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**Persistencia**

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Exordium

Here we go again! New year, new challenges!

As the New Year begins, we all think about what we did not do in the past year that could be done in the newly begun year.

Common resolutions such as start a physical activity, lose some weight, more time with family for leisure and pleasure, a new haircut, maybe a new house or a vacation trip are always brought about in this period of the year; as usual, much is idealized, even though a few may be accomplished.

As editor-in-chief of VPA, The Pan-American Journal of Ophthalmology, I also dream and think about things to do to improve our journal. Those thoughts are always shared with the Editorial Board in our annual meetings and by electronic mail correspondence. After a very democratic discussion, we select the best and feasible suggestions of improvements to apply to our journal.

Our main purpose this year is to increase the publication of original articles from Pan-American researchers. Our journal has some special features such as visibility to the academic community through 8 scientific databases (CiteFactor®, J-Gate®, Index Copernicus®, Google Scholar®, DOAJ®, EBSCO® and Hinari®), publishes full articles in 4 idioms (English, Portuguese, Spanish and French) with English Abstract (for indexation purposes) and is available full text either in printed matter and online at http://journals.sfu.ca/paao and www.paao.org. Our Review Board is quickly responsive in the process of evaluation, giving fast turnover, accelerating the process of paper submission. In this era of rapid communication, this is vital and we are proud and thankful of having this exceptional support from the Review Board.

We are always working to offer to researchers in general good reasons to choose VPA as your publication of choice.

Wishing that 2015 brings a lot of good news from all of you!

Paulo E.C. Dantas, MD
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Colombia is a special country in Latin America also known as República de Colombia, located in the northeast of South America. Bogotá is the capital and the country’s total population is 48.32 million (2013), having Spanish as its official language.

This destination can surprise visitors with the contrast of Caribbean beaches and historical past represented by numerous buildings and monuments. In Cartagena, a popular tourist destination, you can have both attractions in the same city. Hidden between walls, Cartagena, as one the colonial past of the region which earned it the title of World Heritage Site, brings together aromas and flavors that appeal to everyone and a coastline of colors. San Andrés, an island at 720 km off the Colombian coast, features beautiful white sand beaches.

Bogotá has the most important airport in the country with direct flights to and from various important international destinations. Visiting the Gold and Botero Museum is just fantastic and must be part of your agenda. The convention center, Corferias International Business and Exhibition Center, is the most complete in Bogotá. Very modern and strategically located, Corferias is the venue where the most impressive scientific program of the XXXI Pan American Congress is going to be held.

We expect around 3000 Ophthalmologists and more than 700 speakers from all around the world. This important event will take place on August 5 to 8 and 26 Affiliated National and 16 Subspecialty societies will be represented there. Among the many events that will take place there, I would like to point out The Summit of the Americas Meeting on Tuesday, August 4th from 9 am to 5 pm, were the Presidents of all National Societies will discuss their projects.

Social activities are also a promise of very good entertainment:
• Tuesday, August 4th, we will feature the Presidents Reception at the National Museum of Fine Arts;
• Wednesday, August 5th, will bring the Congress Opening Ceremony;
• Friday, August 7th, we will have a ticketed dinner at Andrés Carne de Rés, a Pan-American Foundation Fund Raising event in order to implement educational activities.

The mission of the Pan-American Association of Ophthalmology - the prevention of blindness through lifelong education and cultural exchange among ophthalmologists in the Western Hemisphere - will be easily achieved with the success of this event. We count on your participation!
Lentes de contacto esclerales: una nueva herramienta de origen muy antiguo

Eduardo Arenas, M.D.

Profesor Especial. Universidad Nacional
Director científico ASOCORNEA (Asociación Colombiana de Cornea y Cirugía Refractiva)

Funding: None
Proprietary/financial interest: None

Leonardo Da Vinci, en 1508, describió la posibilidad de mejorar la visión si se sumergía el ojo en un recipiente especial con agua, mientras René Descartes, en 1632, propone la posibilidad de colocar un lente encima de la cornea para corregir defectos. Solo hasta 1887, August Müller presenta su tesis de grado como médico que titula “Brillenglas und Hornhautlinsen” (Anteojos y lentes de contacto), que más tarde fabrica para uso personal, tratando de corregir sus 14 dioptrías de defecto, con un lente de vidrio con el que obtiene pobres resultados, por lo cual prefiere dedicarse a la ortopedia. Adolf E. Fick, un médico alemán que quiso migrar a Mendoza, Argentina, sin lograrlo terminó en Zurich como oftalmólogo y en 1888 construyó con moldes en ojos de cadáver, lentes de vidrio soplado de 19 a 21 mm de diámetro, que él mismo utilizó con excelentes resultados visuales, pero con pobre adaptación. En el mismo año, Edouard Kalt, en Paris, adapta lentes de apoyo en la esclera para casos con queratoceno, los que solo podían ser utilizados por pocas horas debido al peso excesivo y a las alteraciones que producía en la superficie ocular. En 1889, el Húngaro Joseph Dallos, también miope, se traslada a Londres gracias al apoyo de su cuñado George Nissel, quien lo presenta al Moorfields Eye Hospital, para adaptar lentes de contacto de vidrio moldeados de apoyo escleral, con excelentes resultados en un pequeño grupo de pacientes. En 1933, la firma Zeiss en Alemania, fabrica y patenta un set de pruebas de lentes de contacto esclerales de vidrio, pero sin mucho éxito. En 1946, en Nueva York, el optometrista William Feinbloom introduce un nuevo tipo de lentes de apoyo escleral hechos de una combinación de vidrio y plástico que tuvieron mejor aceptación por parte de los pacientes, pero no se popularizaron.

Ridley, en 1948, expuso la necesidad de ventilar los lentes de contacto esclerales para impedir el edema de cornea y mostró sus resultados en un pequeño grupo de pacientes. En el mismo año, Toothy en California, patentó unos lentes de contacto hechos de plástico (Polimetilmetacrilato), que no eran de apoyo escleral, sino de apoyo corneano, que...
empezaron a utilizarse clínicamente por Berens y Girard en 19549 y por Montague Ruben, en Inglaterra, unos años más tarde.9

Esta invención dio pronto al origen de los lentes corneanos de menor diámetro llamados rígidos con excelentes resultados visuales y de adaptación, cuyo material fue cambiado posteriormente al introducir el concepto de la permeabilidad al oxígeno por Miguel Refojo en Boston en 1979, mezclando el silicón que es 100% permeable al oxígeno con polimetilmetacrilato que, posteriormente, se populariza y es el material actualmente usado como lentes de contacto gas permeables de apoyo corneano, en todo el mundo10,11 (Figura 2).

Regresando a los lentes de contacto de apoyo escleral fueron clínicamente utilizados para el tratamiento de enfermedades graves de la córnea y la superficie ocular tales como pénfigo, quemaduras, enfermedad de Stevens-Johnson y otras, con buenos resultados por Girard, Soper y otros en 1970.12,13

El uso de lentes esclerales en pacientes con afáquia unilateral demostró ser tan útil que Mills, en 1971, sugirió que era el método ideal para el manejo de la afáquia monocular.14 Más tarde, en 1978, Moss encuentra una buena aplicación del concepto de lente escleral para uso cosmético a la vez que visual.15 En 1983, el optómetro Donald Ezekiel, en Australia, presenta la posibilidad de utilizar materiales gas permeables para el diseño de lentes esclerales16 también utilizados por Ruben y colaboradores en los Estados Unidos17.

Los lentes esclerales se siguieron usando en ciertos casos, en especial en Inglaterra, utilizando el sistema de moldeado,18 idea que fué seguida por otros autores.19,20 En los Estados Unidos, el grupo de Harvard, en Boston, introduce en 1990 el uso de materiales gas permeables y presenta una serie de casos exitosos, de queratoconos avanzados y distorsiones corneanas21 y en Holanda, Kok y Visser los utilizan como una herramienta terapéutica en el manejo de trastornos severos de la superficie ocular, principalmente en casos de ojo seco.22

Donald Tan y colaboradores, en 1995, en Singapore reportan una larga serie de 343 casos con seguimientos hasta de cinco años y resultados exitosos con diversos tipos de lentes esclerales y múltiples indicaciones23 y poco después el grupo del Moorfields en Londres, encabezado por Pullum, utiliza únicamente materiales gas permeables en una serie mayor de casos, que incluyen diagnósticos de ectasias corneanas, degeneración pellúcida, post queratoplastia y altas miopías.24

En las últimas décadas y con la introducción de nuevas tecnologías, su uso, liderado por los grupos de Harvard en Estados Unidos y Moorfields en Inglaterra, ha sido recomendando inclusive en forma extendida para patologías graves de la superficie ocular.25,26,27,28

La más común aplicación de los lentes esclerales son las ectasias corneanas, cuando ya no responden a los lentes de contacto convencionales, logrando una corrección casi total de la superficie refractiva del ojo, ya que al estar apoyado sobre la esclera, no tiene ningún movimiento, la cornea respira a través del intercambio de lagrimas, de agujeros o simplemente debido a la alta permeabilidad de los materiales usados29 (Figura 3).

