CORRESPONDENCE

Visual limitations assessment in patients with glaucoma

EDITOR,—It is well known that patients with glaucoma experience defects in their field of vision. It is generally assumed that these defects interfere with the affected individual’s visual function.

This study explored the relation between visual field loss and the perception of visual disabilities in patients with glaucoma. A questionnaire designed to identify vision associated limitations in daily activities (VALDA, Table 1) was applied to 231 patients with glaucoma who had reliable computerised visual field examination with the Humphrey 24–2 program.1,2 Visual field loss was quantitatively evaluated (“mean deviation” (MD) and “pattern standard deviation” (PSD)). The relation between the presence of VALDA and visual field defects, visual acuity, and age was investigated.

There were 91 (39.4%) males and 140 (60.6%) females. The ages ranged from 13–90 years, with a mean age of 68.5 (SD 12.6) years. Most patients were white (n=213, 92.2%) and 18 (7.7%) were black. The mean duration since the diagnosis of glaucoma was 8.7 (SD 8.1) years (range 1–40). Ninety eight subjects (42%) reported a subjective perception of vision associated limitations in daily activities. Among the limitations mentioned by the patients, problems with night driving ranked first (97%) followed by difficulties reading newspapers (33%), and driving at any time (27%); limitations doing outdoor activities were present in 10%. The perception of VALDA was related to visual acuity and was significantly greater in older patients.

We analysed in patients with visual acuity better than or equal to 20/40 in both eyes (127 patients) the relation between the visual field damage and the VALDA score (Table 2). The perception of VALDA was related to the MD loss in both eyes, but not to the PSD.

COMMENT

Monocular visual field examinations are frequently used clinically in monitoring glaucoma, but, from a functional viewpoint, visual field defects, visual acuity, and age were investigated.

In this study, we found that the perception of limitation in daily activities is closely related to a general loss of visual field (MD loss) in both eyes. Although visual acuity played an important role in vision and the VALDA score (Table 2), visual field defects were correlated with higher rates of visual acuity in both eyes. Although visual acuity played an important role in vision and the VALDA score (Table 2), visual field defects were correlated with higher rates of visual acuity in both eyes.

In conclusion, a questionnaire regarding vision associated limitations in daily activities provides information about patients’ well-being. Visual limitations, as measured in this study, are related to the total amount of visual field loss. Some patients with visual field loss do not have any limitation in visual function.

DA-WEN LU
Glucoma Service, Wills Eye Hospital, Jefferson Medical College, Philadelphia, Pennsylvania, USA and Tri-Service General Hospital, Taipei, Taiwan

AUGUSTO AZUARA-BLANCO
GEORGE I SPAETH
SUBERIKA COLLUR
MATTHEW A SPEICHER
SILVANA ARAUJO
Glucoma Service, Wills Eye Hospital, Jefferson Medical College, Philadelphia, Pennsylvania, USA

Table 2 Relation between amount of visual field loss in both eyes and perception of VALDA in patients with visual acuity better than or equal to 20/40 in both eyes

<table>
<thead>
<tr>
<th>Visual field*</th>
<th>No of patients</th>
<th>% of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (N, N)</td>
<td>37</td>
<td>2.7%</td>
</tr>
<tr>
<td>(+, +)</td>
<td>26</td>
<td>23.0%</td>
</tr>
<tr>
<td>(++, +)</td>
<td>5</td>
<td>25.0%</td>
</tr>
<tr>
<td>(+++, +)</td>
<td>23</td>
<td>39.1%</td>
</tr>
<tr>
<td>(+++, ++)</td>
<td>7</td>
<td>50.0%</td>
</tr>
<tr>
<td>(+++, +++)</td>
<td>11</td>
<td>83.6%</td>
</tr>
<tr>
<td>(+++, ++++)</td>
<td>6</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Visual field loss was separated into four groups by mean deviation (MD); (1) N = normal (MD = <2.6 dB); (2) + = 2.6 dB<MD = <9.5 dB; (3) ++ = 9.5 dB<MD = <18.5 dB; and (4) +++ = MD >18.5 dB.


In the preface of this book, the aim of promoting the safe use of contact lenses is stated. The text complements this by reasoned use of the scientific literature, and addresses the philosophical considerations of corneal physiology. The book provides an introductory chapter on corneal topography. Each chapter is concise, clearly set out, and well illustrated and there is reference to and presentation of experimental evidence for the information provided. It provides an excellent introduction to the second section. Section II concentrates on the development of the concept of disposable contact lens. The opening pages are long, but very readable as it traces the evolution of the contact lens, from original glass to modern materials, and manufacturing methods with some perspective on the current decisions. There is a summary appendix defining the miles for the reader who may not wish to wade through the whole chapter.

The chapter begins with the historical perspective of contact lens design, patient preferences, and complications. In an

BOOK REVIEW


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Primary Eye Care
The latest issue of the Community Eye Health (no 26) discusses the importance of primary eye care, particularly in the developing world. For further information please contact Community Eye Health, International Centre for Eye Health, Institute of Ophthalmology, 11–43 Bath Street, London EC1V 9EL. (Tel: (+44) 171 608 6910; fax: (+44) 171 250 3207; email: eyeresource@ucl.ac.uk) Annual subscription £25. Free to workers in developing countries.

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