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New biomarkers for predicting diabetic retinopathy

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Diabetic retinopathy (DR) is one of the late complications of diabetes and usually it affects people who have had diabetes for considerably longer duration. Research from the Madras Diabetes Research Foundation (MDRF), India has now demonstrated that young onset type 2 diabetes patients possess an increased risk of developing diabetic retinopathy at an earlier stage and at a greater frequency accompanied by the elevated levels of certain biomarkers such as monocyte chemotactic protein 1 (MCP-1) and cathepsin-D.

Diabetes can lead to a wide variety of health complications, including heart disease, nerve damage, stroke, kidney disease, and vision loss. Diabetes is a risk factor for developing glaucoma, as well as for developing cataracts, but the most common and debilitating vision problem experienced by diabetics is diabetic retinopathy.

It appears that higher levels of MCP-1 and cathepsin-D in young onset type 2 diabetes patients represent an accelerated aging phenotype -- a driving force for faster development of diabetic retinopathy. It is expected that targeting the pathways related to these biomarkers could be a future strategy for preventing the heightened risk of developing diabetic retinopathy in young-onset diabetic patients