.01; OR=13.07, p=0.01) and ARLF (OR=4.52, p=0.04; OR=19.62, p=0.03). Among 15 heavy AR patients, being an rs738409 G allele carrier was related to GGT elevation (p=0.03) and ARLF (p=0.04), but it was not to GGT elevation in mild drinkers (n=16) or abstainers (n=52).

**Conclusions** : PNPLA3 polymorphism of the recipient genotype can independently affect the post-LT prognosis of LT patients for ALD, especially in heavy AR patients. Therefore, strong abstinence education is recommended in patients with this single nucleotide polymorphism.

Corresponding Author. : Kwang Woong LEE ( kwwwlee@gmail.com )

Presenter : Tae YOO ( youts@hanmail.net )