TO ASSESS THE EFFECT OF DIABETIC RETINOPATHY (TYPE-II) IN RELATION TO BASED UPON AGE AND GENDER OF THE POPULATION OF MALWA REGION-A CROSS SECTIONAL STUDY

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ABSTRACT
Background : Diabetic Mellitus is one of the common illness caused by metabolic disorders mainly by defect in blood glucose level. It looked at diabetes as two different diseases: type I and type II. In the younger onset group, which consists of people whose age at diabetes diagnosis was less than thirty years, retinopathy was noted in 13% of patients with less than five years of diabetes and 90% of patients with ten to fifteen years of diabetes. Diabetic Retinopathy (DR) affects 25% of those with type 1 diabetes who have had the condition for 15 years. Retinopathy affects 40% of insulin-using patients and 24% of non-insulin-using patients in the older onset group, which consists of people who were diagnosed with diabetes at a period when they were ≥ 30 and ≤ 5 years old.
Aim : To assess the effect of retinopathy among age & gender of the definite population.
Materials and Methods : 200 subjects suffered from DR were included coming in the hospital and done our methodology by using all the parameters after prior consent.
Result : It was reported that the most affecting people were of moderate age (51-60 years) having the frequency of 97 and the least affected population were the age of <40 years which were 06.
Conclusion : This study reveals that the proper care is needed on the basis of age and gender after examining via different biochemical parameters.

Keywords : Diabetic Retinopathy, Type-II Diabetic Mellitus, Metabolic Illness

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INTRODUCTION

Hypoglycemia, or low blood sugar, is a metabolic illness known as diabetes mellitus (DM) [1]. DM is said to be the century's pandemic [2]. Although the incidence in Europe is 8.9% in 2019, it is predicted to increase to 9.8% in 2030 and 10.3% in 2045 [3]. Diabetes mellitus is a condition marked by absolute or relative abnormalities in insulin secretion or action, as well as persistent hyperglycemia and disruptions in the metabolism of fat, protein, and carbohydrates. The secondary pathophysiological alterations in several organ systems brought on by the metabolic dysregulation linked to diabetes mellitus place a heavy strain on the diabetic. DR also known as diabetic retinopathy, is a well-known side effect of diabetes that can result in blindness and severe eye damage in those with the disease. DR is typically caused by long-term diabetes and is characterised by the leakage of proteins and other fluids from retinal vessels, which forms exudates on the surface of the retina and impairs vision. Studies have indicated that an individual with more than ten years of diabetes has an 80% increased risk of developing diabetic retinopathy [4].

MATERIAL & METHODS : The present cross-sectional study was conducted over 200 subjects in IMC & Hospital, Indore (M.P.). The study was conducted after prior consent and IEC certificate approval. All the methods used related to study with collaboration of Department of Ophthalmology
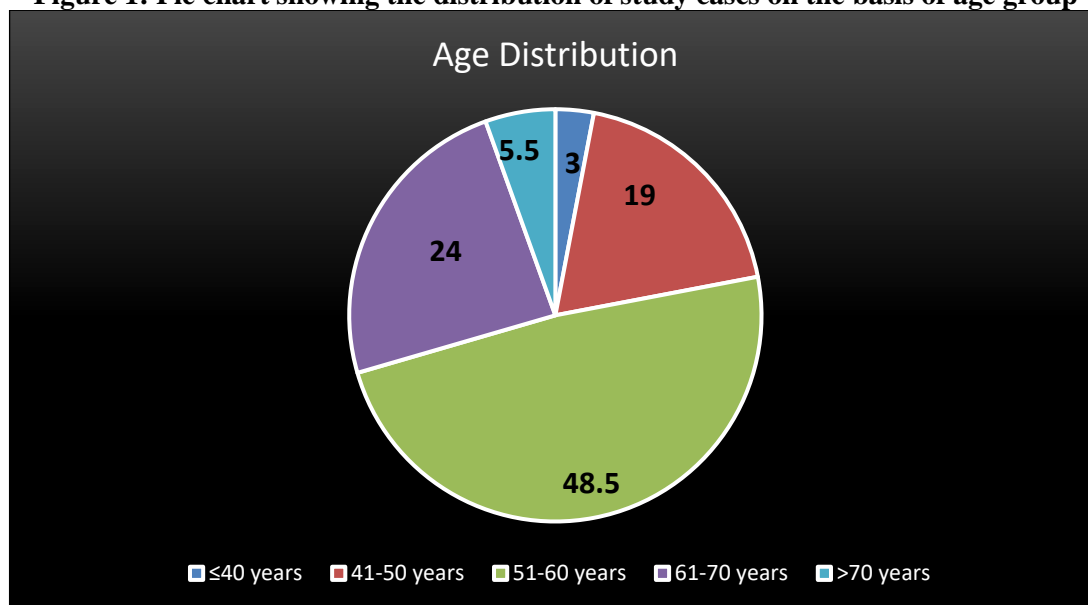
OBSERVATION & RESULTS :
The following table shows the distribution of the studied cases on the basis of their age and it was found that the majority of the diabetic retinopathy cases were in the age group ranging from 51-60 years (48.5%) followed by 61-70 years (24.0%) whereas patients less than 40 years were least affected (3.0%).

