EARLY PRESBYOPOSES

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ASOCORNEA
COLOMBIA
NEW PRESBYOPIA POPULATION

- Plenty life
- Active
- “Young”
- Close vision world

Life after 40y

Visual comparison of multifocal contact lens to monovision.
THE STATE OF ART OF CONTACT LENS FITTING FOR PRESBYOPIA

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ASOCORNEA
ASOCIACIÓN COLOMBIANA DE CORREcción Y CIRUGÍA refractiva
GETTING RID OF EYE GLASSES = GOLD STANDARD OF VISUAL EXPECTED RESULTS

- Early forth decade of life
- Contact lens use still a reliable alternative
- Patient selection and education
Priorities

- Comfort
- **Image**
- Vision
- Profesion-tasks
- Make up

TYPES OF CORRECTION

- Undercorrection
- Monovision
- Bifocals
- Multifocals
- Cosmetics
- Residual Ametropia
- Smart CL

Stereoacuity with simultaneous vision multifocal contact lenses.
Ferrer-Blasco T, Madrid-Costa D. Optom Vis Sci. 2010 Sep;87(9):E663-8
CONTRA

- No previous CL use
- Cost
- Dry eye
- Disparity
- Stereopsis
- Glare
- Intolerance

Quantification of ghosting produced with presbyopic contact lens correction.

Influence of presbyopic corrections on driving-related eye and head movements.
Chu BS, Wood JM, Collins MJ. Optom Vis Sci. 2009 Nov;86(11):E1267-75
Planned monovision contact lens wearing for low hyperopic/myopic presbyopes patients

1. Pre- LASER
2. After overcorrection

- Early Presbyopic patients
  (Hyperopic/myopic patients)
GP CONTACT LENSES

- Mono-bi-multifocals
- “Inverse” ortho-keratology
VFL BIFOCAL CONTACT LENSES

- Accurate centering
- Right Fluorescein pattern
FOLLOW UP OF 15 CASES
NUMBER OF YEARS USING VFL

CASES

Number of years wearing VFL CL

0 1 2 3 4 5

18
16
15
14
13
11
8
5
4

X=49 y

J2
SMART CONTACT LENSES

- Virtual vision
- IOP monitoring
- pH, enzymes, osmolarity, GPS

U. Washington
Profesor James Brandt-U. California en Davis.
EFFECTS OF PHARMACOLOGICALLY MANIPULATED AMPLITUDE OF ACCOMMODATION IN PRESBYOPIC PATIENTS
PHARMACOLOGICAL AIDS FOR PRESBYOPIA

- PILOCARPINE® parasympathomimetic alkaloid
- ALPHAGAN P® selective alpha-2 adrenergic agonist for ophthalmic use
In-office clinical investigation to determine if Brimonidine ophthalmic solution improves the depth of focus, and the near vision in early presbyops.

Range of accommodation, pupil size, IOP dates and refraction changes and vision tests were measured.

Population: 21 eyes of patients between 38 to 49 years old (x 43y)
After 30 minutes of drop application:

- Changes in pupil size: $x=0.2\text{mm}$
- Changes in accommodative range: $0.5-1\text{ Diop}$
- Myopic shift: $x=0.45\text{ Diop}$
- Improvement in close vision: 1-3 lines
**J-CHART READING**

Arenas E, et al.-2012
REFERENCES


Multiple trials
“Real life” wear
Close supervision
Overuse

An international survey of contact lens prescribing for presbyopia.
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Blog: Alex Mieth: Los ojos de las mujeres
STUDY NUMBER TWO:
USE OF PILOCARPINE AND BRIMONIDINE IN EARLY
EMETROPIC PREBYOPS. CLINICAL MEASUREMENTS

PUPIL SIZE

SCELLEN CHART READING
INTRODUCTION

- WEARING GLASSES FOR PREBYOPIA IS A SYMBOL OF AGING
- EARLY PREBYIOPS ARE NOT SURGICAL CANDIDATES
- FEW CONTACT LENSES WEARERS ARE ADVISED TO EXCHANGE PB CL
Pupillographic, accommodative, topographic and refractive parameter changes were measured before after topical instillation of Brimonidine tartrate in healthy subjects.
Accommodation (% maximum)

