# Dry Eye Syndrome in subjects with Diabetic Retinopathy



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## **Abstract**

#### Introduction :

Dry eye syndrome is a multifactorial condition affecting the ocular surface and the tear film that leads to suffering mostly from gritty sensation, soreness, decreased visual acuity, photophobia, itching, decreased corneal sensitivity, tearing, pain and blurred vision. Diabetes mallets is one of the major causes of dry eye syndrome. In addition to other ophthalmic terrible complications caused by diabetes like diabetic retinopathy, cataract and glaucoma, dry eye syndrome occurs more frequently and more severely in diabetic retinopathy patients when compared to non-diabetic population, the mechanism by which diabetes causes dry eye can be explained by meibomian gland dysfunction, tear film instability or increased tear osmolality

#### Aim :

The aim of this study is to demonstrate the correlation between type 2 diabetic retinopathy and dry eye syndrome, and to compare the rate of occurrence of dry eye syndrome and the severity of symptoms between non-diabetic participants and diabetic retinopathy patient.

#### Methodology :

This study was conducted using a case-control study design, 160 participants were enrolled 80 of them were cases with type 2 diabetic retinopathy, the remaining 80 were non-diabetic participants, all the sample was collected from NNUH and the diabetes center in Nablus. Clinical data of all participants were obtained by direct patient interview, presence of diabetic retinopathy in the cases was confirmed by medical reports of patients, we used Schirmer test and OSDI questionnaire to assess Dry eye syndrome

#### **Results**:

we found that there is a significant association between diabetic retinopathy and dry eye with p-value less than 0.05, gender was not significantly associated with the occurrence and severity of dry eye with p-value more than 0.05, the results for the relation between the age and dry eye show a significant association with OSDI for assessment with p-value less than 0.05 but not significant with schirmer test with p value more than 0,05, no significant association between the last hbA1c level and duration of diabetes with the occurrence and the severity of dry eye syndrome with p-value more than 0.05 for both relations.

### **Conclusion:**

Our study revealed that dry eyes and diabetic retinopathy appear to have a common association .

Routine screening for Dry eye should be an integral part of the assessment of diabetic eye disease, as early diagnosis allows for a timely and more effective treatment which is essential to prevent complications