Defining Cataracts

French study highlights need to integrate quality of vision in cataract assessment

by Dermot McGrath in Paris

As technologies evolve and national health systems become increasingly conscious of the need to reduce costs, there is perhaps a real rationale in redefining the current definition of cataract to enable greater account to be taken of quality of vision in its definition and diagnosis, according to Beatrice Cochener MD, PhD.

"It is time to look again at how we define cataracts in the French context. The current definition dates back to the conference of consensus in 1989 and stipulates that a loss in visual acuity to below 5/10 is the key parameter to determine whether the cataract operation will be reimbursed by the French social security system," Prof Cochener told delegates attending the annual meeting of the French Implant and Refractive Surgery Association (SAFIR).

As Prof Cochener pointed out, the present definition of cataract, despite having been adjusted in 2012 to embrace the idea of "an alteration in the crystalline lens of the eye" rather than simply an "opacity", is not sufficiently precise in this era of premium IOLs and clear lens extraction.

"We know now that the loss in visual acuity is the last stage of the process and that the impact on the patient's qualitative vision is detected or felt earlier, but this has not been measured until now," she added.

Prof Cochener, professor of ophthalmology at the University of Brest, France, said that technologies are available to provide better objective measures of a patient's visual disability due to cataract. These kind of quantifiable values – from light scatter measurements for instance in addition to questionnaire of life – may in future be needed to satisfy government or private insurance requirements for cataract procedures. "A reworked definition would potentially benefit all of the stakeholders. For the patient, it would take account for the first time of complaints concerning their quality of vision. For the surgeon, it would help to define the real limits between cataract and clear lens extraction, and for the social security system, it could potentially change the current reimbursement rules," she said.

To determine the feasibility of integrating more objective quality of vision parameters into the current definition of cataract, Prof Cochener said that SAFIR had commissioned a multicentre study with the support of the French health authority HAS (Haute Autorité de Santé).

The prospective study included 10 centres that at that day collected data concerning 1,179 patients who were candidates for cataract surgery (first eye). All patients underwent visual acuity, ophthalmoscope and OCT examinations. Cataracts were graded according to the lens opacities classification system III (LOCs III), and all patients received the VF-14 vision and quality of life questionnaires.

In addition, 536 eyes underwent optical scatter index (OSI) measurements using the Optical Quality Analysis System (OQAS, Visiometrics) and evaluation of the ocular surface. The average patient age was 72.6 years with a range from 28 to 93 years and a mean preoperative visual acuity of 0.47 D. The average patient score on the VF-14 chart was 73.90. Almost 67 per cent scored less than 84 on the scale, said Prof Cochener, indicating the presence of pathologic cataract. The results were further analysed using Spearman's rank correlation method and the Shapiro-Wilk test to examine correlations between visual acuity, patient age, VF-14 outcomes, LOCs III classification and OQAS measurements results.

A correlation was found between visual acuity results and patient age, confirming that cataract is an age-related disease. Similarly, OSI scores were correlated with patient age and with visual acuity, said Prof Cochener. While a correlation was found between VF-14 ratings and visual acuity and also between VF-14 results and OSI scores, no correlation was found between VF-14 score and patient age.

Summarising the results, Prof Cochener said that while there was clearly a need to integrate some form of objective measurement of quality of vision into the current definition of cataract, further research was required in order to present some clear-cut conclusions.

"In the 10 months of the study we obtained a wide variety of results but no correlations that were strong enough to warrant changing the definition for the moment. Hence, we need to continue the study with a wider series of patients and incorporating more OQAS devices to try to establish stronger statistical evidence," she said.