Pilocarpine Concentration

2%  n = 6
4%  n = 6
6%  n = 9
USE OF PILOCARPINE AND BRIMONIDINE IN EARLY PREBYOPS PROTOCOL

- Blinded study
- One eye Pilocarpine
- Second Eye Brimonidine
- Measurement of Snellen chart and pupil size 30 minutes, 1, 2 and 4 hours after
PUPIL SIZE
Materials and Methods

- An in-office clinical investigation to determine the contact lenses fitting success rate for presbyopia
- The reasons of failure were recorded
- The patients population consisted of presbyopic patients between 50 and 55 years old, divided in three groups:
  1. Emmetropic patients
  2. Low myopic or hyperopic patients (2-4 D)
  3. Patients with varied myopic refractive defects (myopic astigmatism)
SOFT CONTACT LENSES FOR EMMETROPIC AND LOW AMETROPIC PATIENTS

- **Emmetropic**:  
  - Bifocal soft contact lenses in both eyes  
  - One lens with plus power for close vision, in the Non-dominant eye

- **Low Myopic**:  
  - One soft contact lens with myopic correction for distance in the Dominant eye

- **Low hyperopes**:  
  - One lens with plus power for close vision, in the Non-dominant eye
SOFT CONTACT LENSES FOR PRESBYOPIA

- Mono-Bi-multifocals

- Broad add power profile across optic zone.
- Hydraglyde™ Optics
- Blended zone to diffuse power transitions to provide crisp, clear, natural vision.
- Equifocal Mass Distribution
- Facilitates less accommodation necessary for effective functioning of the aphakic optics.
- Comfort Blend Geometry
- Releases back surface mass, creating a consistent peripheral zone and enhancing comfort.
- Rounded Edge Profile
- Provides smooth movement over conjunctival tissue for excellent comfort.
Patients are fitted bilaterally with:
- PureVision multifocal B & L soft contact lenses
- Exceptional vision with high-definition aspheric optical design
- Comfort-enhancing AerGel material repels debris and stays moist all day
VFL© GAS PERMEABLE CONTACT LENSES

VFL 3 ©

Aspheric base curve flattens from the center to the periphery, producing a progressive increase in plus power (multifocal effect)
• Add: +0.75 to + 2.50 Diopters
• Power: -10.00 to +10.00 Diopters
Myopic patients (16) were fitted bilaterally with VFL-GP multifocal contact lenses

- Add: _+2.50_____
- Flat K: 42.50 to 49.50 Diopters
- Astigmatism up to 4.75 Diopters (range: 1.58)
- Corrected far vision: 20/25
- Corrected near vision: Average :J2
IDEAL LUBRICANT

- No debris
- No grease
- No gel
- No “inteligent”
- No preservatives
MATERIALS AND METHODS

- An in-office clinical investigation to determine the contact lenses fitting success rate for presbyopia
- The reasons of failure were recorded
- The patients population consisted of presbyopic patients between 50 and 55 years old, divided in three groups:
  1. Emmetropic patients
  2. Low myopic or hyperopic patients (2-4 D)
  3. Patients with varied refractive defects (myopic astigmatism or hyperopic astigmatism)
Until the advent of bifocal hydrogel lenses, planned monovision contact lens wearing for emmetropic or low hyperopic/miopic presbyopes patients was the rule; there were no options for contact lens fitting for high refractive defect patients with presbyopia.

We present here different alternatives for contact lens use each condition in middle age presbyopia patients.

Patient selection and education play key roles in optimizing patient success.
FIN

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Blog. Alex Mieth : Los ojos de las mujeres
PRESBICIA
REFERENCES

- Stein HA. The management of presbyopia with contact lenses: A review. *CLAO J* 1990;16:33-8


- Bennett, ES. Contact lens correction of presbyopia. *Clinical and Experimental Optometry*, 2008;91:265-278


REFERENCES


- Stein HA. The management of presbyopia with contact lenses: a review. CLAO J. 1990;16:33-8

- Bennett, E. S. Contact lens correction of presbyopia. Clinical and Experimental Optometry, 2008;91: 265-278.
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We present here different alternatives for contact lens use for each condition in middle age presbyopia patients.