En los ojos previamente sometidos a cirugías incisionales el cambio topográfico con y sin lentes esclerales, es definitivo (Figure 4).

Los lentes esclerales pueden ser la solución refractiva, inclusive para pacientes pediátricos.30
Sin lugar a duda, los lentes esclerales rígidos gas permeables son una herramienta muy útil en la recuperación de la estructura óptica del segmento anterior del ojo y cada vez aparecen más indicaciones y modelos diferentes que los hacen indispensables en la práctica oftalmológica moderna.\[31,32,33\]

![Figura 3: Lente de contacto escleral moderno con cuatro curvas periféricas de apoyo para limbar.]

![Figura 4: Caso clínico para demostrar la diferencia visual y topográfica en un caso con cornea alterada después de una queratotomía radial.]

**BIBLIOGRAFÍA**

5. United States patent granted on 8 August 1933 Number 1,921,971.
Normal fluence photodynamic therapy associated with lamellar macular holes in exudative age related macular degeneration.

CASE 1

Figure 1A. Predominantly classic subfoveal choroidal NVM.

Figure 1B. Cicatricial disciform scar After 3PDT.

Figure 1C. TD-OCT Lamellar macular hole and fibrovascular proliferation

Figure 1D. SD-OCT. Lamellar macular hole Fibrovascular separation Disk cupping (0.6x0.6 mm)

ABSTRACT.

This case series report aimed to describe lamellar macular holes associated with the use of normal fluence photodynamic therapy.

Key words: Age related macular degeneration; macular holes; photodynamic therapy.

INTRODUCTION

Exudative age related macular degeneration (ARMD), vitreoretinal traction, (VRT) normal fluence photodynamic therapy (PDT) and lamellar macular holes (LMH) may be associated findings.1-4 Lamellar macular holes, found at first by pathology4-6, are currently recognized with optical coherence tomography (OCT)7,8, technique also suitable for differential diagnosis, documentation and etiological associations.9,10 Lamellar holes after photodynamic therapy were clinically reported by Mansour and Chung11,12, found in pathology specimens by Gnazi, Stanga and Scupola in cases of exudative ARMD managed with normal fluence PDT.13-15 The present three case report was made possible with optical coherent tomography during follow-up of long standing cases of neovascular exudative age related macular degeneration treated initially with normal fluence PDT.2,3,16-19

CASE SERIES REPORT

Case 1: Seventy year-old male seen in 2003 with BCVA 20/200 in the right eye in association with PVD, a subfoveal predominantly classic choroidal neovascular membrane of ARDM, exudation and hemorrhage (Figure 1A). Patient received a normal fluence PDT that improved vision to 20/80, repeated 4 months after and two years later due to recurrent macular disease that ended in a cicatricial disciform scar with 20/320 visual acuity (Figure 1B). Patient remained stable in 2009 when a TD-OCT3 found a lamellar macular hole, decreased thickness of macular neuroepithelium and photoreceptor layer, intraretinal diffuse edema and a yuxtafoveal fibrovascular separation (Figure 1C).
SDOCT on July 2011 confirmed findings and a normal medium thickness optic nerve fiber layer (ONF) (Figure 1D). Fluorescein angiography revealed geographic atrophy with faint central staining in late stages (Figure 1E) and typical autofluorescence. Last BCVA in the right eye was 20/320 in 2012 with senile lens changes.

Case 2: Is the same patient contralateral left eye also affected with exudative ARM since year 2000. BCVA LE was 20/40, decreasing one month later to 20/200 due to macular hemorrhage associated with occult type choroidal neovascularization found on fluorescein angiography (Figure 2A) and causing a central scotomata. Patient received a normal fluence PDT application, repeated 4 months later, vision remaining 20/200 and improving two years later to 20/120. Patient returned seven years later, fluorescein angiography revealed hyperfluorescent macular disciform scar and geographic atrophy with typical autofluorescence (Figure 2B). TD and SD-OCT (Figure 2C) found a macular epiretinal membrane, diminished foveal neuro-epithelium thickness, a normal medium thickness ONF, micro cysts around lamellar macular hole, fibrovascular separation, 0.6m disk cupping. These findings were unchanged in a 2012 SD OCT (Figure 2C) and BCVA 20/120 through moderate lens changes.

Case 3: In 1996, a seventy two years old male had performed elsewhere a bilateral ECCE with PC IOL implant and a subsequently a Nd yag laser capsulotomy in both eyes. The right eye regained BCVA 20/20 but three years later he developed early ARM changes (Figure 3A). Patient was first seen in the office in 2001 with 20/400 vision due to a subfoveal choroidal neovascular membrane, predominantly classic (Figure 3B), treated before elsewhere with only one normal fluence PDT application. Patient returned in 2010 with a disciform macular scar in the right eye (Figure 3C) and TD-OCT3 found a lamellar macular hole associated with subfoveal fibrovascular proliferation (Figure 3D). In 2011 SD-OCT revealed reduced neuroepithelium thickness, diffuse macular edema, macular epiretinal membrane, a lamellar macular hole, decreased median thickness ONF 71 microns (Figure 3E), intraocular pressure 23 mm Hg, optic disk cupping 0.5 mm. BCVA was 20/400 in 2012.

In 1996, the contralateral left eye of same patient had performed elsewhere an ECCE with PCIOL, followed by Nd: yag laser posterior capsulotomy regaining 20/20 visual acuity. Our first examination in 2001 found BCVA 20/200 due to a non-treated subfoveal scar of ARM (Figure 4A). In 2003, patient developed a recurrent sprout of hemorrhagic exudative minimally classic neovascularization in the nasal side of the prior scar decreasing vision to 20/400 and refusing any treatment including PDT (Figure 4B). Patient returned in 2010 with a large disciform macular scar in the left eye (Figure 4C) revealing in TD-OCT a lamellar macular

Figure 1. ARM, geographic atrophy

Figure 2. Exudative ARMD, occult type.

Figure 3. Subfoveal CHNVM predominantly classic. (2001)

Figure 4. Disciform macular scar on autofluorescence. (2010)
hole associated with subfoveal fibrovascular separation (Figure 4D). Disk cupping 0.6 mm, normal thickness ONF and visual field changes required anti glaucomatous topical treatment.

RESULTS
In summary, four eyes of two patients with exudative ARMD presented a lamellar macular hole. Subfoveal neovascularization was classic in three eyes, one occult, all recurrent. Two eyes of the first patient were phakic and two eyes of second patient were pseudophakic and received Nd: Yag laser posterior capsulotomy. Three eyes received normal fluence PDT sessions: one eye, three sessions, another two session and remaining eye, one session. The contralateral eye in the second patient did not receive PDT but a Nd-yag laser posterior capsulotomy and still developed a lamellar hole.9,10 Three of four eyes showed macular epiretinal membranes following PVD, three eyes had decreased thickness of the macular neuroepithelium and two eyes of the second patient had increased optic disk cupping already receiving antiglaucomatous medication.26 Visual acuity in all eyes ended under 20/200 level.

DISCUSSION
Lamellar macular holes have been found in four eyes with exudative age related macular degeneration. Three of four eyes were treated with an irregular administration of normal fluence photodynamic therapy and two pseudophakic eyes received Nd Yag laser capsulotomy. Pathophysiology of lamellar macular holes, herewith reported, is not unique but a combination of several mechanisms probably associated.19-22 These mechanisms should include trauma from phaco surgery, yag laser capsulotomy and normal fluence PDT in exudative ARMD. Possibly, a contributing contractile vitreo-retinal traction may follow during the healing cicatricial complex process of a mixed degenerative, inflammatory, neovascular, hemorrhagic and exudative disease. Regarding management, prevention becomes important, with an early and proper diagnosis of ARMD using OCT and fluorescein angiography. Based on observations, and results, a good advised is to decrease flow and dosage of PDT in the treatment of ARMD, the use of antiangiogenics or combined therapies16-18 not devoid of complications. Visual results depend on the normal continuity of the external limiting membrane in the ellipsoid zone25 that could be preserved if patients do not reach the cicatricial stage.

CONCLUSIONS
Lamellar macular holes may be observed during follow up of wet-ARMD treated with normal fluence PDT which requires early diagnosis and proper management specially prevention using low fluence FDT alone or a combination therapy with antiangiogenics in precise indications to prevent associated implications.
ACKNOWLEDGMENTS
To Julieth Cortés and Pablo Amaya for their cooperation.

REFERENCES


New option in conventional silicone hydrogel contact lenses: The Brazilian Experience

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ABSTRACT

PURPOSE: To evaluate the clinical performance of a new conventional silicone hydrogel contact lens in spherical and toric designs.

METHODS: We fitted the Perfect SH and Perfect Toric SH (World Vision Ophthalmic®, Brazil) in 19 patients (33 eyes). Contact lens material was Filcon II (hydration: 74%; Dk: 60 x 10^-11@35°C). We evaluated demographics (sex, age), also if the patient had tried to wear contact lenses before, best-corrected visual acuity with spectacles and with contact lenses, spherical equivalent of the refraction, design of the fitted lenses (between spherical and toric), keratometry, the base-curve of the fitted lenses, the occurrence of complications, and patient's satisfaction with the new lenses.

