

PP-D-28

ASSOCIATION BETWEEN CHEMOTACTIC CYTOKINE RECEPTOR 5 (CCR5) GENE PROMOTER (59029 G/A) POLYMORPHISM AND DIABETIC NEPHROPATHY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

<https://doi.org/10.15605/jafes.038.AFES.97>

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INTRODUCTION

Diabetic nephropathy is the leading cause of end-stage renal disease. Despite optimal glucose and blood pressure control, many patients still develop diabetic nephropathy. These patients might have some genetic risk factors associated with diabetic nephropathy.

METHODOLOGY

Ninety-eight patients with type 2 diabetes mellitus were included in this cross-sectional case-control study, which was conducted at No. (2) Military Hospital (500-bedded), Yangon. The study aimed to investigate the association between chemotactic cytokine receptor 5 (CCR5) gene promoter 59029 G/A polymorphism and diabetic nephropathy in patients with type 2 diabetes mellitus. Genotype frequencies (GG, GA, AA) were determined by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method. Serum creatinine was measured to calculate the estimated glomerular filtration rate (eGFR); urine creatinine and urine albumin were measured to calculate urine albumin to creatinine ratio (ACR).

RESULTS

CCR5 59029 G/A genotype frequencies, namely, GG, GA and AA were found in 28.6%, 49.0% and 22.4%, respectively, in patients with diabetic nephropathy, and 30.6%, 44.9% and 24.5%, respectively in those without diabetic nephropathy. G allele frequency was 53.1%, and A allele frequency was 46.9% respectively, in both groups. Genotype frequencies did not deviate from Hardy-Weinberg equilibrium (HWE: $\chi^2=0.326, p=0.567$). The odds ratio (OR) and 95% confidence interval (95% CI) were used to analyze the association of genotypes and alleles with diabetic nephropathy. The clinical characteristics were not significantly different between both groups ($p>0.05$), apart from HbA1c and renal profile. The statistically significant association between the CCR5 59029 G/A genotypes and diabetic nephropathy was not found in different genetic models (co-dominant, dominant, recessive and allelic models) ($p>0.05$).

CONCLUSION

The association between CCR5 gene promoter 59029 G/A polymorphism and diabetic nephropathy in patients with type 2 diabetes mellitus was not found in this study population.

KEYWORDS

CCR5, diabetic nephropathy, type 2 diabetes

PP-D-29

PREVALENCE AND FACTORS ASSOCIATED WITH DIABETES-RELATED EMOTIONAL DISTRESS (DRED) AMONG FILIPINO ADULT PATIENTS WITH TYPE 2 DIABETES MELLITUS USING A VALIDATED FILIPINO VERSION OF THE DIABETES DISTRESS SCALE (DDS)

<https://doi.org/10.15605/jafes.038.AFES.98>

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INTRODUCTION

Diabetes-related Distress refers to the significant negative psychological reactions related to having diabetes mellitus. There are limited studies involving diabetes distress and its association with glycemic control and other clinicodemographic factors among Filipinos. In addition, there is currently no Filipino-adapted Diabetes Distress Scale. This study aimed to translate the Diabetes Distress Scale into Filipino, and validate this version among Filipino Adult Patients with Type 2 DM, and assess the prevalence of diabetes-related distress and its association with Glycemic Control and other related factors.

METHODOLOGY

The English DDS was translated into the Filipino language and a subsequent cross-sectional validation study was done with 186 individuals with type 2 diabetes in a single-center tertiary hospital and assessed the prevalence and related factors of DRED. Descriptive statistics was used for categorical variables. Shapiro-Wilk test was used to determine the normality distribution. Continuous quantitative data were summarized using mean and standard deviation (SD), median, and interquartile range. Logistic regression was used to determine the association of clinicodemographic and metabolic factors with moderate to high diabetes-related distress. Odds ratios and corresponding 95% confidence intervals were reported.