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Amico Yasna Pars

Ophthalmology Newsletter

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In Loving Memory of Hamed Amiri

For a second you were flying
Like you always wanted to
Now you'll fly forever
In skies of azure blue
We'll see your smile in every ray
Of sunshine after rain
And hear the echo of your laughter
Over all the pain
The world's a little quieter now
The colors have lost their hue
The birds are singing softly
And our hearts are missing you
Each time we see a little cloud
Or a rainbow soaring high
We'll think of you and gently
Wipe a tear from our eye



With profound sorrow we would like to announce, the untimely demise of one of the greatest members of Amico Yasna Pars family, **Engineer Hamed Amiri**. Hamed was a gift to our family that unfortunately passed away in the terrible Tehran-Yasuj plane crash in the line of duty. Each of us not only grieves at the passing of a tremendous individual but also for the loss his family suffers.

We will all miss a great human being. His golden memories will stay in our hearts forever. Eternal rest grants unto him and let perpetual light shine upon him. May he rest in peace.

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Discussion



SETTING PATIENT EXPECTATIONS

By Sumit (Sam) Garg, MD

Setting patient expectations is key to succeeding with any premium lens and, despite its stable optics, the TECNIS Symphony® IOL is no exception. You still need to talk about expectations. It is our job to make sure that the patient understands that no lens is perfect. In my clinic, I tell patients that we currently have a lot of very good lenses to choose from. Then, I explain that the one we ultimately select will be the one that is best for them and their individual needs.

There are several dos and don'ts that move the needle of understanding for patients. The patient expectation conversation is a little different with extended depth of focus lenses versus the conversation you might have with a patient who is receiving a multifocal lens.

OUTLINE THE OPTIONS

Take the time to discuss different lens options with your patients. You don't necessarily need to go over every available lens in depth, but explain the differences of the options that might reasonably suit a patient's

WHAT NOT TO DO

Avoid these pitfalls when discussing extended depth of focus lenses:

- Don't rush through your discussion without explaining how the TECNIS Symphony® IOL works. When patients understand how the technology works, they are likely to be more accepting of minor imperfections in vision.
- No matter how excited you are about this new technology, don't let it spill over too much into your discussion with the patient. You should never overhype the TECNIS Symphony® IOL— or any other lens for that matter.
- Never say, "trust me you'll be fine." Patients appreciate understanding how the technology works and why.
- No matter what IOL you are talking about, never say, "this is a perfect lens."

- Sumit (Sam) Garg, MD

Sumit Garg is the Vice Chair of Clinical Ophthalmology, Medical Director, and an Associate Professor in Cataract, Refractive, External Disease and Corneal Surgery at the Gavin Herbert Eye Institute at the University of California, Irvine.

1. TECNIS Symphony® IOL DFU

2. Cochener B, et al. Clinical outcomes of a new extended range of vision intraocular lens: International Multicenter Concerto Study. J Cataract Refract Surg. 2016;42:1268-75.

individual needs.

When appropriate, offer the patient a comparison of the differences in visual performance with a multifocal lens versus the visual performance with an extended depth of focus lens. When doing this, it's helpful to emphasize that vision simulators/applications are very helpful. If a patient is willing to use glasses for near vision on occasion in exchange for high-quality vision across all distances, he or she may be a good candidate for the TECNIS Symphony® IOL.

GETTING REAL WITH SYMPHONY®

With the introduction of the TECNIS Symphony® IOL for presbyopia mitigation, we can predictably achieve very good outcomes. However, we should never offer perfection or use any terminology that might make patients expect it.

When you talk to a patient about the TECNIS Symphony® IOL, it's helpful to emphasize that your goal is to achieve quality of vision. This means they may continue to need reading glasses on occasion, but in return they will likely have a greater range of vision. Make sure the patient is clear that this is the trade-off. They must be willing to accept it. Although many patients will wear glasses less often,¹ don't lead patients down the road where that's what they're promised to get.

Even though the TECNIS Symphony® IOL is not a multifocal, you may get some starbursts in the beginning, so make sure patients anticipate this. When they do, most patients will be very accepting of it.

