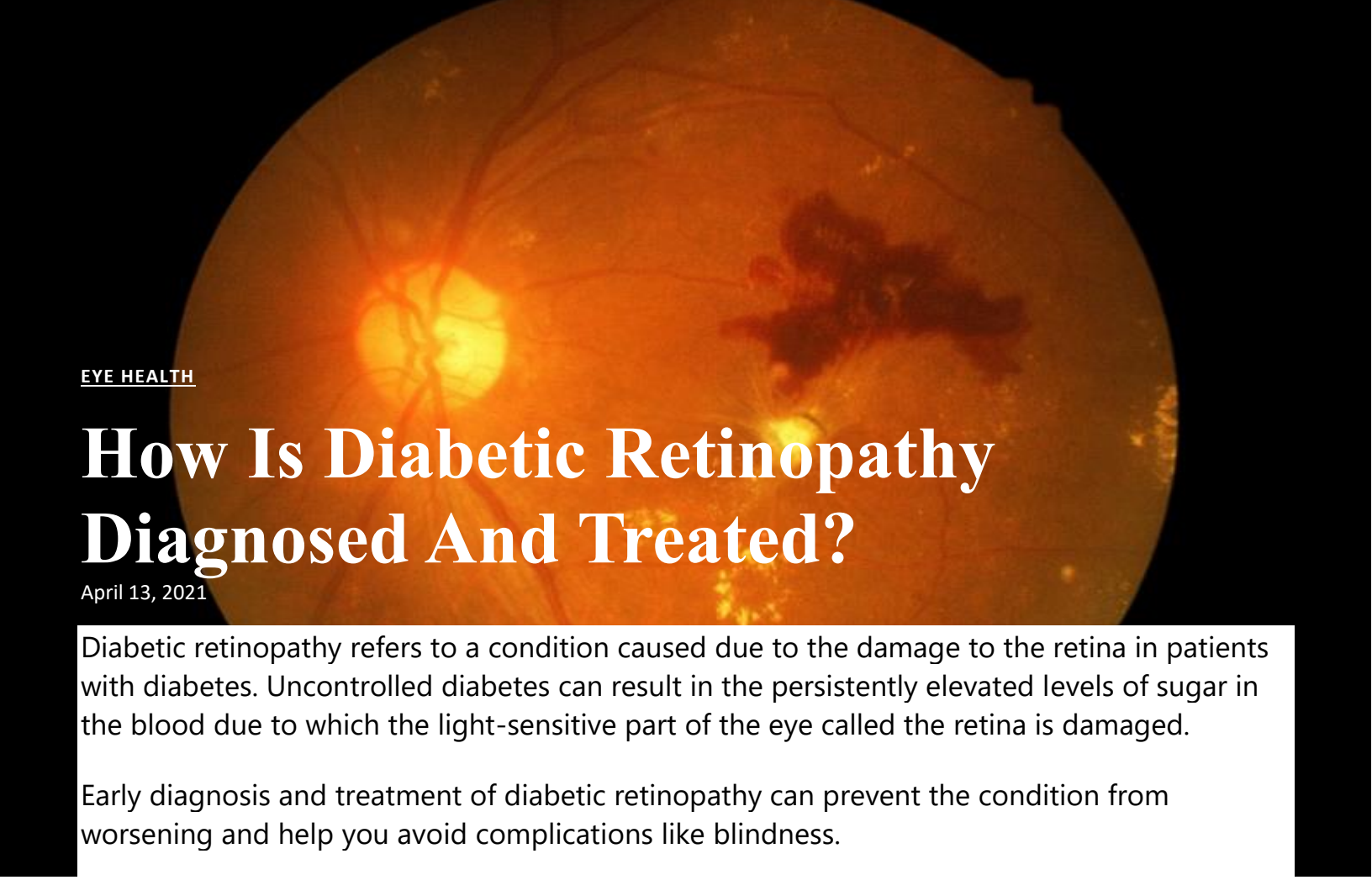

EYE HEALTH

How Is Diabetic Retinopathy Diagnosed And Treated?

