

## ABSTRACT

**Background:** The burden of the Non Alcoholic Fatty Liver Disease (NAFLD) was rising globally. It was the disease condition where there were increase fat deposition ( $\geq 5\%$ ) in the hepatic cells. The objective of this study was to determine the risk factors for NAFLD among the patients admitted to North Colombo Teaching Hospital (NCTH) Ragama.

**Methods:** A case control study was conducted among the 106 cases with NAFLD and 212 unmatched hospital based controls without having NAFLD according to the ultrasonography by using convenient sampling technique. A case was defined based on the presence of fatty liver according to the diagnostic ultra sonographic criteria. Those were increase echogenicity of the liver compare to kidney and spleen, obliteration of vascular architecture and deep attenuation of ultrasonic signals. There should be at least two out of three criteria to diagnosed as NAFLD. The data was collected by using interviewer administered questionnaire. The risk factors were determined by using multiple logistic regression and the results were interpreted by using adjusted odds ratio(AOR), 95 % confident interval (95% CI) and the p value.

**Results:** The risk factors for NAFLD were found as the fast food consumption more than 1 time per week (AOR=9.34, 95% CI= 4.47-19.49, p value= <0.001), none consumption of coffee (AOR=2.78, 95% CI= 2.78-1.32, p value=0.007), family history of liver disease (AOR=12.2, 95% CI= 2.16-67.97, p value=0.005), methotrexate usage (AOR=32.02, 95% CI=1.45-707.29 p value=0.028), inadequate physical activity (AOR=8.10, 95% CI= 4.04-16.26, p value= <0.001), high BMI value more  $\geq 23\text{Kg/m}^2$  (AOR=6.17, 95% CI=2.93-12.99, p value= <0.001) Being a Sinhalese (AOR=12.7, 95% CI=2.03-79.33, p value=0.007).

**Conclusion:** There were seven independent risk factors for NAFLD were identified. Among those most of the risk factors were modifiable risk factors such as inadequate physical activity, High BMI value ( $\geq 23\text{Kg/m}^2$ ) with overweight, infrequent coffee consumption and increase fast food consumption. It should be taken primary preventive strategies for those modifiable risk factors to prevent NAFLD.

**Keywords :** NAFLD, risk factors, Ragama