

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

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Sai Thiha Tun,¹ Theingi Kyaw,² Zaw Min Htut,¹ Nyan Sint Htun,¹ Thet Naing¹

¹Defence Services Medical Academy, Yangon, Myanmar

²No. (1) Military Hospital 700 bedded, Pyin-Oo-Lwin, Myanmar

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)

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Carissa Rae Mirano, Oliver Allan Dampil, Hanna Clementine Tan, Sienna Placino

St. Luke's Medical Center, Quezon City, Philippines

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.

RESULTS

The overall prevalence of diabetes distress for this study is 34.41% with a mean overall score of 2.02. The prevalence of moderate distress was highest for Regimen-related distress at 45.16% (95% CI: 37.87-52.61%), followed by Emotional-related distress at 39.78% (95% CI: 32.70-47.20%), and the lowest prevalence was found in the Physician-related distress domain at 11.29% (95% CI: 7.13-16.74%). Age was a significant predictor of diabetes distress (OR 0.97(0.95-1), $p = 0.04$). In contrast, educational level, marital status, socioeconomic status, duration of diabetes, presence of diabetic complications, number of medications, level of BMI, or glycemic control were not associated with diabetes distress.

CONCLUSION

This study has indicated that the Filipino DDS is a valid instrument in the assessment of diabetes-related distress among Filipino diabetic patients. A younger age was associated with the development of diabetes distress, while it was not associated with glycemic control and other related factors.

KEYWORDS

diabetes distress, type 2 diabetes, diabetes distress scale

PP-D-30

ENHANCING DIABETES CARE: EVALUATING THE EFFICACY OF TELEMEDICINE FOR INITIATING INSULIN THERAPY IN TYPE 2 DIABETES PATIENTS AT GRAND HANTHA DIABETES CENTER, MYANMAR

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Than Than Aye, Mie Mie Pyone, Thet Htun Zaw, Ei Zarni Aung, Aye Moh Moh Han

Grand Hantha International Hospital, Yangon, Myanmar

INTRODUCTION

Amidst the COVID-19 outbreak in Myanmar, telemedicine has emerged as a crucial tool, enabling healthcare providers to conduct remote assessments, offer patient education, and provide guidance on initiating insulin therapy. Insulin therapy plays a vital role in managing uncontrolled diabetes with secondary oral antidiabetic (OAD) treatment failure. Its effectiveness in controlling blood glucose levels is well-known. However, there remains a concern about the risk of hypoglycemia and timely titration to reduce therapeutic inertia, particularly for individuals residing in remote

districts where access to healthcare professionals (HCPs) is limited. In such challenging circumstances, junior doctors from diabetes centers supported patients throughout the initial three-month period of insulin initiation, providing valuable guidance and care. This study aims to ascertain the effectiveness and safety of initiating insulin therapy guided by experienced Medical Officers of GHDC (Grand Hantha Diabetes Center) using the Viber app on mobile phones, which is widely available and accessible in remote areas of Myanmar.

METHODOLOGY

A prospective three-month follow-up study was conducted on patients initiated on insulin therapy due to oral hypoglycemic agent (OHA) failure. These patients were enrolled in the GHDC and voluntarily participated in the study from March 2022 to June 2022. In total, 85 patients underwent assessments for pre-HbA1c and post-HbA1c levels, average fasting blood glucose (FBG) and average random blood sugar (RBS) levels (including postprandial blood sugar [PPBS] and pre-meal levels) during the duration of the study. Additionally, severe hypoglycemia, defined as blood glucose levels below 54 mg/dl or instances where assistance was required for recovery, was also noted.

RESULTS

Overall, consultations via the Viber app led to improvements in FBG and RBS during the second and third months compared to the first month, along with a significant reduction in HbA1c levels. Among the patients, 27 patients (32%) achieved a reduction of HbA1c less than 10% from the baseline, 28 patients (33%) achieved a reduction between 10% and 30%, and 17 patients (20%) achieved a reduction of over 30% from the baseline. Thirteen patients (15%) showed either an increase or no change in their results compared to the baseline. There was a satisfactory reduction in the following parameters: FBG decreased from a mean baseline of 167 to 129, Postprandial blood sugar decreased from 223 to 162, and premeal blood sugar decreased from 212 to 152. Among these patients, eight patients (9%) experienced hypoglycemic symptoms and required the intake of sugary drinks to alleviate the condition. None required admission.

CONCLUSION

Telemedicine is effective and safe for initiating insulin therapy in Type 2 Diabetes Patients during the COVID-19 outbreak.

KEYWORD

basal insulin