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Diabetic retinopathy refers to a condition caused due to the damage to the retina in patients with diabetes. Uncontrolled diabetes can result in the persistently elevated levels of sugar in the blood due to which the light-sensitive part of the eye called the retina is damaged.

Early diagnosis and treatment of diabetic retinopathy can prevent the condition from worsening and help you avoid complications like blindness.

If you are suffering from diabetes, read on to learn how diabetic retinopathy is detected and treated.

How is Diabetic Retinopathy Diagnosed?

Diabetic retinopathy, just like diabetes, progresses gradually over a period of time, often without causing any apparent symptoms initially.

Hence, patients with diabetic retinopathy may not experience any symptoms or may have only mild problems with their eyesight.

If not detected and managed early, it can cause blindness. Hence, patients with diabetes are advised to undergo a routine eye check-up so that any damage to the retina can be detected early.

Eye Examinations are critical to detect the onset of early diabetic retinopathy

What Will Your Eye Doctor Look Out For During an Eye Examination?

Your doctor will perform a comprehensive dilated eye examination to assess the health of the eyes and your vision.

The exam should be simple and painless. Before the examination, a few drops of a solution will be placed into your eyes to dilate or widen the pupils. This will allow the doctor to view the inside of the eyes more clearly. The drops can cause your near vision to blur for a few minutes. However, the effect would wear off after a few hours restoring your vision.

During the comprehensive eye examination, your ophthalmologist will look for the following signs of diabetic retinopathy:

Excessive redness, swelling or fatty deposits in the retina

These are the initial warning signs of diabetic retinopathy that can be detected during a routine eye examination.

Presence of abnormal blood vessels

The detection of abnormal blood vessels in the retinal tissues could be indicative of diabetic retinopathy.

Growth of scar tissues and new blood vessels

These signs suggest the body's efforts to repair the damaged retinal tissues by forming scar and new blood vessels that can supply more nutrients to enhance healing.

Bleeding in the Vitreous humor

If your eye examination reveals bleeding in the vitreous humor, it might suggest that the disease has progressed considerably necessitating advanced treatments.

Retinal detachment

Retinal detachment is usually detected in the later stages of the disease when considerable loss of vision has already occurred.

Abnormalities in the optic nerve

Detection of the abnormalities in the optic nerve is considered a serious sign indicating a higher risk of developing vision loss.

What Are The Other Ways To Check for Diabetic Retinopathy?

As we've covered in previous blogs, here are some other screening methods that can help in the diagnosis of diabetic retinopathy.

Fluorescein angiography

This test can be performed during an eye examination with your eyes dilated. It involves capturing images of the inside of the eyes. This is followed by injecting a special dye into the vein of your arm and taking more images once the dye reaches the tissues of the eyes through the bloodstream.

The images, thus captured, can help to identify the blood vessels that are damaged, broken down, closed, and leaking fluid.

This form of examination is an accurate method to determine whether there is adequate blood flow through the blood vessels in the back of your eye. It can also detect vascular changes due to the inner and outer blood-retinal barrier.

Fluorescein angiography can be helpful in observing whether diabetic retinopathy treatment is working. This method of screening can be problematic as it's an invasive procedure, but at the same time highly effective at detecting any issues in the eye.

Optical coherence tomography

As technology evolves, better cameras and machines become available to help increase early diagnosis in diabetic retinopathy. An optical coherence tomography (OCT) examination is another imaging test that can provide cross-sectional pictures of the retina. Thanks to high-speed scanning and sensitivity improvements, screening with OCT allows for a 3-D high-quality image of the eye.

These images provide vital clues about the thickness of the retina to help the doctor assess whether any fluid has leaked into the retinal tissues. OCT examination can also be used to monitor the response of the patient to the treatment of diabetic retinopathy.

