

Reducing the Possibility and Severity of Diabetic Retinopathy

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Diabetic retinopathy (DR) is the most common complication of DM and it is a potentially blinding disease. The best management of DR is by preventing or delaying its development and progression by control of risk factors. There are ten important risk factors; duration of DM, poor glycemic control, pregnancy, hypertension, nephropathy, hyperlipidemia, smoking, cataract surgery, obesity and anemia.

Duration is more important in type 1 DM, diabetics younger than 30 years, prepubertal and proliferative diabetic retinopathy (PDR). Every diabetic patient older than 12 years should be screened for DR.

Early tight and gradual blood glucose control can prevent or delay DR development and progression by keeping HbA1c below 6.05%.

Pregnancy sometimes leads to rapid DR progression. A diabetic pregnant should be screened at onset of pregnancy or even before and reviewed every 1 - 3 months.

Hypertension is very common in type 2 DM. Blood pressure should be below 140/80 mmHg.

Severe nephropathy is associated with progression of DR. Treatment of nephropathy lead to improvement of DR and better response to laser treatment.

Hyperlipidemia is associated with severe hard exudation. Progression to PDR was shown to be related to serum triglyceride and LDL.

 $Smoking \ even \ passive \ increases \ the \ risk \ of \ DR \ progression. \ Each \ cigarette \ smoked \ per \ day \ increases \ the \ risk \ of \ progression \ of \ DR \ by \ 15\%.$

DR progresses more rapidly after cataract surgery. Even phacoemulsification cataract surgery doubles the progression rate of DR in the 12 months after surgery.

Obesity is an important risk factor, higher body mass index (BMI) and larger neck circumference increase the risk of DR progression. Normal BMI is 18.5 - 24.9. Neck circumference Is measured just below Adam's apple. Normal neck circumference is up to 35 cm in males and 32 cm in females.

10% of diabetic patients could be anemic. Anemia is a risk factor of PDR progression.

Hb should be more than 12 gm% [1-5].

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