Under The Auspices of

COLLEGE OF CHEMICAL PATHOLOGISTS OF SRI LANKA

10th ANNUAL ACADEMIC SESSIONS 2025

UNRAVELING CHALLENGES:
QUALITY SAGA FOR EXCELLENCE

11th and 12th July 2025

Monarch Imperial Hotel, Kotte

JULY 2025 | ISSUE 10

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ABSTRACTS OF E-POSTERS
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RP 11

Association Between Serum Triglyceride to High Density Lipoprotein-Cholesterol Ratio and Albuminuria

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Introduction and objectives
Dyslipidemia is a key contributor to diabetic nephropathy. Yet traditional lipid markers fail to capture their full metabolic impact. Triglyceride-to-High Density Lipoprotein Cholesterol (TG/HDL-C) Ratio has emerged as a potential marker of atherogenic dyslipidemia, but its association with albuminuria progression in diabetic patients remains uncertain. This study was aimed to investigate the role of the TG/HDL-C Ratio in predicting the risk of developing albuminuria.

Methods
A retrospective cohort study was conducted from 2021 to 2023 on 674 diabetic patients who were initially free of albuminuria at the Diabetic Clinic, Teaching Hospital, Jaffna. The TG/HDL-C ratio was calculated at baseline and follow-up years, and albuminuria development was assessed based on the Urinary Albumin-Creatinine Ratio (UACR ≥ 30 mg/g) obtained from their clinical records. Independent t-test, Repeated Measures ANOVA and ROC curve analysis were performed.

Results
All the selected subjects were included and there were no dropouts. Of 674 patients, 102 developed albuminuria (15.1%). The mean TG/HDL-C Ratio at baseline and 1st year significantly differed between albuminuria and non-albuminuria patients ($p < 0.001$; $p=0.003$), while at the 2nd year it was not ($p=0.293$). The TG/HDL-C ratio increased with time in both albuminuria and non- albuminuria patients, while the change was not significant in albuminuria patients ($p = 0.071$). In contrast, non- albuminuria patients showed a significant change with time ($p < 0.001$, CI: 95%). The Area Under Curve (AUC) of TG/HDL-C ratio at baseline, 1st and 2nd Year were 0.663, 0.597 and 0.478 respectively. The optimal cut off value at baseline is 1.095 (Sensitivity: 98.0%, Specificity: 95.1%).

Conclusions
The High baseline TG/HDL-C ratio may serve as an early indicator of albuminuria risk in diabetics but not as a longitudinal tracking marker. Its predictive value declines with time, likely due to treatment effects, disease progression, or altered metabolic control.

Keywords
Association, Triglyceride to High Density Lipoprotein-Cholesterol, Albuminuria