OCT screening is a cost-effective way to screen for diabetic retinopathy, but it may come with high implementation costs for the clinic.

How is Diabetic Retinopathy Treated?

The treatment of diabetic retinopathy depends on the type and severity of the condition. The treatment is aimed at slowing down or preventing the progress of the condition as explained below.

Early diabetic retinopathy

Patients with mild to moderate nonproliferative diabetic retinopathy may not need active medical intervention. However, your ophthalmologist will likely monitor the health of your eyes and vision on a regular basis to determine when you might need treatment.

In such cases, it is advisable to ensure optimum control over your blood sugar levels so that the progress of diabetic retinopathy can be inhibited.

Advanced diabetic retinopathy

Patients diagnosed with advanced or proliferative diabetic retinopathy with macular edema usually need surgical intervention. Depending on the specific changes that have occurred in the retina, the ophthalmologist may recommend one of the following treatments:

Photocoagulation

It is a form of laser treatment, also called focal laser treatment, that can prevent or slow down the leakage of fluids and blood into the eye.

During this procedure, the part of the abnormal blood vessels through which leakage is occurring is exposed to laser rays to promote healing.

Focal laser treatment can be performed in the doctor's clinic, usually in a single session. This treatment may not help to restore the vision completely in patients who have already developed blurring due to macular edema.

However, it is likely to help prevent the macular edema from worsening thereby reducing the risk of further vision loss.

Pan-retinal photocoagulation

This is another laser treatment, also called scatter laser treatment, that works by inducing shrinkage of the abnormally formed blood vessels.

During this procedure, the part of the retina that is away from the macula is exposed to the scattered laser rays to induce healing. The heating effect caused due to the laser can result in the shrinking of the new vessels leading to the development of scarring.

This procedure is usually performed in the doctor's clinic and may require 2 or more sessions. The vision may become blurry for about 24 hours after the procedure. Some patients may develop a loss of night vision or peripheral vision after the sessions.

Vitrectomy

During this procedure, a tiny incision is made in the eye to remove blood from the vitreous part along with the scar tissues that have been tugging on to the retina.

This procedure is usually performed in a hospital or surgical center under local or general anesthesia.

Good diabetes management will prevent the need for serious medical procedures

Injecting medicines into the eye

The treatment of diabetic retinopathy may also involve injecting medications called the VEGF (vascular endothelial growth factor) inhibitors into the vitreous of the eye.

These medications help to stop the growth of the new vessels by inhibiting the effects of signals that are sent to stimulate the formation of the new blood vessels.

Anti-VEGF therapy is recommended as a stand-alone treatment for patients with advanced diabetic retinopathy or in combination with other therapies such as pan-retinal photocoagulation.

Surgical intervention may be recommended to slow down or inhibit the further progress of diabetic retinopathy, though it may not cure the condition.

As diabetes is a chronic progressive disorder, retinal damage and the loss of eyesight may continue to worsen in the absence of regular monitoring and treatment.

Patients with diabetes are advised to visit their ophthalmologist on a regular basis to assess their vision and retinal health. Early detection of diabetic retinopathy with the help of

advanced diagnostic methods discussed above would help you seek the most appropriate treatment aimed at minimizing the risk of complications like blindness.

Regular eye screening

Patients with diabetes are advised to visit their ophthalmologist on a regular basis to assess their vision and retinal health. Early detection of diabetic retinopathy with the help of advanced diagnostic methods discussed above would help you seek the most appropriate treatment aimed at minimizing the risk of complications like blindness.

Timely diagnosis and treatment of diabetic retinopathy can also help to inhibit the worsening of the condition and enable patients to restore their eyesight, completely or partially, depending on the stage of the disease.

Conclusion

Early detection and proper treatment of diabetic retinopathy, in combination with healthy dietary and lifestyle habits aimed at controlling blood sugar levels, is key to preventing diabetes complications like vision loss or blindness. Make sure that you don’t miss your eye screening this year.