

A Dissertation on

**“A STUDY ON INCIDENCE AND RISK FACTORS OF DIABETIC  
RETINOPATHY IN PATIENT WITH DIABETIC MACULOPATHY”**

*Submitted to the*

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY**

*In partial fulfilment of the Regulations*

*for the Award of the Degree of*

**M.S. (BRANCH - III) - OPHTHALMOLOGY**



**GOVT. STANLEY MEDICAL COLLEGE**

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY**

**CHENNAI – 600 001**

**MAY 2020**

## **CERTIFICATE**

This is to certify that the study entitled “**A STUDY ON INCIDENCE AND RISK FACTORS OF DIABETIC RETINOPATHY IN PATIENT WITH DIABETIC MACULOPATHY** ” is the result of original work carried out by **DR.S.M.MOHAMMED MUHAZIR**, under my supervision and guidance at **GOVT. STANLEY MEDICAL COLLEGE, CHENNAI**. The thesis is submitted by the candidate in partial fulfilment of the requirements for the award of **M.S Degree in Ophthalmology**, a course from 2017 to 2020 at Govt. Stanley Medical College, Chennai.

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This is to certify that the dissertation entitled “**A STUDY ON INCIDENCE AND RISK FACTORS OF DIABETIC RETINOPATHY IN PATIENT WITH DIABETIC MACULOPATHY**” is a bonafide record of research work done by **DR.S.M.MOHAMMED MUHAZIR**, Post Graduate Resident in Department of ophthalmology, Government Stanley Medical College, Chennai.

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## **DECLARATION**

I hereby declare that this dissertation entitled “**A STUDY ON INCIDENCE AND RISK FACTORS OF DIABETIC RETINOPATHY IN PATIENT WITH DIABETIC MACULOPATHY**” is a bonafide and genuine research work carried out by me under the guidance of **Prof.Dr.THANGERANI RAAJASEHARAN M.S,D.O** HOD, Department of Ophthalmology, Government Stanley Medical College And Hospital, Chennai - 600001.

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## **CERTIFICATE-II**

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## **ABBREVIATIONS:**

1. DR - DIABRTIC RETINOPATHY
2. DM - DIABETIC MACULOPATHY
3. DMO - DIABETIC MACULAR EDEMA
4. CMO - CYSTOID MACULAR EDEMA
5. CSME - CLICALLY SIGNIFICANT MACULAR EDEMA
6. CKD - CHRONIC KIDNEY DISEASE
7. NPDR - NON PROLIFERATIVE DIABETIC RETINOPATHY
8. LR PDR - LOW RISK DIABRTIC RETINOPATHY
9. HR PDR - HIGH RISK DIABRTIC RETINOPATHY
10. ADED - ADVANCED DIABETIC EYE DISEASE
11. T1DM - TYPE 1 DIABETES MELLITUS
12. T2DM - TYPE 2 DIABETES MELLITUS
13. LADA - LATENT AUTOIMMUNE DIABETES OF ADULTS
14. TCF - TRANSCRIPTION FACTOR
15. GAD - GLUTAMINE ACID DECARBOXYLASE
16. IAPP - ISLET AMYLOID POLYPEPTIDE
17. OHA - ORAL HYPOGLYCEMIC STATUS
18. OGTT - ORAL GLUCOSE TOLERANCE TEST
19. VEGF - VASCULAR ENDOTHELIAL GROWTH FACTOR
20. IGF - INSULIN-LIKE GROWTH FACTOR
21. RAAS - RENIN-ANGIOTENSIN-ALDOSTERONE SYSTEM
22. SDH - SORBITOL DEHYDROGENASE

- 23. ACE - ANGIOTENSIN CONVERTING ENZYME**
- 24. ROS - REACTIVE OXYGEN SPECIES**
- 25. RAGE - RECEPTOR FOR ADVANCED GLYCATION  
ENDPRODUCTS**
- 26. RNS - REACTIVE NITROGEN SPECIES**
- 27. BRB - BLOOD RETINAL BARRIER**
- 28. CA - CARBONIC ANHYDRASE**
- 29. ETDRS - EARLY TREATMENT DIABETIC RETINOPATHY  
STUDY**

# **PART- I**

# **PART- II**