Patient selection and education play key roles in optimizing patient success.
# Rules for VFL CL Fitting

<table>
<thead>
<tr>
<th>K Flat B. Curve</th>
<th>VFL K Base</th>
<th>CL Diameter</th>
</tr>
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<tbody>
<tr>
<td>42.00</td>
<td>44.25</td>
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</tr>
<tr>
<td>42.50</td>
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<tr>
<td>46.50</td>
<td>49.25</td>
<td>9.0</td>
</tr>
</tbody>
</table>
IDEAL CASES FOR VFL

- Myopes up to - 6.00 D
- Hyperopes up to - 4.00 D
- Astigmatism up to 3.00 D
- Base curve from 42 D up to 48 D
- Maxim add power + 2.50 D
LENTES VFL

Parámetros:
- Adiciones hasta + 2.50 D
- Curva Base desde 6.80 hasta 7.90
- Diámetros de 9.0 a 9.4 mm
- Colores varios
<table>
<thead>
<tr>
<th>Base</th>
<th>Curve</th>
<th>Diameter</th>
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<tbody>
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<td>9.0</td>
</tr>
<tr>
<td>46.00</td>
<td>6.95</td>
<td>9.0</td>
</tr>
</tbody>
</table>
- Flat K VFL 3 Base Curve* VFL 3 Diameter
  42.00D 7.60 mm 9.4 mm 42.50 7.50 9.4 43.00
  7.40 9.2 43.50 7.30 9.2 44.00 7.25 9.2 44.50
  7.15 9.2 45.00 7.10 9.2 45.50 7.00 9.0 46.00
  6.95 9.0 46.50 6.85 9.0 * With the rule
  corneal astigmatism greater than 2 diopters,
  against the rule, oblique or other corneal
  topography may require a base curve steeper
  than the normal suggested starting point.
  Tight or narrow lid apertures may also
  require a steeper base curve selection. A 10mm base curve change is required to
  produce a significant on eye affect.
Broad add power profile across optic zone.

Natra-Sight™ Optics
Broad near to distance power transition to provide crisp, clear, natural vision

Equalized Mass Distribution
Facilitates lens centration essential for effective functioning of the aspheric optics

Comfort Blend Geometry
Reduces back surface mass, creating a consistent peripheral zone and enhancing comfort

Rounded Edge Profile
Provides smooth movement over conjunctival tissue for excellent comfort
COLOR

Freshlook Colors
Gris-Verde-Violeta
Azul-Zafiro-Avellana

Freshlook Colorblends
Gris-Verde-Avellana-
Miel-Marron-Amatista
Azul-Turquesa-Zafiro

Expressions Colors
Azul Osc.-Azul-Aqua
Verde-Gris-Avellana
Marron
ENHANCERS

Freshlook Dimensions
Aqua-Azul Pacifico-Verde

Freshlook Radiance
Plata-Nacar-Bronce-Oro

Expressions Accents
Aqua-Violeta-Verde-Azul
Avanzada Tecnología que otorga naturalidad, con un 55 % Agua y un 45 % Phemfilcon A", que los deja situados en el Primer Grupo de Lentes de Contacto Cosméticos, Otorgándote...

PUPIL

Extensiones

Lentes de contacto

Pelucas de fantasía

Pestañas
RESULTS
COMPLICATIONS

1) Cosmetic contact lens-related Acanthamoeba keratitis.
   McKelvie J, Patel D, McGhee C.
   PMID: 19594573 [PubMed - in process]

   Presumed corneal argyrosis from occlusive soft contact lenses: a case report.
   Hau SC, Tuft SJ.
   Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom.
   scott.hau@moorfields.nhs.uk

   Late-onset interface inflammation associated with wearing cosmetic lenses 18 months
   after laser in situ keratomileusis.
   Choi HW, Moon SW, Nam KH, Chung SH.
   Department of Ophthalmology, Inje University College of Medicine, Seoul Paik Hospital,
   Seoul, Korea.
La Academia Americana de Oftalmología ofrece estas recomendaciones para comprar y utilizar cualquier tipo de lentes de contacto, incluidos los cosméticos o aquellos para disfrazarse:

*Siempre acuda a un especialista profesional de la visión, tal como el oftalmólogo antes de comprar los lentes.
*Nunca compre lentes de cualquiera que no está autorizado.
*Siempre siga las instrucciones para cuidado, limpieza y desinfección adecuada.
*Nunca preste o compartga sus lentes de contacto con cualquier otra persona, ni use los lentes de ellos.
*No duerma con lentes de contacto en sus ojos, a menos que estén específicamente aprobados por la Food and Drug Administration (FDA) para el uso nocturno.
*No practique natación mientras utilice lentes de contacto.