Use real life examples to explain what extended depth of focus means. The ability to provide continuous vision for distance through intermediate into near with TECNIS Symphony® IOL² means the patient should be able to drive a car, work at their computer and surf the web on a handheld device. These concrete examples address functional concerns that are important to many of our active cataract patients.

MAKE THE MESSAGE STICK

However technical your discussion becomes, always return to the basic point, which is that the goal of the TECNIS Symphony® IOL is to increase range of vision while maintaining good visual quality.

Patients will forget what you told them preoperatively, so I often direct them to the Vision Simulator. I also explain that cataract surgery is not an acute event. It is a process.

TORIC IOLs

Surgeons discuss the features of available lenses.

Tecnis Toric IOL

BY DANIEL H. CHANG, MD



Since its FDA approval in 2013, I have found the Tecnis Toric IOL (model ZCTXXX; Abbott Medical Optics [AMO]) to be an exceptional lens for helping patients who desire correction of their astigmatism at the time of cataract surgery (see Table). Built on the basic platform of the Tecnis 1-piece IOL (AMO), the toric lens has all of the advantages inherent in the platform with the addition of excellent astigmatic correction.

OPTICS

In terms of optics, the Tecnis Toric IOL (Figure) is made of a midindex acrylic material (refractive index of 1.47) that has the highest published Abbe Number (55) of any foldable IOL and thus the lowest chromatic aberration of any toric IOL available in the United States.^{1,2} The implant provides -0.27 μ m of spherical aberration, which fully corrects the average cornea, producing a sharper quality of vision and contrast sensitivity than spherical lenses.³ In my experience, the lens combines effective chromatic aberration properties with the correction of spherical aberration to offer excellent functional vision and vision in dim light.

Another advantage of sharing the same platform as the Tecnis 1-piece family of IOLs is that the toric model uses the same Unfolder Platinum 1 Series implantation system (AMO), which I have found to provide consistent injection and unfolding. In my hands, rotating and positioning the lens is easy and precise, with fine adjustments in both the clockwise and counterclockwise directions possible. Once the lens is in place, the posterior vaulting of the optic relative to the haptics has some forgiveness with respect to the anterior capsulotomy's size, shape, and position, and it also helps to maximize contact of the optic with the posterior



Figure. Tecnis Toric IOL.

capsule to prevent the entrapment of viscoelastic and augment stability.

EXCELLENT OUTCOMES

In my experience, these design features contribute to excellent visual and refractive outcomes as well as superb rotational stability. The Tecnis Toric IOL easily meets the American National Standards Institute's Z80.30-2010 standards for toric IOL rotational stability. In the FDA premarket approval study, between 1 and 3 months, 93% of eyes showed less than 5° of rotation, and between 3 and 6 months, 94% of eyes demonstrated less than 5° of rotation. The average rotation between baseline and 6 months was 2.74°. Of the nearly 200 Tecnis Toric IOLs that I have implanted to date, I have only had to return to the OR to rotate one.

CONCLUSION

Superb optics and excellent rotational stability translate into great outcomes. In the FDA premarket approval study, 94% of patients implanted with the ZCT150 lens achieved less than or equal to 1.00 D of residual astigmatism, and 72% of patients achieved less than or equal to 0.50 D of residual astigmatism. This meant that 89% of patients with the Tecnis Toric ZCT150 achieved 20/32 or better distance UCVA.

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Discussion

Ultra-widefield fundus fluorescein angiography in the diagnosis and management of retinal vasculitis

NP Jones^{1,2}, A Sala-Puigdollers^{1,3}
and PE Stanga^{1,2,3}

Abstract

Purpose To quantify the additional information provided by ultra-widefield fluorescein angiography, compared with 7-field standard imaging, in patients with retinal vasculitis (RV).

Patients and methods Retrospective case series of 106 patients.

