# **HKSH Ophthalmology Centre**

# **Happy Valley**

# Admiralty

**Service Hours** 







**Diabetic** 

Retinopathy

# **Diabetic Retinopathy**

Currently, around 10 to 15% of the adult population in Hong Kong suffers from diabetes mellitus (DM). The age of onset is getting younger in recent years. DM can affect multiple organs in the body including the eyes. It can cause diabetic retinopathy, cataract, glaucoma and retinal detachment. Depending on the duration and age of onset of DM, the incidence of diabetic retinopathy varies from 20 to 55%.

# Signs and Symptoms

Early diabetic retinopathy is asymptomatic and patients enjoy normal vision without redness and pain in the eyes. However, if the medical condition is not treated, blood vessels would eventually dilate, leak serum and phospholipids and form microaneurysms in the retina. Retinal capillaries closure will then cause ischemia and lead to the growth of new blood vessels. These new blood vessels bleed into vitreous cavity easily. Patients would experience sudden onset of floaters or even sudden blindness.



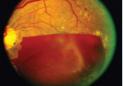
Normal Retina



Retinal hemorrhages, cotton wool spots and exudates



Retinal detachment



Vitreous hemorrhage

# Examination and Prevention of Complication

Once DM is diagnosed, patients must regulate their diet, improve their lifestyle as instructed by doctors and dietitians and control their blood sugar with oral

medications or injections. Regular retina examination by ophthalmologist is recommended every six months to one year. Laser treatment can be done to preserve vision if indicated by fundus fluorescein angiography or clinical diagnosis. More frequent follow-up is necessary when the retinopathy progresses.

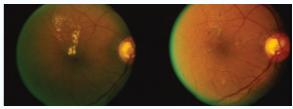
# **Latest Treatment**

Regular eye examination by doctors and strict control of blood sugar, blood pressure and blood cholesterol are essential in protecting vision. When new blood vessels are detected, or when the macula is threatened by edema and exudates, intravitreal injection of anti-VEGF or laser photocoagulation can preserve vision. In more severe conditions like retinal detachment, vitreous hemorrhage or refractory macular edema, vitrectomy is useful in restoring vision.



Laser treatment for diabetic retinopathy

#### Macular edema



Before treatment

After treatment

# Conclusion

Prevention is the best cure. Regular eye check up, strict blood sugar control and medical, laser or surgical treatment can protect vision and prevent blindness for most diabetic patients.