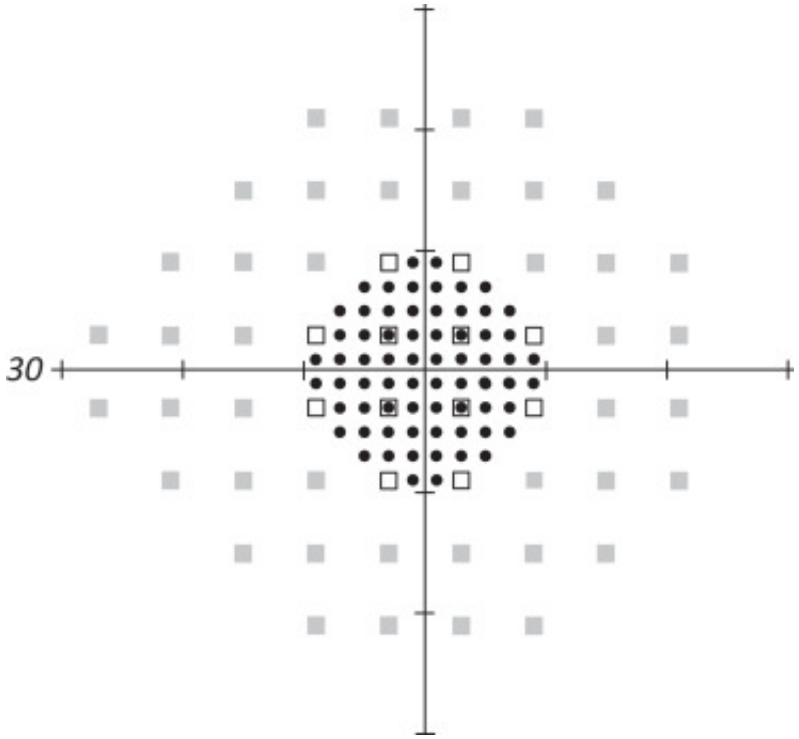
Central Visual Field Testing in Early Glaucoma



Purpose

To evaluate the current published literature on the utility of the 10-2 visual field (VF) testing strategy for the evaluation and management of early glaucoma, defined here as mean deviation (MD) better than –6 decibels (dB).

Methods

A search of the peer-reviewed literature was last conducted in June 2023 in the PubMed database. Abstracts of 986 articles were examined to exclude reviews and non-English–language articles. After inclusion and exclusion criteria were applied, 26 articles were selected, and the panel methodologist rated them

for strength of evidence. Thirteen articles were rated level I, and 8 articles were rated level II. The 5 level III articles were excluded. Data from the 21 included articles were abstracted and reviewed.

Results

The central 12 locations on the 24-2 VF test grid lie within the central 10 degrees covered by the 10-2 VF test. In early glaucoma, defects detected within the central 10 degrees generally agree between the 2 tests. Defects within the central 10 degrees of the 24-2 VF test can predict defects on the 10-2 VF test, although the 24-2 may miss defects detected on the 10-2 VF test. In addition, results from the 10-2 VF test show better association with findings from OCT scans of the macular ganglion cell complex. Modifications of the 24-2 test that include extra test locations within the central 10 degrees improve detection of central defects found on 10-2 VF testing.

Conclusions

Evidence to date does not support routine testing using 10-2 VF for patients with early glaucoma. However, early 10-2 VF testing may provide sufficient additional information for some patients, particularly those with a repeatable defect within the central 12 locations of the standard 24-2 VF test or who have inner retinal layer thinning on OCT scans of the macula.

Financial Disclosure(s)

Proprietary or commercial disclosure may be found in the Footnotes and Disclosures at the end of this article.