Results Retinal vascular pathology was identified by UWF FFA, but not by standard ETDRS 7-field area, in 62 patients (58.5%) and in 79 eyes (43.4%). The pathology included active RV (47 eyes, 25.8% of eyes); retinal ischaemia, or infarction (53 eyes, 29.1%); and retinal neovascularization (7 eyes, 3.8%). A change to management was made in 36 patients (34%). Of these, 21 (20% of all patients undergoing angiography) were made after the identification of retinal vascular pathology, which was found only on UWF FFA, outside the ETDRS area.

Conclusion Ultra-widefield fluorescein angiography has clear advantages over standard multi-field imaging. It is currently the standard method of assessment for RV in this centre.

Eye (2017) 31, 1546–1549; doi:10.1038/eye.2017.93; published online 2 June 2017

Introduction

Retinal vasculitis (RV) is uncommon, but may be the primary focus of intraocular inflammation. A recent study from the Manchester Uveitis Clinic (MUC) found that in 4.5% of patients with intraocular inflammation, RV was the predominant feature.¹ Occlusive disease in particular is sight-threatening and RV may require aggressive management including antimicrobial treatment for infective inflammation, or immunosuppression for non-infective disease. The ability to diagnose important manifestations of

RV, including vascular wall staining, extravascular leakage, retinal ischaemia or infarction, and retinal neovascularization, is important in decision-making.

Standard multiple 30° fundus fluorescein angiography (FFA) images (the mainstay of RV imaging for 4 decades) even if performed diligently in logical order, requires a high degree of mental manipulation by the observer to recreate a fundal picture of disease, and sequential and ‘round the clock’ narrow-field imaging to capture all clock hours of the fundus implies that no fields are simultaneous due to the time lapse between images. In addition, direct clinical observation in patients with uveitis is may be challenging because of media opacity or compromised pupils.

The introduction of widefield imaging using the Staurengi contact and non-contact lenses in conjunction with the Heidelberg Engineering SPECTRALIS system (Heidelberg Engineering GmbH, Robert-Koch-Straße 1, 69115 Heidelberg, Germany)² and the Optos Ultra Wide-Field (UWF) (Optomap, Dunfirmline, UK)³ has facilitated the process of photography but most importantly that of image analysis and interpretation.

UWF FFA imaging technologies have removed some of these limitations, especially by allowing, for the first time, simultaneous and high-contrast angiographic images of all 360 degrees of the mid and peripheral retina. The use of UWF imaging confers the advantage of rapid pattern recognition, with potential resultant earlier diagnosis and prediction of disease progression. The confocal nature of Optos technology also permits the user to bypass some of the interference induced by cataract or vitreous opacities, and to image through small pupils, these being common components of uveitis.

Discussion

Optos imaging technology involves the use of a scanning laser ophthalmoscope of two wavelengths (green 532 nm and red 633 nm) in combination with a large concave elliptical mirror, obtaining a retinal image field of 180–200° (~82% of the retina) and high-resolution images (up to 2000 by 2000 pixels) within 0.25 s. This study aims firstly to quantify the additional information provided by Optos UWF angiography in patients with RV in comparison with standard 30° imaging, and secondly to quantify effects on patient management.

Subjects and methods

MUC maintains a prospectively filled database of all new patients attending, containing information on diagnosis. All patients with RV as the predominant manifestation of intraocular inflammation, were identified and the images of those who had undergone UWF FFA using the Optos 200Tx system were analysed. Criteria noted included active RV (retinal vessel wall staining with fluorescein leakage), vascular occlusion with retinal ischaemia or infarction, and retinal neovascularization. The images onscreen were overlaid with a scaled standard 7 × 30° field ETDRS pattern, as shown in Figure 1 to obtain a comparison between these methods. Retinal vascular pathology was recorded by one of us (NPJ) as being present either within the comparative ETDRS area, or only outside it. The sensitivity for manifestations of RV was compared between simulated ETDRS and UWF FFA. Subsequent management decisions were noted, and the impact of UWF FFA on those decisions was analysed.