RESULTS: Fourteen patients were female (73.7%) and five were male (26.3%). The average spectacle-corrected visual acuity (LogMAR) was 0.31 ± 0.35. The LogMar visual acuity with contact lenses was 0.25 ± 0.29. Seventeen (89.4%) patients were satisfied with the new contact lens and 2 (10.6%) were not.

CONCLUSION: This new conventional silicone hydrogel contact lens could be considered an useful option for contact lens fitting in Brazil.

Keywords: contact lenses; silicone hydrogel; extended wear; daily wear.

INTRODUCTION

Launched in the late nineties, silicone hydrogel contact lenses (SHCL) have had an important role in improving corneal physiological response in comparison to hydrogel contact lenses, which are made of hydroxyethyl methacrylate (HEMA) copolymers, and have low oxygen permeability (DK).¹ Cavanagh et al demonstrated that lenses with higher oxygen transmissibility caused no or only small increases in bacterial binding to corneal surface cells in either daily or extended wear.² This could lead to a decreasing on lens-related microbial infection risks.

Particularly with low DK materials, overnight contact lens wear is known to be associated with serious complications, such as microbial keratitis.³ In relation to corneal edema, Holden & Mertz showed that no swelling would occur under daily wear conditions if the average oxygen transmissibility (Dk / Lavg) was at least 24.1 ± 2.7 X 10^-9 (cm X ml O2) / (sec X ml X mmHg)⁶, an Equivalent Oxygen Percentage (E.O.P.) of 9.9%. The Dk / Lavg needed to limit overnight corneal edema to 4.5% (level experienced without CL in place⁵) was found to be 87.0 ± 3.3 X 10^-9 (cm X ml O2) / (sec X ml X mmHg), an Equivalent Oxygen Percentage of 17.9%.⁶ Although silicone hydrogels were at first thought to be safe for daily and extended wear, complications associated with this material are still present.⁷⁻¹⁰ Even with the release of high oxygen transmissibility materials, daily wear remains the major way of use.

Silicone hydrogels became available in Brazil in 1999, and until 2010 all the lenses

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<th>Corresponding author:</th>
<th>Marcelo Vicente de Andrade Sobrinho, MD</th>
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<td><a href="mailto:marcelosobrinho@terra.com.br">marcelosobrinho@terra.com.br</a></td>
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Date of submission: 22/11/2014 Date of approval: 16/02/2015
in Brazil were for frequent replacement (15 to 30 days). The purpose of this study was to evaluate the clinical and subjective performance of the first conventional silicone hydrogel launched in Brazil.

METHODS

We conducted a retrospective study reviewing the charts of 19 patients (33 eyes) from the Contact Lens sector at the Federal University of São Paulo, Brazil, who were fitted with the Perfect Silicone Hydrogel™ CL (World Vision®, São Paulo, Brazil) during the year of 2011. The material of this CL is the Filcon II 3. The DK of this material is 60 x 10^-11 (cm X ml O2), and it has 74% of hydration. The available base curves are 7.8; 8.1; 8.4; 8.7; 9.0 and 9.3 millimeters, and the diameters are 13.5; 14.5 and 15.0 millimeters. The dioptric power ranges from +20.00 to -20.00 spherical diopters, and from -0.75 to -8.00 cylinder diopters.

We noted the sex, age, spherical equivalent, best-corrected spectacle visual acuity, keratometry, type of CL used, refraction of the CL (in spherical equivalent), visual acuity with CL, previous CL wear, complications, and patient’s satisfaction.

We used descriptive analysis of the data. Qualitative variables are presented as mean±standard deviation. Quantitative variables are presented as frequency of occurrence. We used the paired t-test to calculate the comparison between the visual acuity with spectacles and with CL. Level of significance was adjusted to 5%.

Fourteen patients were female (73.7%) and five were male (26.3%). The age ranged from 17 to 42 years old (average 27.71 ± 7.62).

RESULTS

The spherical equivalent ranged from plano to -22.00 D (average -5.59 ± 6.86 D). The average spectacle-corrected visual acuity (LogMAR) was 0.31 ± 0.35. Keratometry was 43.96 ± 2.13 D.

In relation to the type of CL used, twenty four (73%) were toric CL, and nine (17%) were spherical. The average spherical equivalent of the CL was -4.96 ± 6.10 D. The base curve (BC) of the CL varied from 7.8 to 9.0 mm, and the average BC was 8.43 ± 0.27 mm. The visual acuity with CL was 0.25 ± 0.29 LogMar.

Seventeen patients (89.4%) were CL wearers before this study, and 2 (10.6%) were first time users. Of the previous wearers, 8 (47%), wore conventional hydrogel toric CL; 5 (29.4%) used rigid gas-permeable (RGP) CL; 2 (11.7%) used conventional hydrogel CL, 2 (11.7%) used frequent replacement hydrogel CL. Regarding complications, one patient (5.2%) presented giant papillary

<table>
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<tr>
<th>Sex</th>
<th>14 Fem (73.7%) / 5 Male (26.3%)</th>
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<tr>
<td>Age (years)</td>
<td>27.71 ± 7.62</td>
</tr>
<tr>
<td>Spherical equivalent</td>
<td>-5.59 ± 6.86</td>
</tr>
<tr>
<td>Spectacle visual acuity</td>
<td>0.31 ± 0.35 (LogMAR)</td>
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<tr>
<td>Keratometry</td>
<td>43.96 ± 2.13 D</td>
</tr>
<tr>
<td>Type of CL</td>
<td>24 Toric (73%) / 9 Spherical(17%)</td>
</tr>
<tr>
<td>CL spherical equivalent</td>
<td>-4.96 ± 6.10 D</td>
</tr>
<tr>
<td>Base curve</td>
<td>8.43 ± 0.27 mm</td>
</tr>
<tr>
<td>CL visual acuity</td>
<td>0.25 ± 0.29</td>
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<tr>
<td>Previous CL wear?</td>
<td>Yes: 17 (89.4%) / No: 2 (10.6%)</td>
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<tr>
<td>CL previously used</td>
<td>Conventional toric CL: 8 (47%)</td>
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<td>RGP: 5 (29.4%)</td>
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<td></td>
<td>Conventional hydrogel: 2 (11.7%)</td>
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<td>Disposable hydrogel: 2 (11.7%)</td>
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<tr>
<td>Satisfied with the CL</td>
<td>Yes: 17 (89.4%) / No: 2 (10.6%)</td>
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Table 1 Summary of the results
Table 2: Comparison between visual acuity (LogMAR) with spectacles and with CL.

<table>
<thead>
<tr>
<th>Visual Acuity</th>
<th>Spectacles (n=33)</th>
<th>CL (n=24)</th>
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<tr>
<td>Spherical (n=9)</td>
<td>0.44 ± 0.53</td>
<td>0.33 ± 0.49</td>
<td>0.74</td>
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<tr>
<td>Toric CL (n=24)</td>
<td>0.27 ± 0.29</td>
<td>0.22 ± 0.17</td>
<td>0.27</td>
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However, studies have shown that this new lens type did not reduce the incidence of complications, especially in overnight wear schedule.\(^5,^{12-16}\) Most of the prescribers worldwide seem to prefer daily wear schedule, and 30-day replacement CL.\(^{17,18}\)

Extended wear represents 7.8% of all soft lens fits, ranging from 0.6% in Malaysia to 27% in Norway.\(^19\) Contact lens non-compliance increases the risk of complications, and one of the reasons is failing on CL replacement at the right time.\(^{20,21}\) In Brazil, especially due to economic factors, patients don’t replace their CL as oriented by the ophthalmologist and by the manufacturer, exposing their eyes to possible complications.\(^{22}\)

The present study was performed with the first Brazilian silicone hydrogel CL to be replaced once a year. We fitted 33 eyes of 19 patients, 89.4% of which were satisfied with this new CL. It appears to be a very useful option for our practice.
Axenfeld-Rieger Syndrome and a Post-Trabeculectomy Presentation of Angle Closure

ABSTRACT
One rare form of anterior segment dysgenesis, Axenfeld-Rieger syndrome can be associated with glaucoma in half of the cases. We present an illustrative case managed with trabeculectomy complicated by angle closure. 

Key words: Anterior segment dysgenesis; Axenfeld-Rieger syndrome; glaucoma.

INTRODUCTION
Axenfeld-Rieger syndrome is a rare, inherited dysgenesis of the anterior segment that is associated with glaucoma approximately 50% of the time. This case illustrates a unique presentation of angle closure despite adequate trabeculectomy in an Axenfeld-Rieger patient that was initially managed with dynamic gonioscopy.

