



A CLINICAL STUDY ON DIABETIC RETINOPATHY IN DIABETES MELLITUS PATIENTS ATTENDING TERTIARY CARE HOSPITAL

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ABSTRACT **AIM :** To study manifestations of Diabetic retinopathy in various subgroups of population like different age and sex groups of Diabetes mellitus patients.To determine manifestations of diabetic retinopathy in Diabetic patients **METHODS :** This is a prospective study done in 100 patients of Diabetic mellitus over a period of one year with proper recordings of snellens visual acuity chart, slit lamp biomicroscopy, direct and indirect ophthalmoscopy,laboratory investigations in patients attending tertiary care hospital, kakinada. **RESULTS :** This study was conducted in 100 patients ,of most common age group was 41-50 years,40% of the patients were with poor glycemic control with longer duration of Diabetes mellitus. Males are more affected than females. Majority presented with blurring of vision, watering from eyes. **CONCLUSION:** Diabetic retinopathy is a vision threatening condition,it can be diagnosed at the time of diagnosis of diabetes mellitus.Thus vision loss due to diabetic retinopathy is preventable through strict glycemic control and frequent funduscopy examination by an ophthalmologist.Primary treatment helps to alleviate the visual acuity and prevent further loss.

KEYWORDS :

INTRODUCTION

Diabetes mellitus is a hyperglycemic condition that consists of type 1 or type 2 diabetes mellitus. A person gets effected by Type 1 Diabetes Mellitus genetic condition and as a consequence of autoimmunity against insulin producing beta cells, ensuing in ample or near total insulin deficiency whereas Type 2 Diabetes Mellitus is a mainly lifestyle related diverse group of disorders considered by inconstant degrees of insulin resistance, compromised insulin secretion, and augmented hepatic glucose production.

In some individuals Diabetes Mellitus can distress multiple organ systems and is accountable for the morbidity and mortality allied with the disease. Complications that occur due to diabetes can be separated into vascular and nonvascular complications and are comparable for type 1 and type 2 Diabetes Mellitus. The vascular complications of Diabetes Mellitus are auxiliary subdivided into microvascular complications constituting retinopathy, nephropathy and macro vascular complications like coronary artery disease and cerebrovascular disease and peripheral arterial disease whereas the Nonvascular complications comprise infections, skin changes, and hearing loss.

While coming to the Diabetic retinopathy it is valued that Diabetic mellitus affects 7.2 to 11.4% of the world populace, fifty percent of who have some degree of Diabetic Retinopathy at any given point of time. According to World Health Organization (WHO), Diabetic Retinopathy is accountable for 3 to 7% of total blindness in Asia. In India, the occurrence of Diabetic Retinopathy in general populace is 3.5%.

AIM : To study manifestations of Diabetic retinopathy in various subgroups of population like different age and sex groups of Diabetes mellitus patients.

To determine manifestations of diabetic retinopathy in Diabetic mellitus patients

METHODS :

It includes study settings, sample frame, study design, study period, sample size, sampling technique, data collection, ethical considerations

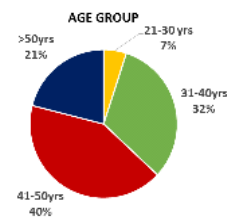
All patients with visual disturbances attending ophthalmology out patient department, Government General Hospital, Kakinada will be enrolled for study after written and informed consent will be taken from patient regarding the study in his/her vernacular language.

Clinical examination of the patient include a detailed general physical examination. Routine investigations like Blood sugar, blood pressure and urine analysis done.This is a prospective study done in 100 patients of diabetes mellitus over a period of 1 year with proper recordings of visual acuity with snellens visual acuity chart, slit lamp bio microscopy, direct and indirect ophthalmoscopy, laboratory investigations in patients attending tertiary care hospital , kakinada.

RESULTS:

AGE WISE DISTRIBUTION OF DIABETIC RETINOPATHY CASES (n = 100)

AGE DISTRIBUTION OF DIABETIC RETINOPATHY CASES (n = 100)		
AGE (years)	NO .OF CASES	PERCENTAGE
21-30	07	07%
31-40	32	32%
41-50	40	40%
>50	21	21%
TOTAL	100	100%



In the current study majority of 40% diabetic retinopathy cases were in the age group of 41 to 50 years compared to 32% who were in the age group of 31 to 40 years followed by 21% who were in the age group of above 50 years and the low amount of 7% cases belong to the age group of 21 to 30 years.

