



Medical treatment of diabetic retinopathy

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Diabetic retinopathy remains one of the leading causes of blindness in people of working age, and sight threatening retinopathy still occurs in more than 40% of type 1 and 20% of type 2 patients after 20 years of diabetes.

The current treatment of retinopathy is good metabolic control, antihypertensive therapy, and laser treatment. However, laser treatment is destructive, and does not restore normal circulation, and good metabolic and blood pressure control are difficult to achieve in clinical practice. Therefore, there is a need for additional therapeutic options.

A number of growth factors have been shown to be upregulated locally in the eye in diabetes, and these growth factors mediate angiogenesis with risk of proliferative retinopathy, and increased permeability of retinal vessels with risk of macular edema. Experimental and clinical trials influencing in particular Vascular Endothelial Growth Factor (VEGF) and Insulin-like Growth Factor (IGF-1) will be addressed.

The therapies under investigation include blockers of the Renin-Angiotensin-System, Protein-Kinase C beta inhibitors, glitazones, somatostatin analogues and lipid-lowering agents.

The status of ongoing, large international clinical trials will be presented.