CASE REPORT
A 24 year-old female with a past medical history of congenital glaucoma and trabeculectomy surgery in the right eye (OD) presented to the Emergency Department (ED) with acute onset of boring right eye pain, nausea, vomiting, and blurred vision OD of 1 hour duration. She reported having had a trabeculectomy OD for similar symptoms 4 years prior, with stable...
postoperative intraocular pressure (IOP) in the low single digits despite multiple procedures to correct bleb overfiltration. She denied any symptoms relating to hypotony maculopathy. Exam revealed visual acuity of OD 20/250 (pinhole 20/70) and normal 20/20 vision in the left eye (OS). IOP was 58mmHg OD and 12 mmHg OS by applanation. She had extensive iris atrophy and corectopia OD with no relative afferent pupil defect. Slit lamp exam OD showed a low lying superior conjunctival bleb, corneal edema, extensive irido-corneal adhesions, extensive iris atrophy and corectopia, and a trace nuclear sclerotic cataract. The left eye also showed superior-nasal irido-corneal touch and superior-nasal iris atrophy. Her slit lamp exam was consistent with the diagnosis of Axenfeld-Rieger syndrome (Photo 1 and 2). Gonioscopy of the right eye showed no visible angle structures secondary to obstructing iris remnants and gonioscopy of the left eye showed irido-corneal touch in the superior temporal quadrant (Photo 3 and 4). Initial treatment in the ED included multiple administrations of topical antihypertensive glaucoma medications and dynamic gonioscopy. The dynamic gonioscopy was successful in breaking the acute glaucoma attack and her IOP OD dropped to 02 mmHg. She was discharged without glaucoma medications. The following day, her vision OD had improved to 20/80 (pinhole 20/40) and her IOP OD remained low at 02 mmHg. The trabeculectomy site OD appeared to be functioning well, however the lens-zonule complex appeared excessively loose and mobile. An anterior segment ocular coherence tomography (OCT) of the right eye revealed a flat anterior chamber with significant iridocorneal touch (Photo 5).

We suspected the mechanism of her acute IOP elevation was migration of the lens-zonule complex into the trabeculectomy site causing mechanical obstruction which was acutely alleviated by dynamic gonioscopy.

To maintain posterior positioning of the lens-zonule complex, we initiated 1% atropine TID OD which was weaned to every other day over 4 weeks. She continued to have good control of her IOP and no additional angle closure attacks.

We discussed removal and replacement of the crystalline lens. Considering the complexity of the surgery, the patient chose observation. In conclusion, dynamic gonioscopy represents a useful method to lower IOP in cases of angle closure and other forms of obstructive outflow.
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We discussed removal and replacement of the crystalline lens. Considering the complexity of the surgery, the patient chose observation. In conclusion, dynamic gonioscopy represents a useful method to lower IOP in cases of angle closure and other forms of obstructive outflow.

Photo 3 – Gonioscopy of the right eye superior view showing iridocorneal adhesion and severe corectopia.

Photo 4 – Gonioscopy view of the left eye showing superior temporal iridocorneal adhesion. Angle structures were identifiable elsewhere.

Photo 5 – Anterior Segment OCT of the right eye demonstrating significant areas of irido-corneal adhesion and flat anterior chamber.

REFERENCES
Visual field defects secondary to Cabergoline use in a patient with pituitary tumor.

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ABSTRACT
Prolactinoma is the most common functional pituitary macroadenoma. It is usually treated with dopaminergic agonists; among them, cabergoline, that decreases tumor size and consequently the symptoms caused by the tumor. An uncommon complication to this treatment is alterations in the visual field. In the majority of cases, symptoms improve with the discontinuation of the drug. Owing to the diagnostic challenge, we present the following clinical case.

Key words: Cabergoline; adverse effects; prolactinoma; visual fields; pituitary neoplasms.

INTRODUCTION
Prolactinoma is the most common functional pituitary macroadenoma. One of its clinical manifestations is damage to the visual field secondary to chiasmatic compression, observed in up to 67% of patients.1 Medical treatment is usually necessary to treat hyperprolactinemia secondary to functional pituitary macroadenoma. The first line of treatment is oral dopaminergic agonist, leaving surgery and radiotherapy for refractory cases or intolerance to the medication.1 Bromocriptine, cabergoline and quinagolide are frequently used. Dostinex® (Pfizer) is cabergoline, a dopaminergic agonist that reduces prolactin levels1, decreases tumor size as well as chiasmatic compression and normalizes the visual field for up to 70% of patients.2 Common adverse effects reported are nausea, vomiting, constipation, orthostatic hypotension, and dizziness.3 Visual field defects have been described secondary to use of cabergoline.3-5

We present a patient with this adverse reaction, with complete resolution once the dose of the medication was gradually reduced.

CASE REPORT
A 24-year-old woman was diagnosed with prolactinoma in 2010. Since then, she had been receiving treatment with oral cabergoline. In January 2011, she presented with a scotoma in the left eye, which lasted two weeks. A diagnosis of optic neuritis was made in another center. A cerebral and cervical MRI was performed, negative for multiple sclerosis. The Goldmann visual field showed an increase in the blind spot and a paracentral scotoma of the left eye. In October of the same year, while on treatment with 2.5mg of cabergoline weekly, the patient presented a new episode of central scotoma in her left eye. The eye examination showed a visual acuity of 20/20 in the right eye and 20/50 in the left. The Ishihara color vision test was 10/10 in both eyes, pupils were equal with normal reactivity, without a relative afferent pupillary defect with neutral density filter of 0.6 log. No visual misalignment and conserved ocular motility was observed. The fundus was normal, without edema of the optic disk bilaterally. A new MRI and an angiogram were conducted, which did not show any signs of chiasmatic compression or pathological optical nerves (Figure 1). Humphrey visual field showed a normal right eye. The left eye showed an increase in the blind spot with a mean defect of -3.79 dB (Figure 2). An adverse effect of cabergoline was suspected, and a decrease in the drug dosage was suggested to the general physician. At two months, the patient was receiving 2.0mg of cabergoline weekly. The eye examination revealed: visual acuity of 20/20 in the right eye and 20/25 in the left eye. The rest of the examination showed no changes. 24-2 Humphrey visual field was performed: the right eye was normal;
while the left eye still showed an increase in the blind spot (less than the previous visual field) and a mean defect of -3.41 dB. In October 2012, a year after our first evaluation, the patient was receiving 1.5 mg of cabergoline weekly. Visual acuity was 20/25 in the right eye and 20/25 in the left eye. The rest of the eye examination was normal. The Humphrey 24-2 visual field was almost normal, with a mean defect of -3.26 dB in the left eye (Figure 3). Given the good evolution of the patient's condition, it was recommended to continue gradually reducing the dose.

**DISCUSSION**

Dopaminergic agonists are often used in the treatment of prolactinomas. After reducing the tumor and improving the visual field, a deterioration of the visual field is described while the patient is being treated with dopaminergic agonists. Several mechanisms have been proposed as responsible for this complication. Some reports have shown alterations in the visual field secondary to the use of the dopaminergic agonists as a product of chiasmatic herniation in the sella turcica, documented with MRI and reversible with the discontinuation of treatment. In these cases, the decrease in the dosage of the medication has shown an improvement in the visual field and a decrease in tumor herniation.

A study assessed the incidence of symptomatic and asymptomatic deterioration associated with chiasmatic herniation during treatment with cabergoline in macroprolactinomas. Chiasmatic herniation was observed in 5 of 28 cases. In three of these cases, deterioration of the visual field was registered. In three cases, the visual field improved once cabergoline was discontinued.

Other possible explanations for the damage to the visual field with dopaminergic agonists are: direct toxicity, ischemia, reversible vasospasm and perivascular fibrosis. Visual recovery has been observed in the literature upon decreasing the dose of dopaminergic agonists, similar to what occurred in the clinical case presented.

It is recommended to maintain a high degree of caution in relation to this low-occurrence complication by maintaining controls and monitoring visual fields and images to rule out real tumor growth.

**REFERENCES**


ABSTRACT
We describe a patient with clinical history of intermittent haemolacria associated to hereditary hemorrhagic telangiectasia, first seen and diagnosed by the ophthalmologist.

Keywords: Osler-Weber-Rendu disease, hereditary hemorrhagic telangiectasia, conjunctival telangiectasia.

INTRODUCTION
Bloody tears or haemolacria is an unusual ocular manifestation commonly associated to vascular tumors, trauma, hemophilia, granulomas, hysteria and reflux from the lacrimal aparatus.1

We present a case of intermittent haemolacria associated to clinical features of Hereditary Hemorrhagic Telangiectasia (HHT), first seen and diagnosed by ophthalmologists.

CASE REPORT
A 49 years old female presented to the emergency room complaining of recurrent episodes of “bloody tears” with spontaneous resolution. She denied any other ocular or systemic symptoms, previous ocular trauma or other co-morbidities.

During eye examination, visual acuity was 20/20 OU, with normal and symmetric pupillary reflex. Intraocular pressure was 10mmHg in both eyes. At slit lamp biomicroscopy, a radial vascular conjunctival telangiectasia was noted in the superior tarsal conjunctiva (Figure 1). Anterior segment structures were normal.

Mapping the retina and macula, we did not find noticeable vascular changes. No hemorrhages and/or retinal telangiectasis.

In the physical examination, we observed telangiectasias in the tip of the fingers (Figure 2), palates, tongue and lips (Figure 3).

Questioned about epistaxis (nose bleeding), she confirmed to have had 3 past episodes in the last 3 months, previous to the examination.

Patient was referred to the gastroenterologist that confirmed gastrointestinal telangiectasia without bleeding by endoscopy.

During the follow-up, patient mentioned that her sister had the same problem with epistaxis.