Results

There were 148 patients on the MUC database exhibiting RV as a predominant feature of their intraocular

inflammation. Of these, 106 had undergone UWF FFA between February 2011 and June 2015. Bilateral RV was seen in 79 (74.5%) of patients and unilateral in 27 (total 185 affected eyes). The underlying diagnoses are shown in Table 1; primary (idiopathic) RV was the most common (38 patients, 35.8%), followed by sarcoidosis-associated (19, 17.9%) and Behçet's disease (17, 16%). Of the 27 patients with unilateral RV, the left eye was affected in 16 and the right in 11. This difference is not significant.

Medical or laser treatment had already been administered to 53 patients before their UWF FFA; of these, 46 patients (82 affected eyes) had received oral steroid and/or immunosuppression, and 18 patients (32 eyes) had undergone argon laser ablation to areas of retinal ischaemia.

All 106 patients (182 affected eyes) underwent UWF FFA. Examining the whole area of the UWF images, active RV was found in 133 eyes (73.1%). Retinal vascular pathology was identified by UWF FFA, but not by standard ETDRS 7-field area, in 62 patients (58.5%) and in 79 eyes (43.4%). The pathology included active RV (47 eyes, 25.8% of eyes, Figure 2); retinal ischaemia or infarction (53 eyes, 29.1%, Figure 3); and retinal neovascularization (7 eyes, 3.8%, Figure 4).

Following UWF FFA, a decision to change management was made in 36 patients (34%). In 11 cases, laser was applied to ischaemic retina; in 14 cases, immunosuppression was either commenced or increased in dosage (7 azathioprine, 5 mycophenolate, and 2 ciclosporin); in 3, anti-tuberculosis treatment was commenced, and in 8, oral steroid was commenced or increased in dosage. Of these 36 management decisions, 21 (20% of all patients undergoing angiography) were made after the identification of retinal vascular pathology, which was found only on UWF FFA, outside the ETDRS area.



Figure 1 A standard ETDRS 7-field scaled grid superimposed on an ultra-widefield fluorescein angiogram.

Table 1 Diagnoses of patients with retinal vasculitis

Diagnosis	No. of patients
Bacterial endophthalmitis	1
Behçet's disease	17
Birdshot retinochoroidopathy	6
Cytomegalovirus retinitis	2
IRVAN syndrome	1
Multiple sclerosis-associated	3
Necrotizing herpetic retinitis	2
Primary (idiopathic) retinal vasculitis	38
Sarcoidosis-associated	19
Susac syndrome	1
Syphilis-associated	2
Tuberculosis-associated	14
Total	106

Abbreviation: IRVAN, idiopathic retinal vasculitis with aneurysms and neuroretinitis.

Discussion

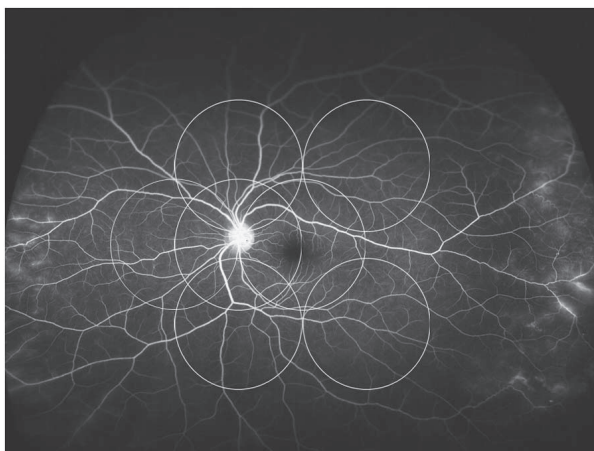


Figure 2 Active retinal vasculitis detected outside the ETDRS 7-field area.

