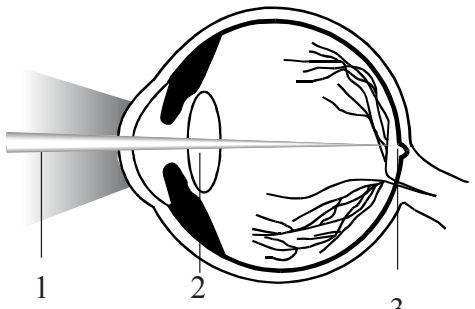

1. The laser is beamed into the eye
2. It passes through the transparent structures of the eye and continues on to the retina
3. It is stopped by the pigment layer of the retina, where it is converted into heat. The heat coagulates, or congeals the retinal layers

aid of the slit lamp and a special contact lens. Absorption by the diseased tissue either reduces the retinal thickening or stops bleeding. Additional treatment may be required depending on the patient's condition.

SIDE EFFECTS: Some patients may experience side effects after laser treatment. These are usually temporary. Possible side effects include watering eyes, mild headache, double vision, glare or blurred vision. In case of sudden pain or vision loss, the ophthalmologist must be contacted immediately.

Vitrectomy

In some patients, there may be bleeding into the vitreous or the vitreous may pull on the retina reducing vision severely. In such instances a surgical procedure called vitrectomy (replacing the vitreous by a clear artificial solution) is performed. Vitrectomy is done only after other forms of treatment have been tried.

REMEMBER:

Diabetic retinopathy is often symptomless until the last stage. Once symptoms show up, it is often too late to prevent loss of vision. Hence all diabetics must visit an ophthalmologist once a year to monitor the retina and watch for diabetic retinopathy. Once it is diagnosed, they may need frequent visits to check the progression of the disease with appropriate treatment.

<Your Hospital Address>

<your website address>

Diabetes and the Eye

<Your Hospital Name>

<Your Logo>

MAGNITUDE OF DIABETES AND DIABETIC EYE DISEASES IN INDIA

Increasing incidence of diabetes mellitus poses a major health problem in India. It was the 17th cause of blindness 20 years ago in India, but today it has ascended to the 6th position.

The contributing factors are:

- Heredity
- Inappropriate diet high in fat and carbohydrates
- Sedentary life-styles
- Obesity

Diabetes may affect both the young (type I) and the old (type II). The latter type is far more common.

Regardless of the type of diabetes, many diabetics develop a complication called diabetic retinopathy: a change in the retinal blood vessels that will lead to loss of vision.

DIABETIC RETINOPATHY: A SILENT PRESENCE

- The most common eye complication in diabetes is diabetic retinopathy; the other instances are cataract and glaucoma.
- Early detection and timely treatment of diabetic eye disease significantly reduces risk of vision loss.
- Diabetic retinopathy produces ocular symptoms when it is very advanced. Since only an ophthalmologist can detect early signs of diabetic retinopathy, all diabetics should have their eyes examined at least once a year.

HOW DOES DIABETES AFFECT THE EYE?

Diabetes produces weakening of the blood vessels in the body. The tiny delicate retinal blood vessels are particularly susceptible. This deterioration of retinal blood vessels, accompanied by structural changes in the retina is termed diabetic retinopathy which will lead to loss of vision.

Diabetic retinopathy is gradual in onset and this is related to the duration of diabetes. The development and progression of diabetic retinopathy is influenced by high blood glucose levels, high blood pressure and genetics.

There are two main stages of diabetic retinopathy:

Non Proliferative: When the blood vessels leak, macular edema may occur reducing vision.

Proliferative: When new weak blood vessels grow or proliferate, bleeding into vitreous may occur with severe visual loss.

Macular edema
This causes swelling and exudation in the fovea

Severe bleeding
New blood vessels rupture and bleed into the vitreous

EYE EXAMINATION IN DIABETIC RETINOPATHY

Every diabetic is at risk for developing diabetic retinopathy. There are no symptoms at the initial stages. Periodic eye examination with dilated pupils is the only way to detect diabetic retinopathy in early stage and prevent further deterioration of vision.

DIAGNOSIS

Diagnostic tools such as a slit lamp, ultra sound and procedures like fluorescein angiography are used in addition to an ophthalmoscope, to assess whether the patient has diabetic retinopathy or other eye problems.

Fluorescein Angiography

This is a magnified photography of the retina using an injectable dye. It helps to stage diabetic retinopathy, record changes in the retinal blood vessels, and to decide on the mode of treatment and evaluate the treatment.

TREATMENT

Lasers are widely used in treating diabetic retinopathy. It is an intense and highly energetic beam of light that can stop or slow down the progression of diabetic retinopathy and improve and stabilise vision.

The laser experience

Laser treatment is usually performed as an out-patient procedure. The patient is given topical anaesthesia to prevent any discomfort and is then positioned before a slit lamp. The ophthalmologist guides the laser beam precisely on the areas to be treated, with the