Based on the Curaçao criteria, established in June 1999 by the Scientific Advisory Board of the HHT Foundation International Inc.², we established the clinical diagnosis of HHT.

The HHT diagnosis is classified as definite if 3 criteria are present, possible or suspected if 2 criteria are present, and unlikely if fewer than 2 criteria are present. The Curaçao criteria are as follows:

1. Epistaxis - Spontaneous, recurrent nosebleeds.
2. Telangiectasias - Multiple at characteristic sites (lips, oral cavity, fingers, nose).
3. Visceral lesions - Such as gastrointestinal (GI) telangiectasia (with or without bleeding), pulmonary AVM, hepatic AVM, cerebral AVM, spinal AVM.
4. Family history - A first-degree relative with HHT Clinical signs make the presumptive diagnosis. Is even necessary, endoscopic and ENT examination to rule out other bleeding sites.

DISCUSSION
HHT is an autosomal dominant disease attributed to genetic mutations involving signaling of transforming growth factor beta (TGF-β), an important pathway in vascular formation and repair.³ Defects in at least 4 genes are implicated in HHT:

Mutations in ENG (encoding the endoglin protein) characterize HHT type 1 and involve chromosome 9, 9q33-34.⁴
Mutations of ALK1 (encoding activin receptor-like kinase 1) or ACVRL1 (activin A receptor kinase, type II like 1), are implicated in HHT type 2 and involve chromosome 12, 12q13.5

A third locus involves mutations of chromosome 5 (5q31.1-32) and is distinct from hereditary benign telangiectasia (HBT), a gene defect in RASA1 (chromosome 5q14).

Mutations of a fourth gene, MADH4 (encoding SMAD4) is described in the HHT-juvenile polyposis overlap syndrome (JPHT), combining juvenile polypos and HHT.7

Based on the above, HHT can be classified in four types: HHT type 1, HHT type 2, HHT type 3 and JPHT.

Vascular abnormalities can appear anywhere in the skin or mucous membranes, being more common on the lips, tongue, face and fingertips. It can also affect the upper airways, lung, spleen, liver and central nervous system. There is prevalence of epistaxis, rinoarrhoy and gastrointestinal bleeding.8

Clinical manifestations and symptoms may occur in the fourth decade of life or latter.9,10

Three doctors described HHT at the end of the XIX century, independently. Henri Rendu first emphasized the hallmark blanching cutaneous and mucous membrane angiomata of HHT and differentiated this disease from hemophilia.11 Subsequently, Sir William Osler and Frederick Parks Weber published detailed descriptions of the syndrome, along with Rendu.12,13

In 1909, was established the diagnostic triad of HHT, including familiar history, hemorrhages and telangiectasias.14

Ocular manifestations are not frequent.15-17 Most common ocular features associated are divided into:

- manifestations of the anterior segment of the eye: epiphora, bleeding/haemolacria, conjunctival telangiectasias and granulomatous lesions;
- manifestations of the posterior segment of the eye: retinal macular and choroid telangiectasia.

Management of the disease depends on the area involved and clinical presentation and can include iron supplementation, transfusion, estrogen therapy, aminocaproic acid, electrocautery, embolotherapy, stereotactic radiosurgery and surgical therapy (neurosurgical resection, liver transplantation, septodermoplasty).

The vast majority of HHT patients have a normal life expectancy. In patients with severe visceral involvement and younger age (less than 60 y), there is a small increase in mortality rate.

CONCLUSION

In the presence of spontaneous hematic epiphora or haemolacria, the ophthalmologist should always suspect of HHT. Thorough examination, including systemic inspection is essential.

REFERENCES

10. Porteous ME, Bunn J, Proctor SJ, Hereditary haemor-

Figure 1. Telangiectasia in the superior tarsal conjunctiva.

Figure 2. Telangiectasia in the tip of the fingers.

Figure 3. Telangiectasia in the palate and tongue.
Dear Colleagues:

We are very excited to be celebrating the 75th anniversary of the Pan-American Association of Ophthalmology (PAAO) at the 31st Pan-American Congress of Ophthalmology, which is scheduled to take place August 5-8, 2015, in Bogotá, Colombia. The first Pan-American Congress took place in 1940 in Cincinnati, Ohio.

The original mission of the Pan-American was to bring together the ophthalmologists of the Americas, Spain and Portugal. The objective was to create a new concept of “Pan-Americanism”. The Pan-American has the unique ability to reach across countries and cultures in an incredible mosaic of collaboration to create programs in prevention of blindness and to offer lifelong education and cultural exchange among ophthalmologists.

The Pan-American is about relationships. In fulfilling this mission, we are organizing the 2nd Summit of the Americas that is planned for August 4, 2015. We have invited the 26 presidents of the affiliated national ophthalmological societies to discuss common challenges and hot topics. The world is changing rapidly and it is our goal to meet and develop strategies to adapt to these changes.

Pan-Americanism and its assortment of educational programs are worth supporting. An exciting dinner at Andrés Carne de Res will be the charity event planned for the Pan-American Foundation, on Friday, August 7, 2015, just outside of Bogotá. This is vibrant location which promises excellent food and entertainment. We welcome your participation in this event! Please go to www.paaoo.org to buy tickets. You will be able to purchase tickets on-site at the Congress as well. Proceeds from the raffle will directly support our educational programs.

For the first time, the Pan-American Foundation is organizing a raffle to take place at a Pan-American Congress. Proceeds from the raffle will directly support our educational programs that are not covered completely with restricted donations, such as expenses related to the eLearning and our Portal & Webinars, the Pan-American Research Day, the Lo Mejor de la AAO en Español meeting, publication expenses for Vision Pan-America: The Pan-American Journal of Ophthalmology, among other things. Please go to www.paaoo.org to buy tickets and you will be able to purchase tickets on-site at the Congress as well.

During the Congress we welcome our members of the Foundation’s Circle of Vision. The Circle of Vision consists of individual donors, Foundations and industry partners who support the PAOF annual with a donation of US$1,000 or more. These donations are the life blood of the Pan-American which support our many educational programs.

The PAAO launched its 12th leadership development course, Curso De Liderazgo, welcoming 16 new participants. The course took place in January in San Francisco, partnering with the American Academy of Ophthalmology (AAO) and the European Ophthalmological Society (SOE). All Curso participants are required to do a project as a part of their program in Advocacy, Prevention of Blindness or continuing education. This has been a spectacularly successful educational program. We thank our private donors and industry partners for their support of this program.

Dr. Paulo Dantas, Editor of the Vision Pan-America: the Pan-American Journal of Ophthalmology continues to develop and expand the Pan-American’s journal. This publication has entered its 14th year. The journal is now indexed in eight international indexing sourcing. We thank Dr. Dantas and his editorial board, the contributing authors, and industry sponsors continuing this excellent publication.

We look forward to continuing to fulfill the mission established 75 years ago: to provide continuing education, cultural exchange and prevention of blindness programs to the Ophthalmologists of the Americas and in the world. We would like to thank our partners, big and small, that so vitally help to support Pan-Americanism and its educational programs.

Best regards,
William De La Peña MD
Chairman of the Board
Pan-American Ophthalmological Foundation
GENERAL INSTRUCTIONS FOR ONLINE SUBMISSIONS

As of January 2012, all submissions to the journal Vision Pan-America need to be uploaded electronically at http://journals.sfu.ca/paa/index.php/journal/index through the Open Journal System software. Candidates must log in as Author with user name and password. To obtain a user name and password, please REGISTER.

If, for some reason, you are unable to access the system, please contact the Editorial Office by email at terri.grassi@paao.org or tgrassi@paao.org or by phone at 817-275-7553 with Terri Grassi.

All Editorial communications are done by email to the corresponding author. It is the corresponding author’s responsibility to keep all contact information (address, institution, phone number and email address) currently available updated.

Before submitting online, please have the following files ready for uploading: cover letter, copyright form(s), financial disclosure form(s), manuscript (including title page, abstract and references), tables, a separate file for each figure submitted and a separate file containing all the figures legends.

If submitting a revision, please include a response file (cover letter) with your answers or changes made in response to the issues raised by the editor, reviewers and/or the editorial office. This file is mandatory, when changes are made. The corresponding author must detail all the changes made, being as specific as possible (note paragraph, line, reference changed).

When submitting a revised file, please make sure to delete the old version and upload the revised one.

Once you “Submit to Journal Office” you will get an acknowledgement from the Editorial Office. An email will advise of the manuscript number that should be referred to in all communications regarding your submission.

Ethics Committee or Institutional Review Board (IRB) Approval

All papers involving human subjects, animals, or privileged health information must indicate approval by an established Institutional Review Board. The following disclaimer should be included in the body of the paper: “This study was evaluated and approved by the Institutional Review Board or Ethical Committee of (name of institution)”.

In countries or situations where an IRB is not available, the authors should confirm that the study and data collection comply with local legislation and with the principles of the Declaration of Helsinki (JAMA 2000;284:3043-3045).

DOWNLOADABLE FORMS FOR AUTHORS

Signatures of authors and co-authors must be original. Electronic signatures are not acceptable for legal and ethical reasons.

