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IMPACT OF QUALITY OF LIFE IN PATIENT WITH TYPE 2 DIABETES: A PROSPECTIVE OBSERVATIONAL STUDY

V. Karthikeyan*[1], S. Madhusudhan[1], S. Selvamuthukumaran[2], CK Dhanapal[1], S. Parimalakrishnan[1]

[1]Department of Pharmacy, Annamalai University, Tamil Nadu, India.

[2]Department of Medicine, RMMCH, Annamalai University, Tamil Nadu, India.

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***Correspondence for Author**
V. Karthikeyan
Department of Pharmacy, Annamalai University, Tamil Nadu, India.

ABSTRACT

Aim: The aim of the study was to evaluate the quality of life in patients with type 2 diabetes through patient counseling. **Method**: A prospective - observational study was conducted by interviewing patients with diabetes mellitus type 2, in this study, a questionnaire was administered to patients immediately after their appointments at the Department of medicine in RMMCH. The QOL questionnaire was adapted from P & T Journal, Medimedia USA, Inc, which was developed by Subish et al. The self-administered questionnaire had a total of 10 questions and each correct answer was given a score of 'one' and the wrong answer was given a score of 'zero'. Each score is categorized as rational scales in good (> 6), and poor (< 5). The aim of the study was to evaluate and improve the quality of life in type 2 diabetes patients. **Result:** A total of 345 consecutive patients were enrolled and filled questionnaires were documented. The patient's medical record and prescription were reviewed for counseling and QOL was measured. In pre intervention 35.13% of male patient had a good score female, 31.87%, but post intervention 69.72% of male and 83.75% of female patient got a good score in quality of life questionnaires. Same as 64.86% male and 68.12% of patients got a poor score in pre intervention, 30.27% of male and 16.25% of female patient had poor score in post intervention. **Conclusion:** QOL was lower in pre intervention and was affected by many factors and more over male patients had lower QOL than female patients, probably due to less physical activity, social history, Co - morbidities etc. The assessment in patient with diabetes could help to improve the quality of life.

KEYWORDS: QOL, Type 2 DM, Life style modification.

INTRODUCTION

Diabetes Mellitus (DM) is a highly widespread chronic disease and its associated complications are rising in worldwide. The estimated global prevalence of diabetes is 382 million people and is anticipated to rise to 592 million by the year 2035. Another 471 million people are at risk of developing diabetes by the year 2035. Pakistan has around 6.76 million people with diabetes, which is predicted to increase to 12.8 million by the year 2035.[1] In the analysis of care in chronic disease patients, where both the diseases and therapeutic strategies will cause symptoms, handicaps, and burdens on the lifestyle of patients and their families, the utility of quality-of-life assessments is usually accepted.[2,3] Thus, it's well documented for people with type 2 diabetes that the diagnosis, the demands of daily treatment, and the emotional coping with the disease and its threatening acute and late complications have major effects on the patient's physical, social, and psychological well-being.[4,5]

Quality of life (QOL) is a crucial outcome in clinical trials and health care interventions [6] that is receiving increasing focus within the scientific literature, together with medical sciences literature.[7] Typically QOL, health and satisfaction with life are used synonymously.[8] Successful treatment methods should alter patients to achieve good glycemic control[9] and, at the same time, they must interfere as little as possible with an independent and flexible lifestyle.[10]

MATERIALS AND METHOD

A prospective - observational study was conducted by interviewing patients with diabetes mellitus type 2, in this study, a questionnaire was administered to patients immediately after their appointments at the Department of medicine in RMMCH, Annamalai University, and Tamilnadu. Patients with diabetes were recruited from the Outpatient Department (OPD) and interviewed on one to one basis by the diabetes educators and general questionnaire that contained data on age, sex, disease duration; FBG, RBG and PPG values were used. The present study was approved by the Institutional Human Ethics Committee (M18/ RMMC/2015), Annamalai University and Annamalai Nagar, India. The QOL questionnaire was adapted from P & T Journal, Medimedia USA, Inc, which was developed by Subish et al[11] The self-administered questionnaire had a total of 10 questions and each correct answer was given a score of 'one' and the wrong answer was given a score of 'zero'. Each score is

categorized as rational scales in good (> 6), and poor (< 5). The aim of the study was to evaluate and improve the quality of life in type 2 diabetes patients.