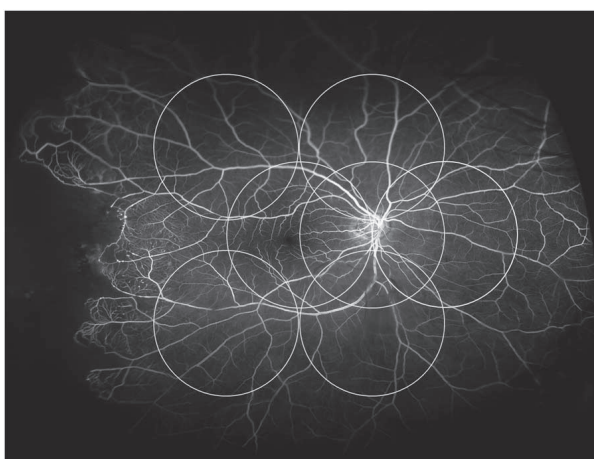


Figure 3 Retinal infarction detected outside the ETDRS 7-field area.

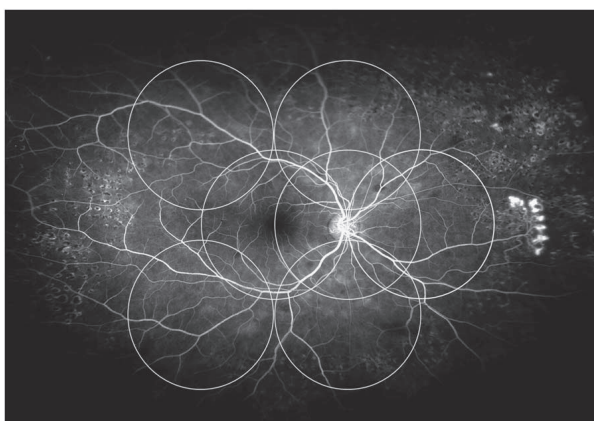


Figure 4 Retinal neovascularisation detected outside the ETDRS 7-field area.

Discussion

RV shows wide clinical variability, and may lead firstly to vascular wall inflammation and leakage of fluid, proteins, or cells anywhere within the retina; secondly, vascular

occlusion with retinal haemorrhage, ischaemia, or infarction; and thirdly, retinal neovascularization with or without intravitreal haemorrhage. The identification of ischaemia in particular is an important milestone in management decision-making in RV. Vascular occlusion may be acute, typically symptomatic, and stepwise (for instance in Behçet's disease), but may be creeping and progressive, at worst ultimately leading to complete extinction of retinal vascular supply. The identification of ischaemia before substantial visual field loss is therefore important; both oral immunosuppression, and in some circumstances laser retinal ablation, are typically used in occlusive RV.

Widefield fundal imaging by definition gives greater coverage of potential fundal pathology, and the introduction of the Optos camera permitted up to 200° visibility.³ Its superior coverage compared to standard 30° views was rapidly apparent.⁴ Previous studies have demonstrated 76.4 sensitivity and 71.9% specificity for identifying retinal lesions.⁵

The increased visibility was shown to improve both detection and classification of diabetic retinopathy.⁶ In the field of uveitis, UWF FFA again captured more pathology from 52 eyes,⁷ but whether this changed clinical management was not clear. In Behçet's disease-associated RV, Optos imaging detected additional pathology in 85% of 33 eyes.⁸ For RV generally, Optos UWF angiography together with pseudo-colour images was found in a study of 23 patients to alter management (potentially) in 51%.⁹

There are weaknesses in this study. First, its retrospective nature did not permit exact standardization of views including routine peripheral projections (but we would argue that the routine inclusion of these could only have increased, rather than decreased, the relative efficacy of UWF FFA); secondly, real ETDRS imaging was not performed, but an ETDRS transparent grid was superimposed and scaled onto an UWF FFA film to simulate the comparison. We would also argue here that 'real' ETDRS-style imaging, in positioning of fields, would be less consistent and would again probably have further decreased the 'real' diagnostic pickup of the ETDRS method; thirdly, only one unmasked observer (NPJ) made the comparisons, introducing the possibility of error and bias.

