**A Novel Genotype in Patients with Alcohol Use Disorder**

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**Aim:** Harmful alcohol use globally resulted in 3 million death, 132.6 million disabilities annually. Moreover, alcohol use disorder is the main cause of cirrhosis and liver cancer.[1] Research attention focussed on viral hepatitis-related liver disease, metabolic dysfunction associated with fatty liver disease[2] , and related genetic factors. However, alcohol-related liver disease and genetic factors have not been studied. This research presents the interferon lambda genotype association with alcohol-related liver disease.

**Method:** In 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.[3] 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:** ST, ALT, and GGT elevate, and Platelets were decreased in Alcohol-related liver disease. IFNL3/4 CC allele has a significant association with GGT and nonsignificant association with AST. IFNL3/4 TT allele has a significant association with Platelets and a nonsignificant association with ALT. IFNL3/4 both CC and CT have an association with fibrosis however this relationship is not significant. IFNL3/4 CC allele has an association with HDL however this relationship is not significant**.** IFNL3/4 TT has a significant association with Triglycerides, Cholesterol, Cholesterol/ HDL, and LDL.

**Discussion:** Interferon lambda has a significant association with alcohol-related liver disease and will be a useful genetic marker to predict alcohol-related liver disease and will help to plan better health care in Drug Health settings. More participants will be helpful for the verification of these results.

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

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[1] Global Status report on alcohol and health 2018 <https://www.who.int/news-room/fact-sheets/detail/alcohol >.

[2] Eslam M, Sanyal AJ, George J MAFLD: A consensus-driven proposed nomenclature for metabolic associated fatty liver disease. Gastroenterology. 2020 Feb 7. pii: S0016-5085(20)30171-2. doi: 10.1053/j.gastro.2019.11.312.

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