RESULT AND DISCUSSION

A total of 345 consecutive patients were enrolled and filled questionnaires were documented. The patient's medical record and prescription were reviewed for counseling and QOL was measured. Among the study population (n=345) male patients were more in number (185) when compared with female patients (160). In total, 52.17% of the patients were males and 47.82% of the patients are females.

Table 1: Gender Distribution.

S.no	Gender	Number of patients	Percentage (%)
1	Male	185	52.17
2	Female	160	47.82

Data related to the age of onset of diabetes or age of diagnosis of diabetes versus the number of patients was illustrated in **Fig 1**. The majority of patients (114 patients, 33.04%) diagnosed for diabetes belongs to the age group of 41- 50 years, followed by 108 patients (31.3%) in the age group of 51-60 years and 75 patients (21.73%) belongs to the age group of 61-70 years. Among the study population, we observed that 6.08% (21 patients) were living with diabetes until 80 years due to advances in the field of medicine. However, early diagnosis of diabetes (27 patients, 7.82%) in the age group of 30-40 years is an alarming factor. Early type-2DM may cause lots of health related complications and give rise to β cell resistant in the pancreas, which will lead to alteration in therapeutic management from oral hypoglycemic agents (OHA) to insulin which will be a great burden to the patient and healthcare sector.

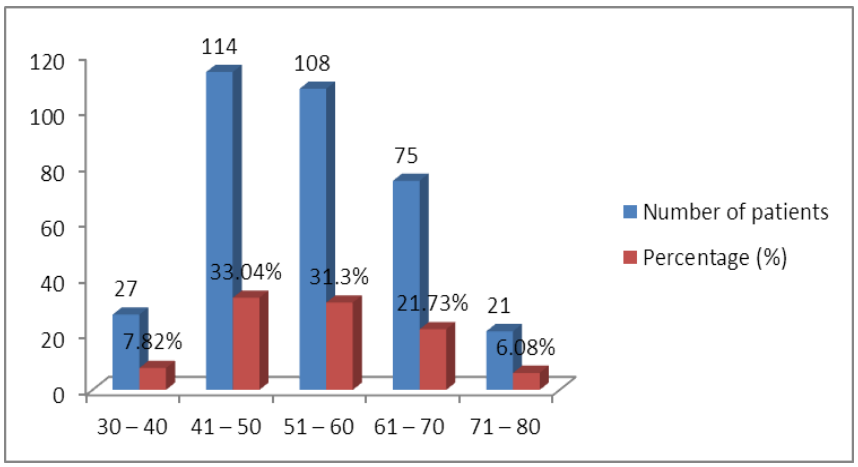

Figure 1: Age vice Distribution

Treatment of co-morbid diseases is really a challenge factor in therapeutic management of type-2DM diabetes among the population. The data for Co morbid disease characteristics are

represented in **fig 2**. Among the study population, 20.00 % of patients were having hypertension along with diabetes (DM+HTN) then followed by DM +HTN+ CAD (12.17 %). Therapeutic management or plan was carried out in the T2DM patients according to their FBS, RBS and PPS levels. The Proper selection of drugs and designing of treatment regimen or protocol was initiated after analyzing the FBS, RBS and PPS value in each individual patient. The treatment plan or protocol used in the study population is represented in the **Fig 3**. The majority of patients (291 patients; 84.34%) were prescribed with OHA alone followed by 33 patients (9.56%) with (insulin + OHA) and 21 patients (6.08%) were prescribed with only insulin. No patient was treated only with diet control.