This study has shown a clear superiority of UWF FFA over standard 30-degree photography, in the identification of significant retinal vascular pathology in patients with RV. Optos UWF FFA imaging allowed easy and rapid identification of vascular changes. Pathology unseen by standard angiography fields was identified in more than half of all patients. This figure is smaller than that identified specifically for Behçet's disease,⁸ but this may reflect more diverse pathology. Changes to patient management were made in about one-third of patients

Discussion

following angiography, but importantly, one-fifth of patients underwent new treatment after new findings only detected by ultra-widefield imaging. Again, this figure is smaller than that identified by Leder *et al*⁹ for patients with RV, but arguably a 20% proportion as identified here, is ample justification for the use of this technique.

Ultra-widefield FFA has now become a standard diagnostic and monitoring tool in the Manchester Uveitis Clinic, for patients with inflammatory retinal vascular pathology. Its advantages in retinal coverage and reliability of image capture are clear, and it has been demonstrated to make a significant contribution to patient management.

Summary

What was known before

- Widefield photography permits instant recognition and orientation of retinal pathology.

What this study adds

- Widefield angiography is superior to montage or multi-view standard angiography in identifying and treating pathology in vasculitis.

Conflict of interest

PES: Optos Plc. (consultancy, equipment, research funding, lecture fees, and travel expenses). The remaining authors declare no conflict of interest.

Acknowledgements

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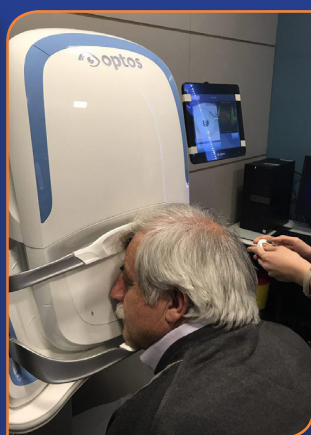
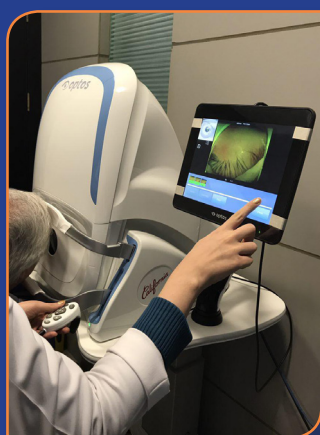
Disclaimer

The authors alone are responsible for writing the article.

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Installation of 2nd optos® California in Iran



Amico Yasna Pars is honored to announce the installation of 2nd **Optos California** in **Persian Eye clinic** of Dr. Ghoreishi, in order to provide the vitreoretinal surgeons with ultra-wide field retinal imaging.

Optos introduced ultra-wide field (UWF™) retinal imaging to enable eye care professionals to discover, diagnose, document and treat ocular pathology that may first present in the periphery. pathology which may go undetected using traditional examination techniques and equipment. Our UWF, high resolution retinal imaging devices each image of more than 80% or 200° of the retina in a single capture.

27th

Annual congress of Iranian society of Ophthalmology

The 27th annual congress of Iranian society of Ophthalmology has been held in the Razi convention center in Tehran from 4-7 December 2017. As without a doubt it was the greatest annual event in the field of ophthalmology in our country a large number of ophthalmologists from all over the country participated. Among many of the scientific and practical programs, the side exhibition was considered as one of the attractive topics which

all ophthalmic companies planned to participate.

As in previous years, Amico Yasna Pars had a great presence in the exhibition as gold sponsor and tried to introduce the latest technology achievements to the participants. Amico Yasna Pars is the exclusive distributor for many world-renowned ophthalmic equipment companies including the Johnson & Johnson vision, Optos, Alcon Vision care, Huvitz and many others.



Upcomming Events

25-28 February 2018

American-European Congress of Ophthalmic Surgery Winter Symposium 2018 (AECOS 2018)

Aspen, United States

28 February - 2 March 2018

10th Annual Meeting of Iranian Society of Ophthalmic Plastic and Reconstructive surgery (IrSOPRS)

Ahvaz, Iran

1 - 4 March 2018

28th American Glaucoma Society Annual Meeting 2018

New York, United States

3 - 8 March 2018

North American Neuro-Ophthalmology Society 44th Annual Meeting 2018

Waikoloa Village, United States

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