Track structural changes in early disease and functional loss at the end of the disease

The Science behind the Tip

Patients with primary open-angle glaucoma can go blind if they already have advanced field loss before they are diagnosed. Detection of early disease and early progression thus is a key thing to successful glaucoma management. In early disease, structural changes can occur well before functional loss as evidenced by current automated perimetry\(^1-3\). One should thus track tissue loss in the retinal nerve fiber layer or optic disc, and search for disc hemorrhages that can precede such loss\(^4\). Initiation of treatment can be considered in glaucoma suspects if tissue loss becomes evident even when field loss cannot yet be documented. If further tissue loss is observed in a treated patient, adjustment of therapy is warranted.

At the end of the disease however, it is mainly the functional remaining we look at. Tissue loss becomes difficult to monitor when the optic disc approaches a state of absolute cupping\(^5\), and disc hemorrhages have not been documented in fully cupped discs. In this stage, strategies testing 10° of the visual field are often more efficient and less tiring for the patient than the ones testing 24° or 30°.

References