The entire process is electronic; therefore, all forms should be scanned and uploaded with your submission. If this is not possible, you may fax them with designated manuscript number and identification to 817-275-3961 at the Journal Editorial Office with attention to Terri Grassi.

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To qualify for authorship, authors must make substantial contributions to the intellectual content of the paper in each of the three suggested categories:

Category 1: concept and design, data acquisition or data analysis and interpretation.

Category 2: drafting the manuscript and/or critical revision of the manuscript.

Category 3: statistical analysis, obtaining funding, administrative, technical or material support, or supervision.

Vision Pan-America does not restrict the number of authors; however, in some exceptional conditions, the Editor may require that the number of authors be reduced if authorship criteria are not met.

The Corresponding Author is responsible for submission and all communication with the journal regarding that submission. He must advise the editors and editorial office of the receipt of the authorship criteria forms from all authors and confirm that all authors qualify; acknowledge receipt of and upload financial disclosure and copyright forms from all authors; and advise editors whether the submission was funded or not by national or international agencies.

All statements regarding study group authorship should be made in the cover letter by the corresponding author. However, if he/she is not the chair, a cover letter a statement from the study chair that the group authorship as stated on the cover page and/or members of responsible writing committee are both correct should be included.
Once a manuscript has been submitted, the order of authorship (including adding or removing authors) cannot be changed without written request to the Editorial Office from the corresponding author. Specifically, if an author is removed, a letter from that author agreeing to his/her removal is required. The new copyright form must show the title and authors’ names at the top of the form in the order they should appear in print and include original signatures from each. If the authors are not able to agree among themselves on authorship changes, the paper should be withdrawn.

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Download the ICMJE Form for Disclosure of Potential Conflicts of Interest at www.icmje.org

GUIDELINES FOR PREPARING A SCIENTIFIC MANUSCRIPT FOR SUBMISSION TO VISION PAN-AMERICA

Vision Pan-America has adopted the following guidelines related to the publication of biomedical research from the original work of influential editorial groups such as:


World Association of Medical Editors (WAME) at http://www.wame.org

Committee on Publication Ethics (COPE) COPE Guidelines (including Code of Conduct; Guidelines for Retracting Articles; Ethical Editing for New Editors) at www.cope.org

Council of Science Editors (CSE) CSE’s White Paper on Promoting Integrity in Scientific Journal Publications at www.councilscienceeditors.org

EQUATOR Network at http://www.equator-network.org

GENERAL PRINCIPLES

To be published in Vision Pan-America, the text of observational and experimental original articles must be divided into the following sections: Introduction, Methods, Results, and Discussion. Other types of articles, such as case reports, reviews, and editorials need to be formatted differently. A structured abstract in two languages should accompany the text.

Double-space all portions of the manuscript—including the title page, abstract, text, acknowledgments, references, individual tables, and legends to facilitate printing for reviewing and editing.

Authors should number all of the pages of the manuscript consecutively, beginning with the title page, to facilitate the editorial process.

Reporting Guidelines for Specific Study Designs

The general requirements listed in the next section relate to reporting essential elements for all study designs. Authors are encouraged also to consult reporting guidelines relevant to their specific research design. A good source of reporting guidelines is the EQUATOR Network http://www.equator-network.org/home/

A. Title Page

The title page should have the following information:

1. Article title: Authors should include all information in the title that will make electronic retrieval of the article both sensitive and specific.

2. Authors’ names and institutional affiliations: Vision Pan-America publishes only one author’s highest academic degree.

3. The name of the department(s) and institution(s) to which the work should be attributed.

4. Contact information for corresponding authors: Name, mailing address, telephone and fax numbers, and e-mail address of the author responsible for correspondence about the manuscript.
5. If existent, source(s) of support in the form of grants, equipment, drugs, or all of these.

6. A running head (first author surname and initials, followed by up to four words of the title) with no more than 40 characters (including letters and spaces) at the foot of the title page.

B. Abstract

Structured abstracts (Purpose, Design, Methods, Results, Conclusions and Financial Disclosure) are preferred for original research and systematic reviews. The abstract should provide the context or background for the study and should state the study’s purpose, basic procedures (selection of study subjects or laboratory animals, observational and analytical methods), main findings (giving specific effect sizes and their statistical significance, if possible), principal conclusions, and funding sources.

Articles on clinical trials should contain abstracts that include the items that the CONSORT group has identified as essential http://www.consort-statement.org.

Vision Pan-America is a multilingual journal, publishing papers in English, Portuguese, Spanish and French; however, for indexing purposes and better diffusion of the scientific information, Structured Abstracts must also be provided in English along with one in the original idiom, when other than English.

Provide five key words associated with your paper. The key words must be cited as listed in the MESH-Medical Subject Headings from the National Library of Medicine.

C. Introduction

Provide a brief context or background for the study (that is, the nature of the problem and its significance). State the specific purpose or research objective of, or hypothesis tested by, the study or observation; the research objective is often more sharply focused than stated as a question.

D. Methods

The Methods section should include only information that was available at the time the plan or protocol for the study was being written; all information obtained during the study belongs in the Results section.

Selection and Description of Participants

Describe the selection of the observational or experimental participants (patients or laboratory animals, including controls) clearly, including eligibility and exclusion criteria and a description of the source population.

Technical Information

Identify the methods, apparatus (give the manufacturer’s name and address in parentheses), and procedures in sufficient detail to allow others to reproduce the results. Cite references to established methods, including statistical methods (see below); provide references and brief descriptions for methods that have been published but are not well-known; describe new or substantially modified methods, give the reasons for using them, and evaluate their limitations. Identify precisely all drugs and chemicals used, including generic name(s), dose(s), and route(s) of administration.

Authors submitting review manuscripts should include a section describing the methods used for locating, selecting, extracting, and synthesizing data. These methods should also be summarized in the abstract.

Statistics

Describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals). References for the design of the study and statistical methods should be to standard works when possible (with pages stated). Specify the computer software used.

E. Results

Present results in logical sequence in the text, tables, and illustrations. Do not repeat all the data in the tables or illustrations in the text; emphasize or summarize only the most important observations. Extra or supplementary materials and technical detail can be placed in an appendix.

When data are summarized in the Results section, give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical methods used to analyze them. Restrict tables and figures to those needed to explain the argument of the paper and to assess supporting data.

F. Discussion

Emphasize the new and important aspects of the study and the conclusions that follow from them in the context of the totality of the best available evidence. Do not repeat in detail data or other information given in the Introduction or the Results section. For experimental studies, it is useful to begin the discussion by briefly summarizing the main findings, then explore possible mechanisms or explanations for these findings, com
pare and contrast the results with other relevant studies, state the limitations of the study, and explore the implications of the findings for future research and for clinical practice.

Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not adequately supported by the data.

Avoid claiming priority or alluding to work that has not been completed. State new hypotheses when warranted, but label them clearly as such.

G. References

General Considerations Related to References

Readers should be provided with direct references to original research sources whenever possible.

Avoid using abstracts as references. References to papers accepted but not yet published should be designated as “in press” or “forthcoming”; authors should obtain written permission to cite such papers as well as verification that they have been accepted for publication.

Information from manuscripts submitted but not accepted should be cited in the text as “unpublished observations” with written permission from the source.

Avoid citing a “personal communication” unless it provides essential information not available from a public source, in which case the name of the person and date of communication should be cited in parentheses in the text.

Editors will check the accuracy of all reference citations; thus, citation errors sometimes appear in the published version of articles. To minimize such errors, references should be verified using either an electronic bibliographic source, such as PubMed or print copies from original sources. Authors are responsible for checking that none of the references cite retracted articles except in the context of referring to the retraction. For articles published in journals indexed in MEDLINE, the ICMJE and Vision Pan-America consider PubMed the authoritative source for information about retractions.

Reference Style and Format

The Uniform Requirements style for references is based largely on an American National Standards Institute style adapted by the NLM for its databases. Authors should consult NLM’s Citing Medicine for information on its recommended formats for a variety of reference types. Authors may also consult sample references, a list of examples extracted from or based on Citing Medicine for easy use by the ICMJE audience; these sample references are maintained by NLM.

References should be numbered consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by Arabic numerals in parentheses. References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure. The titles of journals should be abbreviated according to the style used in the list of Journals Indexed for MEDLINE, posted by the NLM on the Library’s Web site.

H. Tables

Type or print each table with double-spacing on a separate sheet of paper. Number tables consecutively in the order of their first citation in the text and supply a brief title for each. Do not use internal horizontal or vertical lines. Give each column a short or an abbreviated heading. Authors should place explanatory matter in footnotes, not in the heading. Explain all nonstandard abbreviations in footnotes, and use the following symbols, in sequence:

*, †, ‡, §, ||, ¶, **, ††, ‡‡, §§, ||||, ¶¶, etc.

Be sure that each table is cited in the text.

I. Illustrations (Figures)

Figures should be either professionally drawn and photographed, or submitted as photographic-quality digital prints. In addition to requiring a version of the figures suitable for printing, Vision Pan-America now ask authors for electronic files of figures in a format (for example, JPEG or GIF) that will produce high-quality images in the Web version of the journal; authors should review the images of such files on a computer screen before submitting them to be sure they meet their own quality standards.