SEX DISTRIBUTION OF DIABETIC RETINOPATHY CASES (n = 100)

SEX	NO .OF CASES	PERCENTAGE
MALE	62	62%
FEMALE	38	38%
TOTAL	100	100%

In the current study males were found to be 62% compared to 38% females

DURATION OF UNCONTROLLED DIABETES MELLITUS IN PATIENTS WITH DIABETIC RETINOPATHY

DURATION OF DM	WITH DIABETIC RETINOPATHY	TOTAL PERCENTAGE
< 2 years	16	16 (16%)
2 - 5 years	21	21(21%)
6 - 10Years	32	32 (32%)
> 10 years	31	31 (31%)

Most of the Diabetic retinopathy cases were found in 6-10yrs duration of uncontrolled Diabetes

HTN IN DIABETIC RETINOPATHY PATIENTS (n= 100)

HTN	DIABETIC RETINOPATHY	PERCENTAGE
PRESENT	59	59%
ABSENT	41	41%

In the current study the prevalence of hypertension was 59% whereas 41% were non hypertensives among the study subjects

Distribution of study subjects based on clinical history (n=100)

CLINICAL HISTORY	NO .OF CASES	PERCENTAGE
BLURRING OF VISION	43	43%
WATERING OF EYES	27	27%
PEDAL EDEMA	15	15%
INCREASED FREQUENCY OF MICTURITION	15	15%
TOTAL	100	100%

Most common symptom blurring of vision ,next watering of eyes

STAGES OF DIABETIC RETINOPATHY IN PATIENTS WITH DIABETES MELLITUS (n=100)

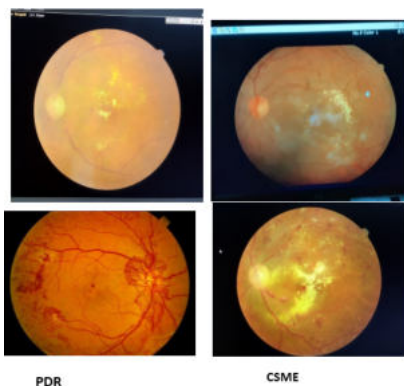
STAGES OF DIABETIC RETINOPATHY	DIABETIC MELLITUS PATIENTS
NPDR	71 (71%)
PDR	27 (27%)
CSME	02(2%)

STAGES OF NPDR (N=71)

STAGE	PERCENTAGE
MILD	45 (63.4%)
MODERATE	20 (28.2%)
SEVERE	06 (8.4%)

In the current study among diabetic retinopathy NPDR 71%,PDR 27%,CSME 2%.In NPDR cases 63.4% were found to have mild NPDR whereas 28.2 % were found to have moderate NPDR compared to 8.4% cases who were found to have severe NPDR

MODERATE NPDR



DISCUSSION

This clinical study of Diabetic retinopathy is done in 100 patients with diabetes mellitus incidence more in males compared to females among various types. Condition is more common in age group of 41-50 years Diabetes Mellitus is a cluster of metabolic diseases categorized by hyperglycemia with indications of frequent urination, increased thirst, and augmented appetite. Depending on causes of Diabetes Mellitus, factors causative to hyperglycemia comprise decreased insulin secretion, reduced glucose utilization, and augmented glucose

production and this metabolic dysregulation allied with Diabetes Mellitus roots to development of ancillary pathophysiologic variations in numerous organ systems that enforce a incredible burden on the patient with diabetes and also on the health care system as published by Jameson et al.

AGE:

In the current study majority of 40% of the cases were in the age group of 41 to 50 years compared to 32% who were in the age group of 31 to 40 years followed by 21% who were in the age group of above 50 years and the low amount of 7% cases belong to the age group of 21 to 30 years with a mean age of 56.8+9.5 years ranging from the age of 21 to 77 years.

SEX:

In the current study males were found to be 62% compared to 38% females

FAMILY HISTORY:

In the current study positive family history was found among 44% of the study subjects compared to 56% who were not having a family history of diabetes

BMI:

In the current study 41% of the study subjects were in the preobese category compared to 38% who were in the normal category of BMI and 4% were found to be underweight and 17% of the study subjects were found to be obese

CLINICAL MANIFESTATIONS:

In the current study 43% of the study subjects reported blurring of the vision whereas 27% of the cases reported with watering of eyes and 15% came with the complaint of pedal edema whereas increased frequency of micturition was found among another 15% of the cases.

STAGES OF DIABETIC RETINOPATHY IN DIABETES MELLITUS PATIENTS:

In the current study 71% of the cases were found to have NPDR whereas 27% were found to have PDR compared to 2% cases who were found to have CSME, 63.4% were found to have mild NPDR whereas 28.2 % were found to have moderate NPDR Microvascular complications like diabetic retinopathy and diabetic nephropathy are a major cause of morbidity and mortality in type-2 diabetes mellitus. In our study 24 out of 100 newly diagnosed type-2 diabetes mellitus were presented with microvascular complications.

CONCLUSION

In inference, diabetic retinopathy is allied with vision threatening impediments. It can be diagnosed even at the time of diagnosis of diabetes mellitus. Thus, vision loss due to diabetic retinopathy is avertible through strict glyceimic control and repetitive fundoscopic examination by an ophthalmologist. Primary treatment helps to alleviate the visual acuity and prevent further loss. The proteinuria appears to be an vital marker of superior diagnostic and prognostic significance may also be an indicator of severe disease with extensive vascular damage.

Therefore screening for early detection and identification of risk factors for Diabetic retinopathy may prevent the progression of microvascular complications among diabetics.

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Nil

Conflicts of interest :

There are no conflicts of interest.

Ethical issues :

Approved by ethics committee

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