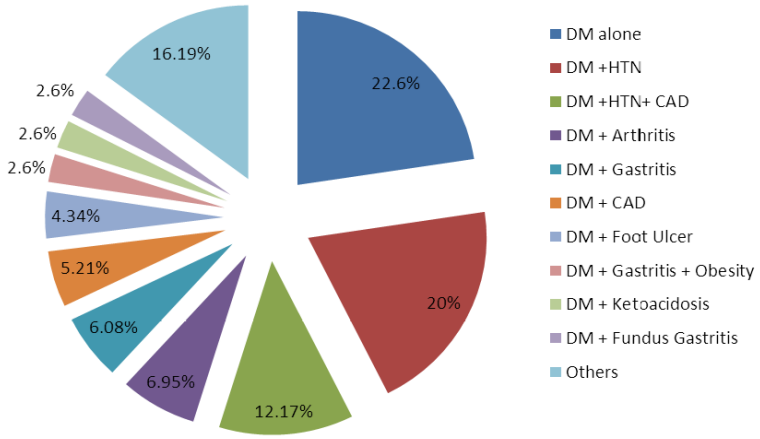

Fig 2: Co-Morbidity diseases

Education level of patients diagnosed with diabetes mellitus was illustrated in (**Fig 4**). The Majority of the respondents (29%) has completed education at primary school level, followed by 28% of patients, have completed education at university level. This research shows that the majority of the respondents have completed education at primary school level.

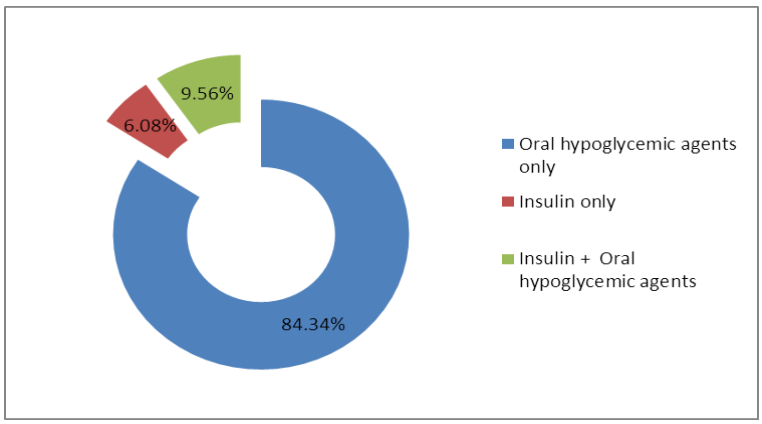

Fig 3: Current Diabetes Treatment.

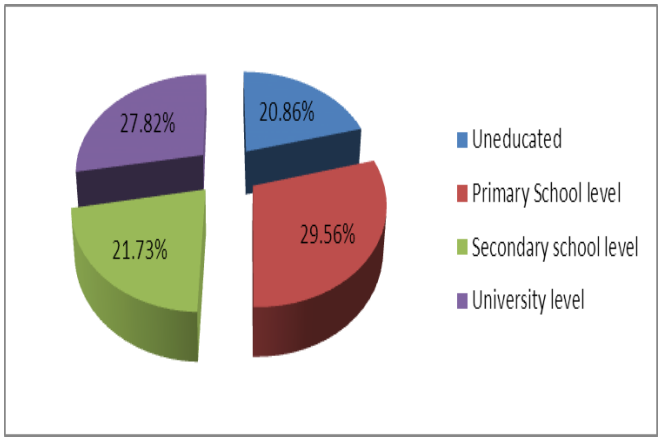

Fig 4: Education Status

Initially 345 patients were enrolled and appointed for our study. After15 days of appointment, pre intervention study was conducted to the patients and immediately patient education and counseling was provided. Follow-up studies were carried out at intervals of 30 days and 45 days since appointment. During second follow-up (i.e. at the 45th day of the appointment), the post intervention study was carried out in the same group of patients. The results of the study were furnished with **table 2**. Initially in pre intervention 35.13% of male patient had a good score female, 31.87%, but post intervention 69.72% of male and 83.75% of female patient got a good score in quality of life questionnaires. Same as 64.86% male and 68.12% of patients got a poor score in pre intervention, 30.27% of male and 16.25% of female patient had poor score in post intervention.

Table 2: Intervention Study of Quality of Life.

QOL of Patients		Pre Intervention		Post Intervention	
		Male	Female	Male	Female
QOL	Good	65 (35.13%)	51 (31.87%)	129 (69.72%)	134 (83.75%)
	Poor	120 (64.86%)	109 (68.12%)	56 (30.27%)	26 (16.25%)

CONCLUSION

Qol is the ultimate goal and important outcome of all medical intervention in diabetes patients. Our study shows that the QOL depending on gender, age and existence of Co – morbidities. QOL was lower in pre intervention and was affected by many factors and more over male patients had lower QOL than female patients, probably due to less physical activity, social history, Co - morbidities etc. The assessment in patient with diabetes could help to improve the quality of life.

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