

## Genetic Risk Factors In Patients With Alcohol-Related Liver Disease

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**Aim:** Genetic risk factors may increase susceptibility to alcohol-related liver disease in alcohol use disorder. Confirmation of a genetic basis for alcohol-related liver disease (ALD) comes from<sup>1</sup> twin studies <sup>2</sup> differences in mortality rates due to (ALD) in ethnic populations and <sup>3</sup> the recent association of a phospholipase gene (PNPLA3) with hepatitis risk in ALD <sup>4</sup> Genotype assessment is a useful tool to identify pathogenic pathways and may ultimately help guide a better clinical management strategy. PNPLA3 and TMSF 2X variants have been studied.

**Method:** In WSLHD Drug Health Service 131 patients with alcohol-dependent were recruited. The study protocol was approved by the Human Ethics Committee and performed compliance with ICH/GCP requirements.<sup>5</sup> Clinical study included blood tests which are alanine and aspartate aminotransferases (ALT, AST), gamma-glutamyl transpeptidase (GGT), full blood count (FBC), Electrolytes (sodium, potassium, and chloride), urea, creatinine (EUC), comprehensive metabolic panel (CMP) and Thyroid function tests (TFTs). Fibro scan, cognitive tests, and Depression-anxiety-stress (DASS21) were also performed. Genotyping of interferon lambda was performed at Westmead Institute for Medical Research. The data were analyzed using SPSS and Prism software programs.

**Results:** AST, ALT, GGT, and Triglycerides level elevates and Platelets HDL and Cholesterol/HDL level decrease. PNPLA3 has a significant association with AST, GGT, C peptide, HDL, MCHC, and Monocyte. However, TMSF 2X has no association with these parameters.

**Conclusion:** The PNPLA3 variant is a prominent risk factor in patients with alcohol-related liver diseases. This polymorphism provides a useful tool to identify individuals with particularly alcohol-related liver diseases and will help to plan better health care in Drug Health settings. More participants will be helpful for verification of the results.

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<sup>5</sup> Ethics Approval Number WSLHD HREC4159

**Disclosure of interest:** None to disclose.