

Diabetic Retinopathy Frequently Asked Questions

Q. Who is at risk of diabetic retinopathy?

Diabetic retinopathy is a highly vascularised eye complication of both insulin dependent and non-insulin dependent of diabetes mellitus. The modern medical treatment of diabetes mellitus has increased the life expectancy of diabetes, but only to succumb to vascular complications affecting the eyes, brain, heart and kidneys. The duration of diabetes mellitus seems to have a direct association with the progression of diabetic retinopathy than the severity of the disease. It is the persistent increased blood sugar which is a high risk factor in developing diabetic retinopathy. In addition the other risk factors are high blood pressure, smoking, alcohol consumption and increased serum lipids. In insulin dependent diabetes mellitus the prevalence of diabetic retinopathy is 97.5% if the duration is 15 years or more and non-insulin dependent diabetes mellitus it is almost 80%.

Q. Is it a prevalent condition amongst diabetes in India? Is the awareness high enough amongst us?

Diabetes mellitus itself is become more prevalent in India. According to WHO, the present population of 19 million diabetics in India will triple in number ie, 57 million in the year 2025 and will have the high incidence of diabetics in the world. About one third to one fourth of all diabetics irrespective of the duration of diabetes will have diabetic retinopathy, which leads to vision threatening lesions like macular oedema, new blood vessels that can bleed easily inside the eye.

Q. What are the warning signals that should alert the patient?

Unfortunately diabetic retinopathy is often asymptomatic in the early stages where the treatment is effective and visual loss is a late symptom. Hence the screening for diabetic retinopathy of all diabetic people and a periodic examination of the fundus is very important to prevent blindness due to diabetic retinopathy.

Q. What are the treatment options for diabetic retinopathy?

The treatment options are management through the following methods or laser/surgery:

- i. Intensive Glucose control. (Reduction in progression of retinopathy and reduction in need for laser surgery has been noted with the good control of blood glucose.)
- ii. Optimum control of blood pressure will reduce the chances of developing diabetic retinopathy.
- iii. Control of serum lipids is essential to prevent progression of diabetic retinopathy.

It must be noted that:

- There are no medical drugs available at present to treat diabetic retinopathy.
- Aspirin, which is considered to be beneficial in other vascular conditions such as cardiac illness and has been found to be not beneficial for diabetic retinopathy.

Laser treatment is the treatment of choice at present for diabetic retinopathy. It can decrease the risk of severe visual loss by about 50% for patients with high risk proliferative diabetic retinopathy and reduce visual loss from macular oedema by 50% or more.

Vitreous surgery – in spite of the available laser treatment, repeated bleeding can occur inside the eye which may not be resolved but can lead to other complications. Vitreous surgery is available to remove this blood and other fibrous tissue and improve vision to a certain extent.

Q. Can the damage due to diabetic retinopathy be reversed?

The damage done due to diabetic retinopathy unfortunately cannot be reversed. We can only try to retain the existing vision rather than regain the vision which has been lost.

Q. Can laser surgery help patients with diabetic retinopathy?

Extensive clinical studies have been carried out in United States like Diabetic Retinopathy Study, Early Treatment of Diabetic Retinopathy Study and Diabetic Retinopathy Vitrectomy Study etc. All have proved beyond doubt that laser surgery is helpful in patients with diabetic retinopathy than no treatment.

Q. How safe is laser surgery? Is it an elaborate procedure? Will there be pain? Will it take a long time to heal?

Laser surgery is absolutely harmless. It is an outpatient procedure. It can be done by an eye specialist who is trained to do this procedure. It is painless. There are two types of laser surgery for diabetic retinopathy:

- i. Panretinal photocoagulation (PRP) is done for extensive neovascular lesions in the retina, which have potential for bleeding and loss of vision immediately.
- ii. A focal laser treatment to eliminate clinically significant macular oedema. For some people there may be some after effects such as decreasing vision in dim light, colour vision problems etc.,

Q.Is laser treatment affordable to the common man? Or are there other options?

There are no other options than laser treatment for these patients at present. Depending upon the severity of the condition, laser treatment may have to be given more than once. The treatment is affordable to the common man and is comparable to any common eye surgery.

Q.What are the precautions a patient must take after operation? What kind of vision can he be expected to have (that is, will he be able to see sharp images, will there be a difference in colour / brightness or depth perception)?

After laser surgery the vision will be blurred up to 24 hours. They may resume the work thereafter. If extensive laser work has been done, the patient will be advised to avoid physical strain for one week. The vision will return to the original level if there is no haemorrhage meanwhile. It is possible that some patients may experience a small reduction in vision, sharpness, colour perception but our aim is to prevent total loss of vision due to diabetic retinopathy in course of time.

Q.Can diabetic retinopathy be prevented?

Diabetic retinopathy can be prevented to some extent by taking care of the risk factors. Though diabetic retinopathy cannot be prevented, blindness due to diabetic retinopathy can be avoided by frequent eye examinations for evidence of diabetic retinopathy. Since it leads to loss of vision, without symptoms, every diabetic patient should be considered a potential candidate for losing vision. As soon as the patient is diagnosed to have diabetes an eye examination should be done annually. But if the diabetic retinopathy is detected the frequency should be increased to every 3-6 months. A dilated fundus examination

should be done by the ophthalmologist who is familiar with detection and management of diabetic retinopathy.

Q.What are some of the recent advancements in the field of treating diabetic retinopathy?

Visual loss in diabetic retinopathy is only due to following two factors:

- i. Bleeding from the new blood vessels – angiogenesis.
- ii. Swelling of the retina due to leakage from bleeding blood vessels.

Research work is going on to determine the pharmacological drugs to act in these mechanisms. Some of these drugs are called anti-angiogenic drugs and PKC Beta inhibitors. We hope that these will be effective and will be available in the early part of the year 2003.