

## **ABSTRACT**

### **AIM**

To study association between serum bilirubin & severity of Diabetic retinopathy in a tertiary care center.

### **MATERIALS AND METHODS**

This is a prospective observational study conducted among patients attending and referred to Ophthalmology OPD in PSG Institute of Medical Sciences and Research Centre ,Coimbatore.

It is a hospital based study spanning over a period of 3 months from May 2014 to July 2014. Totally 75 diabetic patients were included in the study.

### **RESULTS**

In our study, Of the 75 consecutive diabetic patients included in the study,48 were males and 27were females.In that 32% had no signs of diabetic retinopathy, 57.5% had non-proliferative retinopathy and 10.5% had proliferative retinopathy.

In our study, the mean level of HBA1C in patients with DR is 9.5 and the mean level of HBA1C in patients without DR is 8.08. In the group of patients within 5years of duration of diabetes 55% of patients had diabetic retinopathy.It

was observed that 89% of the patients presented with DR in the group of patients with duration 6 to 10 years. It was observed that DR changes were present in 100% of the patients with duration more than 10 years.

In our study, Out of the 75 patients, the number of patients with serum bilirubin level less than 0.3 were 4 patients and all presented with DR changes. The number of patients within 0.3 to 0.6 were totally 54 patients in this group 41 patients (76%) had DR changes and 13 patients (24%) without DR changes. The number of patients with serum bilirubin greater than 0.6 were 17 patients in this group 6 patients (35%) had DR changes and 11 patients (65%) without DR changes.

## **CONCLUSION**

In this study we have tried to study about the antioxidant role of serum bilirubin and its association with the microvascular complications of diabetes. There has already been many studies done to observe the antioxidant role of serum bilirubin in cardiovascular diseases, but its role in diabetic retinopathy needs further evaluation. If the role of bilirubin against DR is proved that they have a protective effect on progression of DR, further avenues for research towards developing drugs to increase bilirubin levels could be opened up and thus focus can be shifted towards medical management of diabetic retinopathy.