Outer retinal tubulation analysis in cases of macular dystrophy

Análisis de la tubulización de la retina externa en las distrofias maculares

Dear Sir,

Macular dystrophies are a heterogeneous group of diseases characterized either by retina pigment epithelium (RPE) atrophy or by the deposit of substances –mainly lipofuscin above or below the RPE. Outer retinal tubulation (ORT) was described recently in tomographic images as pseudo-cystic spaces surrounded by a hyper-reflective wall located in the outer retinal layers.  

We have analyzed the prevalence and characteristics of ORT in spectral domain optic coherence tomography (SD-OCT) by means of a retrospective review of 61 eyes of 32 patients diagnosed with macular dystrophy. The SD-OCT images were assessed in order to determine the presence and location of ORT, the integrity of the external limiting membrane (ELM), the joint of the internal and external photoreceptor segments (IS/OS) and the apex of the photoreceptor external segments (COST). The patients included in the study (12 males and 20 females) were diagnosed with adult vitelliform foveomacular dystrophy (19 eyes of 10 patients), Stargardt disease (14 eyes of 7 patients), pattern dystrophy (12 eyes of 7 patients), retinoschisis linked to chromosome X (8 eyes of 4 patients) and cone dystrophy (8 eyes of 4 patients).

ORT was evidenced in 13 eyes (21.3%). When considering only cases with external retina disruption, ORT was found in 12 eyes (22.9%).

Fig. 1 – (A) Color retinography of a 56-year-old patient with Stargardt disease, exhibiting significant macular atrophy area with fleck-type lesions around it. (B) The lesions are more evident in the autofluorescence image. (C) OCT exhibits central RPE and external retinal layer atrophy up to the external limiting membrane, producing window effect with secondary increase of choroidal reflectiveness (black arrows). At the edge of the atrophy a rounded lesion appears with a hyper-reflective wall corresponding to the ORT (white arrow).

50% of cases with ELM disruption, and 34.2% of cases with disruption in IS/OS, and 24.5% of cases with atrophic changes in the external retina (Stargardt disease, retinoschisis linked to chromosome X and cone dystrophy) (Fig. 1). ORT was not observed in dystrophies characterized by lipofuscin deposits.

ORT appears to be a frequent finding in SD-OCT of macula dystrophies with atrophic changes in the cytoarchitecture of the external retina and could constitute a late event in retinal degeneration, closely associated to ELM disruption. New studies with a higher number of patients must be carried out to assess the usefulness of this finding in the follow-up and prognostic evaluation of these patients as well as for its possible use in monitoring the neuroprotective effect of new therapies in development.

REFERENCES


Use of quality of life questionnaires for the evaluation of patients subjected to cataract surgery

Uso de cuestionarios de calidad de vida para la evaluación de pacientes sometidos a cirugía de catarata

Dear Sir,

In the past decades the use of quality of life questionnaires as instruments based on patient reporting has increased. However, said questionnaires have been utilized mainly in research while their application in ophthalmological medical practice is largely ignored.

Conventionally, post-surgery evaluations include visual acuity, biomicroscopy findings and the presence of new symptoms. Quality of life questionnaires provide an additional tool to obtain an evaluation including the patient point of view as regards functional condition of the eyesight and satisfaction. In order to obtain a comprehensive assessment of a patient, the latter aspect is important and should be taken into account. On the other hand, it is also important to take into account the costs and time involved in the execution of said questionnaires. Even so, it is the best way to assess the therapeutic response and avoid discrepancies that could arise between visual acuity measurement and the patients visual impairment.

The benefit of the above-mentioned instruments depends on their correct application. In order to choose the most appropriate questionnaires, it is important to know that some instruments make a better evaluation of the quality of life

Table 1 – Main characteristics of 4 instruments for measuring quality of life in ophthalmology

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Original language</th>
<th>Number of questions</th>
<th>Validation into Spanish</th>
<th>Cronbach</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVS</td>
<td>English</td>
<td>22</td>
<td>No</td>
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<tr>
<td>Cataract type specification questionnaire</td>
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<tr>
<td>NEI VFQ 25</td>
<td>English</td>
<td>25</td>
<td>Yes</td>
<td>α ≥ 0.86</td>
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