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# Ocular complications in diabetes: clinical patterns from a hospital-based study in Chakwal

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## ABSTRACT

**Background and objective:** Diabetes mellitus (DM) is a major public health concern worldwide, with ocular complications being a leading cause of preventable vision loss among adults. Early detection through regular ophthalmic screening is critical to prevent irreversible vision loss. The study was designed to determine the frequency of ocular complications of DM in patients with diabetes presenting to Munawwar Memorial Hospital Chakwal, for their first eye consultation.

**Methods:** A cross-sectional observational study was conducted at the monthly Medical Retina Clinic of Munawwar Memorial Hospital Chakwal from September 2022 to November 2022. Detailed clinical assessment and regular ophthalmic examination of 60 diabetic patients, aged 30-90 years, was done to determine the presentation patterns of diabetic eye disease. An optometrist performed refraction and slit lamp examination to evaluate the anterior and posterior segments. A full retinal examination was performed using a 78-diopter lens. The findings were then validated by the attending ophthalmologist.

**Results:** The mean age of patients was  $57.5 \pm 13.5$  years, with 45% females and 55% males. Diabetic retinopathy (DR) was found in 62% of diabetes patients with recurring vision loss. 62.5% and 34% patients presented with non-proliferative and proliferative DR. Cataract was seen in 28% patients. Other ocular complications included dry eyes, keratitis, and glaucoma. Age and duration of diabetes were significantly associated ( $p < 0.05$ ) with the progression to proliferative diabetic retinopathy.

**Conclusion:** A high burden of advanced ocular disease, in particular diabetic retinopathy, was observed at first presentation along with other complications such as cataracts, glaucoma, and corneal disease. These findings underscore the urgent need for community-based screening, early referral pathways, and public awareness campaigns to facilitate timely detection and intervention in diabetic eye disease.

**Keywords:** Diabetes mellitus, diabetic retinopathy, cataract, glaucoma.

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