For x-ray films, scans, and other diagnostic images, as well as pictures of pathology specimens or photomicrographs, send sharp, glossy, black-and-white or color photographic prints, usually 127 x 173 mm (5 x 7 inches) or high quality jpeg or TIFF images.

Photographs of potentially identifiable people must be accompanied by written permission to use the photograph.

Figures should be numbered consecutively according to the order in which they are cited in the text. If a figure has been published previously, acknowledge the original source and submit written permission from the copyright holder to reproduce the figure. Permission is required irrespective of au
Reference Style and Format

Editors will check the accuracy of all reference citations. Libraries of frequently referenced journals should be available to referees. Authors should be cognizant of the correct usage of abbreviations in the title of the manuscript. Use only standard abbreviations. Avoid abbreviations in the title of the manuscript. The spelled-out abbreviation followed by the abbreviation in parentheses should be used on first mention unless the abbreviation is a standard unit of measurement.

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Authors should obtain written permission to cite such papers in the text. If a figure has been published previously, acknowledge the source. Identify references in text, tables, and legends by Arabic numerals, according to the order in which they are cited in the text. If a reference is cited in the text, it must be listed in the reference section. References should be verified using either an electronic bibliographic source, such as PubMed or print copies from original sources. Authors are responsible for checking that none of the references cite retractions.

B. Title and Citation of Journals

The titles of journals should be abbreviated according to the style used in the list of Journals Indexed for MEDLINE, published by the National Library of Medicine. The titles of proceedings should be abbreviated in the text as well as in the reference list. The spelled-out title followed by the abbreviated title in parentheses should be used on first mention unless the abbreviation is a standard unit of measurement. Abbreviations in footnotes, and use the following symbols: *, †, ‡, §, ||, ¶, **, ††, ‡‡, §§, ||||, ¶¶, etc.

C. Date of Communication

The date of communication should be cited in parentheses in the text. If a figure has been published previously, acknowledge the source. If a table has been published previously, acknowledge the source.

D. Copies of Articles

Information from manuscripts submitted but not published should be provided in parentheses where appropriate. Authors should place explanatory matter in footnotes, not in the heading. Authors should place explanatory matter in footnotes, not in the heading. Be sure that each table is cited in the text.

E. Figure Legends

Legends for Illustrations (Figures)

Type or print out legends for illustrations using double spacing, on a separate page, with Arabic numerals corresponding to the illustrations. Legends of figures must be submitted in a separated word format file.

F. Tables

Type or print each table with double-spacing on a separate sheet of paper. Number tables consecutively. The spelled-out abbreviation followed by the abbreviation in parenthesis should be used on first mention unless the abbreviation is a standard unit of measurement.

J. Units of Measurement

Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples.

Temperatures should be in degrees Celsius.

Drug concentrations may be reported in either SI or mass units, but the alternative should be provided in parentheses where appropriate.

K. Abbreviations and Symbols

Use only standard abbreviations. Avoid abbreviations in the title of the manuscript. The spelled-out abbreviation followed by the abbreviation in parenthesis should be used on first mention unless the abbreviation is a standard unit of measurement.
Keynote Lectures / Conferencias magistrales

Moacryl E. Alvaro Pan-American Lecture: Anesthesia in Ophthalmology: A Historical Perspective

Dr. Mark J. Mannis is Professor and Chair of the Department of Ophthalmology & Vision Science, UC Davis Eye Center at the University of California, Davis. He also serves as Medical Director of Sierra Regional Eye and Tissue Donor Services in Sacramento, California. He completed his ophthalmology residency training at Washington University in St. Louis and a fellowship in Cornea and External disease at the University of Iowa. His primary research includes studies in the development of new anti-infective agents, corneal transplantation, visual rehabilitation of patients with corneal disease, and the management of ocular surface disease and diseases of the ocular surface. Clinically, he specializes in corneal surgery and diseases of the external eye. Dr. Mannis is editor/author of five recent books: Cornea—now in its third edition published by Elsevier—a two volume comprehensive text on the cornea and external eye co-edited with Jay Krachmer and Edward Holland, and cited as one of the 100 most important texts in ophthalmology of the 20th century; Eye and Skin Disease - a text for both ophthalmologists and dermatologists on skin diseases with ocular manifestations, co-edited with Marian Macsai and Arthur Huntley; Corneal Transplantation: A History in Profiles - co-authored and co-edited with Avi Mannis; Ocular Surface Disease co-authored with Edward Holland now in a new edition published by Elsevier; and Contact Lenses in Ophthalmic Practice, a manual on contact lenses, translated and edited by Dr. Mannis. Dr. Mannis was Editor-in-Chief of the journal Cornea as well as Founding Editor of Vision Pan-America, the Pan American Journal of Ophthalmology. He has published widely in peer-reviewed journals with over 130 published papers and is a reviewer for the Archives of Ophthalmology, the American Journal of Ophthalmology, Ophthalmology, and Cornea and Contact Lenses. Dr. Mannis is a recipient of the R. Townley Paton Award in eye banking from the Eye Bank Association of America and was a recipient of the Lew Wasserman Award in research from Research to Prevent Blindness, Inc. for his work in the development of antimicrobial peptides in ophthalmology. He is President Emeritus of the Cornea Society. And recently completed his term as President of the Pan-American Association of Ophthalmology. He conducts a busy referral practice in diseases of the cornea and external eye based at the University of California, Davis.

AJO Lecture: From Investigation to Innovation: Atypical and Acanthamoebal Corneal Infections

Dr. Elmer Y. Tu is a Professor of Clinical Ophthalmology and Director of the Cornea and External Disease Section of the Department of Ophthalmology and Visual Sciences, University of Illinois College of Medicine, Chicago, Illinois. He received a BS in Chemistry from the University of Miami in 1984 and an MD from the University of Miami School Of Medicine in 1988. He completed an ophthalmology residency at the University of Wisconsin, Madison in 1992 and a fellowship in Cornea and External Disease at the Bascom Palmer Eye Institute in 1993. He was formerly Director of the Corneal and External Disease Section, Department of Ophthalmology, University of Texas Health Science Center- San Antonio, San Antonio, Texas until 1999 and served as Residency Program Director for a portion of his time there. His area of research interest involves infectious and inflammatory diseases of the ocular surface and corneal surgery. Dr. Tu is a recipient of both an American Academy of Ophthalmology Achievement Award and Secretariat Award. He was elected to the Alpha Omega Alpha Honor Society and has been an expert consultant to the FDA Ophthalmic Devices Panel. He serves on the American Academy of Ophthalmology Basic and Clinical Science Course Cornea/External Disease Subcommittee, the AUPO Fellowship Compliance Committee and previously served on the Knowledge Base-Cornea/External Disease-Panel Subcommitte. He currently serves as Secretary/Treasurer of the Cornea Society and is a past President of the Ocular Microbiology and Immunology Group. He is an Executive Editor for Cornea and External Diseases for the American Journal of Ophthalmology, is a Section Editor of the AAO publication, Focal Points, and is on the Editorial Board of the subspecialty journals Cornea and Eye and Contact Lens. He performs peer review on a regular basis for numerous national and international journals. He has also received numerous teaching awards, presented numerous national, named and international invited lectures and has been listed as a Best Doctor in America for over 10 years. In total, he has over 100 book chapters, peer-reviewed manuscripts, and abstracts in publication.
Gradle Lecture: Argus II Retinal Prostheses in Retinitis Pigmentosa Patients: The Results of the KKESH Collaborative Retina Study Group

Dr. J. Fernando Arévalo completed his medical and ophthalmology training in Caracas, Venezuela, his native country, before traveling to Bogotá, Colombia for a two-year Retina and Vitreous fellowship at the Barraquer Institute and the Fundación Oftalmológica Nacional (University of El Rosario) in 1992-1993. From 1993-1995, Dr. Arévalo did a 2-year Retina and Vitreous/Uveitis and Intraocular Inflammation fellowship at the University of California, San Diego from 1993-1995 under the mentoring of Dr. William Freeman. The following year, Dr. Arévalo went to Philadelphia, Pennsylvania, for his Ocular Oncology fellowship at Wills Eye Hospital under the mentoring of Drs. Jerry and Carol Shields. Dr. Arévalo returned to Venezuela (1996), where he was appointed to the rank of Chairman of Ophthalmology at the Clínica Oftalmológica Centro Caracas in Caracas, Venezuela, and Professor of Ophthalmology at the University of Los Andes, Merida, Venezuela. In 2001, Dr. Arévalo founded the Arévalo-Coutinho Foundation for Research in Ophthalmology. In 2011, Dr. Arévalo was invited by Johns Hopkins University (JHU) in Baltimore to work as a Professor of Ophthalmology and the Chief of the Retina Division of the King Khaled Eye Hospital (KKESH) in Riyadh, Saudi Arabia for a four-year tenure (July 2011-15), followed by an appointment at the Wilmer Eye Institute as the Edmund F. and Virginia B. Ball Professor of Ophthalmology in the Retina Division. As a clinical scientist, Dr. Arévalo has more than 800 scientific publications (more than 200 on MEDLINE), ten books, more than 700 scientific paper presentations, and more than 1000 invited lecture presentations in North-America, South-America, Central-America, Europe, Africa, and Asia that have led to international recognition and awards. Dr. Arévalo belongs to numerous scientific societies including the American Academy of Ophthalmology, the Association for Research in Vision and Ophthalmology, the Pan-American Association of Ophthalmology, the American Society of Retina Specialists, the Retina Society, the Macula Society, the Club Jules Gonin, the International Uveitis Study Group, the International Society of Ocular Oncology, Fellow of the American College of Surgeons, and has a seat at the Academia Oftalmológica Internacionalis. Dr. Arévalo is a former President of the Pan-American Retina and Vitreous Society (2006-2008). Dr. Arévalo is the Executive Vice-president (2011-2015) and President-Elect (2015-2017) of the Pan-American Association of Ophthalmology (PAAO), and is a member of the Board of Directors of the Pan-American Ophthalmological Foundation (PAOF).

