MODULE 8.4
Summary

Diabetic retinopathy (DR) is a sight-threatening complication of diabetes mellitus that affects millions of people worldwide. The disease is subdivided into nonproliferative (NPDR) and proliferative (PDR) forms.[1] Increasing severity of NPDR is associated with increased risks of progression to the proliferative form of the disease. PDR can be a serious condition requiring urgent treatment if certain high-risk characteristics, such as vitreous hemorrhage, are present. Patients with DR can experience sudden visual loss due to vitreous hemorrhage and other complications.

A high proportion of vision loss from DR is due to diabetic macular edema (DME), a complication of DR characterized by thickening of the macula.[2,3] DME severity is typically graded according to the degree and extent of retinal thickening and the presence of hard exudates.[4] DME is often further classified as focal or diffuse, but these definitions are the subject of considerable debate. These definitions are generally based on findings for examination techniques such as fundus biomicroscopy and color fundus photography.

The Early Treatment Diabetic Retinopathy Study (ETDRS) defined the criteria for clinically significant macular edema (CSME).[5] These criteria are based on the degree and location of retinal thickening and hard exudates. The SAVE grading protocol for CSME can aid clinicians in the categorizing the disease and designing effective treatment strategies to minimize the risk of vision loss.

Three phenotypes of DR progression (A, B, and C), based on retinal thickness and the rates of microaneurysm turnover, have been identified.[6,7] These phenotypes are associated with varying risks of disease progression. For instance, patients with phenotype C experience the fastest rate of progression and are at the highest risk of developing sight-threatening complications.

The prevalence of DR and DME underscore the need for vigilance in assessing patients suspected of or following up those who are diagnosed with these conditions. Several classification schemes have been proposed in an attempt to standardize assessments and facilitate the design of treatment strategies. The optimal utilization of the current diagnostic tools should help to minimize the risk of sight-threatening complications for patients with DR and DME.

References

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