Table 1: Distribution of study cases on the basis of age group

Age	Frequency (n=200)	Percentage
≤40 years	6	3.0%
41-50 years	38	19.0%
51-60 years	97	48.5%
61-70 years	48	24.0%
>70 years	11	5.5%

Figure 1: Pie chart showing the distribution of study cases on the basis of age group
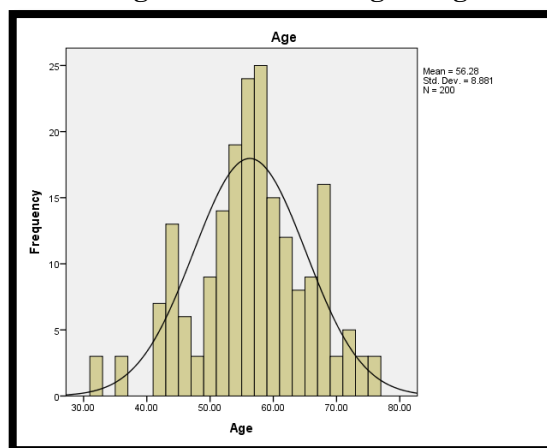

The mean age of the studied cases was 56.28±8.88 years with median 56.0 and IQR 51.25-62.0.

Table 2: Age distribution of the studied cases

	Mean ± SD	Median	IQR
Age	56.28 ± 8.88	56.00	51.25 - 62.00

**Figure 2: Histogram chart showing the age distribution**

The below table shows the distribution on the basis of their gender and it was found that the majority of the cases were male (65.0%) followed by females (35.0%).

Table 3: Distribution of study cases on the basis of gender

	Frequency (n=200)	Percentage
Male	130	65.0%
Female	70	35.0%

Figure 3: Pie chart showing the distribution of study cases on the basis of gender
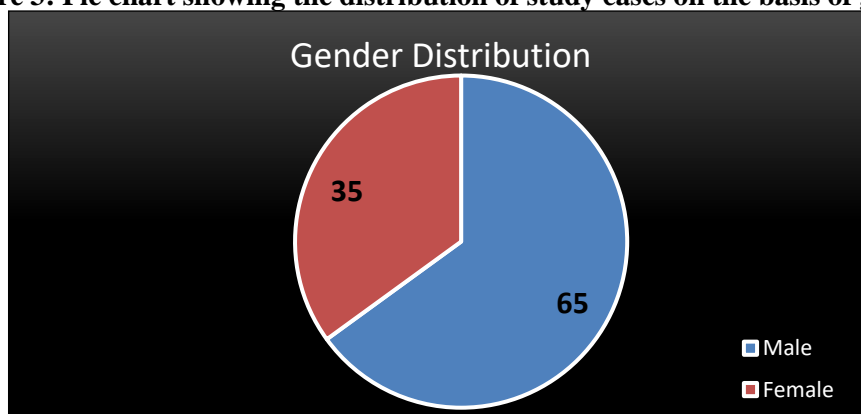
DISCUSSION :
This study noted that the majority of the diabetic retinopathy cases were in the age group ranging from 51-60 years (48.5%) followed by 61-70 years (24.0%). The mean age of the studied cases was 56.28±8.88 years with median 56.0 and IQR 51.25-62.0. In left eye both VA and BCVA increases significantly with increasing age (p<0.05) whereas insignificant association was seen in right eye (p>0.05). In a study **Ranganathan RS et al [5]** reported the prevalence of DR among individuals with T2DM aged ≥45 years was 68%. A similarly high prevalence rate of 51% was found by **Kaushik et al [6]** in a hospital-based study conducted in a tertiary care center in Kashmir, India. A hospital-based multicentric study performed across India by **Rajalakshmi et al [7]** found a prevalence of

33% DR in the study population with a mean age of 58 years. This difference may be due to sample size differences and a multi-centric approach. A population-based study involving 31 districts showed a prevalence of only 16.9%.The present study noted that the majority of the cases were male (65.0%) followed by females (35.0%) **[8]**.

CONCLUSION :
Our findings have clear clinical implications which represents that the moderate age persons mainly the male population is prone for retinopathy having type-II DM causes the diabetic retinopathy. This study also shows the importance of measuring the biochemical parameters which helpful in forecasting of the disease.

CONFLICT OF INTEREST : NONE

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