Colombian Society of Ophthalmology Lecture: Valor de la ecografía preoperatoria en la evaluación de nuestras cataratas

Dr. Ramiro Prada Reyes is an ophthalmologist whose specialty is ocular ultrasound. He was trained at the Universidad Nacional de Colombia and at the Fundación Oftalmológica Nacional in Bogotá, Colombia. Dr. Prada is an Associate Professor at the Universidad Nacional de Colombia in Bogotá and an Assistant Professor at the Pontificia Universidad Javeriana in Bogotá. Dr. Prada will have served as a member on the Colombian Society of Ophthalmology board of directors from 1996-2016, and as President of the Society from 2002-2004. He is the Founder and President of the Colombian Group of Ultrasound and Diagnostic Imaging. Dr. Prada presented the Named Lecture at the Colombian Society Congress in 2010. He serves as the current President of the Latin American Council of Ocular Ultrasound (CLO) for the term 2014 – 2016. He is Vice Presidente for the XXI Pan-American Congress of Ophthalmology that is taking place in August 2015 in Bogotá and will be presenting the Colombian Society’s Named Lecture at this meeting. Dr. Prada is an active member of the Colombian Society of Ophthalmology, the Pan-American Association of Ophthalmology, a member of CLEO, a member of SIDUO, and corresponding member to the Peruvian Society of Ophthalmology, a ICO coordinator for Colombia 2007-2010 and 2013-2015, a member of the PAAO Board of Directors 2003-2009 and 2013-2015, a member of the PAAO Ethics Committee, an international invited speaker at congresses and courses to speak on ocular ultrasound. Dr. Prada has published several articles on Ocular Ultrasound, General Ophthalmology and the History of Ophthalmology in Colombia in national journals.
Rifa y cena de la Fundación Panamericana en el marco del XXXI Congreso de Oftalmología

En el marco del Congreso habrá dos oportunidades emocionantes para apoyar la misión de la Panamericana de proporcionar un conocimiento oftálmico para conservar la vista y habilidades a miles de oftalmólogos que están trabajando todos los días para mejorar la calidad del cuidado de los ojos y evitar la ceguera: La Rifa y la Cena de la Fundación de la Panamericana.

Los boletos de la rifa se venderán por US $ 20 por boleto, y los boletos para la Cena están disponibles por US $ 150 cada uno.

Asista a una gran noche el viernes 07 de agosto 2015, en el reconocido restaurante Andrés Carne de Res en Bogotá, Colombia. Y como un bono, por la compra de un boleto de la cena usted recibirá un (1) boleto para la rifa. Los ingresos de estas dos actividades se destinarán a apoyar nuestros proyectos de educación continua y prevención de la ceguera.

PAOF dinner and raffle at the XXXI Congress of Ophthalmology

The Congress will have two exciting opportunities to support the mission of the Pan-American Foundation to provide an ophthalmic knowledge to preserve vision and skills to thousands of ophthalmologists who are working every day to improve the quality of eye care and prevent blindness: the Panamerican Raffle and Dinner.

The raffle tickets will be sold for $ 20 per ticket, and tickets for the dinner are available for $ 150 each.

Join us for a great night on Friday, August 7, 2015, at the renowned Andrés Carne de Res restaurant in Bogota, Colombia. And as a bonus for buying a dinner ticket you will receive one (1) raffle ticket. Revenues from these activities will go to support our ongoing education and prevention of blindness projects.
En el marco del Congreso habrá dos oportunidades emocionantes para apoyar la misión de la Panamericana de proporcionar un conocimiento oftálmico para conservar la vista y habilidades a miles de oftalmólogos que están trabajando todos los días para mejorar la calidad del cuidado de los ojos y evitar la ceguera: La Rifa y la Cena de la Fundación de la Panamericana.

Los boletos de la rifa se venderán por US $ 20 por boleto, y los boletos para la Cena están disponibles por US $ 150 cada uno.

Asista a una gran noche el viernes 07 de agosto 2015, en el reconocido restaurante Andrés Carne de Res en Bogotá, Colombia. Y como un bono, por la compra de un boleto de la cena usted recibirá un (1) boleto para la rifa. Los ingresos de estas dos actividades se destinarán a apoyar nuestros proyectos de educación continua y prevención de la ceguera.

The Congress will have two exciting opportunities to support the mission of the Pan-American Foundation to provide an ophthalmic knowledge to preserve vision and skills to thousands of ophthalmologists who are working every day to improve the quality of eye care and prevent blindness: the Panamerican Raffle and Dinner.

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www.paaobogota2015.com
2015 Pre ARVO Pan-American Research Day

Denver, CO, USA. Saturday, May 2, 2015 Sheraton Denver Downtown Hotel

Registration:
10:30 am - 12:30 pm

Working Session:
12:30 pm - 5:30 pm

Cocktail reception:
6:00 - 9:00 pm (light buffet will be served)

4 Travel Scholarships and 3 Research Incentive Awards to be awarded on site!

Sheraton Denver Colorado Downtown Hotel,
1550 Court Pl, Denver CO 80202

Keynote Speakers:

J. Bronwyn Bateman, MD.
Specialist in Genetics and Pediatric Ophthalmology,
Clinical Professor of Ophthalmology at the David Geffen School of Medicine at UCLA.

Alfredo Sadun, MD.
Flora L. Thornton Endowed Chair and Professor of Neuro-Ophthalmology
Optic Nerve and Optic Neuropathies and Research at the Doheny Eye Center UCLA.

Sponsored by Pan-American Association of Ophthalmology
Co-Sponsored by ARVO, PAOF

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INTRODUCING THE TECNIS® TORIC IOL — all the advancements and advantages of a TECNIS® IOL, now available for precise astigmatism correction. With the excellent stability that Tri-Fix 3-Point fixation is designed to deliver, the TECNIS® Toric IOL offers you the solution you seek in astigmatism correction. LEARN MORE AT WWW.TECNISIOL.COM/EU

TECNIS® 1-Piece lenses are indicated for the visual correction of aphakia in adult patients in whom a cataractous lens has been removed by extracapsular cataract extraction. These devices are intended to be placed in the capsular bag. For a complete listing of precautions, warnings, and adverse events, refer to the package insert. Rx only. TECNIS and TriFix are trademarks owned by or licensed to Abbott Laboratories, its subsidiaries or affiliates. ©2012 Abbott Medical Optics Inc. www.AbbottMedicalOptics.com 2012.03.06-CT4818
Preserva la visión alcanzando las menores presiones objetivo en más pacientes

Investigadores de diversos estudios, (AGIS, Shirakashi, Shields) han comprobado de alcanzar y mantener la PIO entre 14 y 15 mmHg reduce la progresión de pérdida del campo visual1.2.3.

Lumigan® alcanza la PIO-objetivo de 14/15 mmHg en un mayor número de pacientes:

<table>
<thead>
<tr>
<th>Porcentaje de Pacientes que alcanzaron la PIO-Objetivo ≤14</th>
<th>Lumigan vs. timolol4</th>
<th>Lumigan vs. dorzolamida/timolol5</th>
<th>Lumigan vs. latanoprost6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porcentaje de Pacientes que alcanzaron la PIO-Objetivo ≤15</td>
<td>21%</td>
<td>9%</td>
<td>17%</td>
</tr>
<tr>
<td>Porcentaje de Pacientes que alcanzaron la PIO-Objetivo ≤15</td>
<td>31%</td>
<td>16%</td>
<td>24%</td>
</tr>
</tbody>
</table>


La dosis no debe exceder a una dosis única diaria, pues fue demostrado que la administración más frecuente puede inducir la hipertensión ocular. Lumigan® (bimatoprost) puede ser administrado concomitantemente con otros productos oftálmicos topicos para reducir la hipertensión intraocular, provided the interval of untie no menos 5 minutos entre la administración de los medicamentos. VENTA BAJO PRESCRIPCIÓN MÉDICA. ESTE PRODUCTO ES UN MEDICAMENTO NUEVO AUNQUE LAS INVESTIGACIONES HAYAN INDICADO EFICACIA Y SEGURIDAD. SI LOS SINTOMAS NO DESAPARECEN, CONSULTE A SU MÉDICO. LAS INVESTIGACIONES HAYAN INDICADO EFICACIA Y SEGURIDAD. SI LOS SINTOMAS NO DESAPARECEN, CONSULTE A SU MÉDICO.