

Foreword

The innovation of no other diagnostic technique in the field of ophthalmology has had a greater impact on the management of patients than optical coherence tomography (OCT). Clinical activities, diagnostic guidelines, and multicenter trial protocols have been substantially modified by the introduction of OCT in the last 20 years.

The reasons for this success lie in the numerous advantages granted by the use of OCT compared with the other older techniques: simplicity, quickness of execution, noninvasiveness, reliability, repeatability and quantification of measures, and results which are easy to read and understand are only a few of these advantages; these explain well the planetary success obtained in only a few years.

More recently, OCT has also been useful to allow a different interpretation of some retinal diseases, and in the future the contribution of OCT images to the knowledge of pathogenic mechanisms involved in many retinal diseases will certainly be useful.

For some time after its introduction, OCT had only been used in highly specialized centers, but after a while it started to be offered in any outpatient service; the only limitation for its wider distribution was the relatively high costs. Recently, thanks to the availability of several machines on the market, the costs have been reduced, and the

number of available instruments is continuing to increase.

Another important factor which contributed to the great success of OCT was the introduction of the intravitreal approach to the therapy of many retinal diseases. OCT is in fact able to detect a very small amount of fluid inside or under the retina, and this helps a lot when deciding whether intravitreal injections are needed or not. The combination of a new diagnostic tool with a new therapy is comparable to what happened in the 1970s and 1980s when fluorescein angiography and laser photocoagulation were introduced into the clinical practice. Also, at that time the interpretation and the therapies of many retinal diseases improved a lot, and for many patients the prognosis changed significantly.

This new volume in the *ESASO Course Series* is published thanks to the enthusiasm of Professor Gabriel Coscas and Professor Anat Lowenstein who recently chaired an ESASO Course on new developments in the use of OCT and who were able to collect the contributions from all the speakers in a very short period of time.

I hope that you will enjoy reading these contributions as much as they enjoyed working on the project.

Francesco Bandello, Milan

Preface

Optical coherence tomography (OCT) is a noninvasive, patient-friendly imaging modality for eye structures. Thanks to recent advances in the technology with its ensuing increasing specificity and sensitivity, OCT has become the modality of choice in visualizing retinal pathologies as well as response to treatment.

The role of OCT has been dramatically enlarging in the last decade, suffice would be to say that it has revolutionized the way we screen, manage and monitor the treatment of retinal disease.

The ESASO intensive course in OCT is a must for any ophthalmologist as well as ophthalmologist in training. After a swift tour of the equipment available and basic techniques, the participants will learn the imaging features of pathological findings in retinal diseases starting with the outer layers including new modalities for choroid

imaging, out-layer disease such as various types of macular degeneration, retinal disease such as diabetic retinopathy and vascular occlusion, and retina-vitreous interface pathologies.

Special lectures are dedicated to teaching the practicality of using OCT in pre- and postsurgical evaluation of the posterior segment, in the differential diagnosis of vitreoretinal diseases and in the management of patients with retinal and neuro-ophthalmological diseases.

Pre- and post-treatment cases are presented in a didactical manner. This is followed by a special case presentation elaborating on diagnosis and management.

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