

NCC 'Beyond 2020' Paper Abstracts
Free paper sessions
Sunday, March 26, 2022 15:00 – 16:00
Netherlands, Veldhoven, de Koningshof,
Baroniezaal

Organization Section: NCC/ BCLA

Moderator: Neil Retallic & James
Wolffsohn

Paper Number: 1

Presentation time: 15:00-15:10

**A clinical performance comparison of
three soft daily disposable multifocal
contact lenses**

*Neil Retallic, Sachiko Nishimura, Mizuki
Ueda, Keiji Sugimoto*

Purpose: To compare the clinical and
subjective performance of three soft daily
disposable multifocal silicone hydrogel
contact lenses.

Method: This was a randomized, open-
label, crossover, bilateral study,
controlled by cross-comparison.

Results: Nineteen early presbyopes
(reading additions +0.75DS to +1.75DS)
were dispensed and completed the study.
Lenses were worn on average for $11.1 \pm$
 2.2 hours each day, 6.6 ± 0.6 days per
week. Lens performance was similar for
most parameters including comfort, lens
fit, lens surface and biomicroscopic
findings.

Distance visual acuity showed a
statistically significant difference at follow
up, with Midafilcon-A lenses (-0.11 ± 0.07)
being better than Somofilcon A ($-0.07 \pm$
 0.06) to a level less than half a line
($p=0.03$). Near visual acuity was better
with Somofilcon A (0.04 ± 0.17) than
Midafilcon A (0.09 ± 0.15), by about half a
line at both visits ($p=0.01$).

Subjective findings for vision were similar,
except for distance vision clarity at fitting,
which favoured Midafilcon-A lenses
($p=0.03$). 68% rated "Excellent" compared
to 26% Somofilcon-A and 47% Delefilcon-
A. No significant differences were seen at
follow up ($p=0.13$).

All lens fits were acceptable, with an 83%
first lens fitting success rate, (ranging
from 74-95%).

Conclusions: The variations in visual
performance may be due to the different
optical designs, which highlights the
importance of following each
manufacturer's fitting guidance to
maximise success.

Overall, all three lens types performed
very well, and generally to similar levels,
with high first lens success rates.
This study supports multifocal soft contact
lenses as an excellent vision correction
option for presbyopia.

Research funding received: This research
was conducted by Eurolens Research in
the UK and funded by Menicon.

Paper Number: 2

Presentation time: 15:10-15:20

**Prediction of Intention to Purchase of
Multifocal Contact Lenses at Time of
Dispensing**

*Michel Guillon, Pasquale Pepe, Ruchi
Gupta, Anna Sulley, Percy Lazon de la Jara*

Purpose: A concern when fitting
multifocal contact lenses (MFCL) is that
while acceptance may be good on
dispensing, satisfaction after a period of
wear declines and intention to continue
wearing the lenses is unpredictable. This
study was a meta-analysis of data from
MFCL studies to test for the predictability
of intention to purchase (ITP) and its
association with overall vision satisfaction
(OVS).

Method: Three studies tested MFCL over
1-week of wear following the same
protocol, that included OVS assessment
on dispensing and both OVS and ITP at 1-
week. In each study, two of three widely
used MFCL types (MyDay multifocal,
Biofinity multifocal and 1-DAY ACUVUE
MOIST MULTIFOCAL) were dispensed for
1-week in random order. OVS was
recorded on a 100-point VAS and ITP on a
5-point LIKERT scale. Predictability of 1-
week response from data of dispensing
was assessed by CHAID decision tree
analysis and association between OVS and
ITP by Chi-square cross tabulation.

Results: 210 participants (152 females &
58 males; 53.8 ± 6.5 years) completed the

studies, equally distributed between emergent n=65, established n=70 and advanced n=75 presbyopes. Positive ITP was 55.0% (emergent 60.0%, established 48.7%; advanced 56.7%) with 19.5% uncertain and 25.5% negative. OVS at dispensing was an indicator of ITP ($p < 0.001$): for OVS dispensing ≤ 63 ITP was 65.9% negative and 17.1% positive and OVS at dispensing > 94 was 74.6% positive ITP and 16.1% negative. For the 155 subjects reporting good OVS (satisfaction highest tercile) at 1-week, 128 (82.5%) had a positive ITP and 7 (4.5%) negative.

Conclusions: OVS at the time of fitting MFCL is an indicator of ITP that helps inform the eye care professional on the likeliness of success, hence, reducing unsuccessful dispensing and optimizing chair time.

Research funding received: Study sponsored by CooperVision, Inc.

Paper Number: 3

Presentation time: 15:20-15:30

Perceptions of contact lens wear amongst spectacle and contact lens wearers with presbyopia

Neil Retallic, Manbir Nagra, Kimiko Kadohara, Fokko Trip, Shehzad Naroo

Purpose: To identify factors influencing contact lens uptake amongst individuals with presbyopia.

Method: Adults in the Netherlands with presbyopia (≥ 40 years) were invited to complete an online survey covering perceived barriers and motivators for contact lens use. Only those with presbyopia, who were existing contact lens wearers or spectacle wearers willing to try contact lenses were included.

Results: Two-hundred and twenty-one respondents provided data eligible for inclusion, most participants had spectacles (84.2%) and around half were contact lens wearers (55.7%). An absence of practitioner recommendation was the most common cause for not considering contact lenses. Of those who solely wore spectacles

(n=111) around two thirds (65.8%) stated their practitioner had never recommended contact lenses as an eyewear option. Out of the contact lens wearers (n=110) around half (50.9%) reported their practitioner usually discussed alternative contact lens options during routine check-ups.

Across all respondents, practicality, convenience, visual and psychological reasons were the most frequently cited benefits of contact lenses. A lower proportion of non-wearers perceived potential enhancements to their quality of life (7.1%) or confidence levels (25.5%), in comparison to current wearers (20.9% and 31.8% respectively). The most common uses for contact lenses were for sport, work, and social activities.

For those wearing both spectacles and contact lenses (n=81) few reported initial adaptation challenges when switching between their eye wear options (8.7%).

Conclusions: Eye care practitioners have an important role in making appropriate eye wear recommendations regarding both spectacle and contact lens options for presbyopia.

It appears patients relate to the advantages contact lenses provide and that most perceived barriers can be overcome with good education and advice.

Research funding received: This research was conducted by a consumer insights specialist agency (ADK INSIGHTS) based in the Netherlands with funding from Menicon Co., Ltd. Japan.

Paper Number: 4

Presentation time: 15:30-15:40

Comparison of Overall Vision Satisfaction of a Multifocal Contact Lens on Dispensing and after 1-week Daily Wear to Predict Success

Michel Guillon, Pasquale Pepe, Ruchi Gupta, Anna Sulley, Percy Lazon de la Jara

Purpose: Successful correction of presbyopia with multifocal contact lenses (MFCL) requires fulfilling vision needs at all distances while maintaining

binocularity for emergent to advanced presbyopes. A three-add MFCL system (Binocular Progressive System, BPS, CooperVision) shown to have a high fit success rate, good vision performance and maintenance of binocularity was tested in three different studies following the same protocol. The objective was to report vision satisfaction achieved with the MFCL using the BPS and determine predictive success factors at the MFCL dispensing visit via a meta-analysis using CHAID decision tree.

Method: BPS daily disposable, silicone hydrogel MFCLs were dispensed for 1-week. Vision satisfaction was recorded on a 100-point VAS for distance, intermediate, near and overall vision (OVS) at dispensing and after 1-week of wear. Subjective comfort (100-point VAS) was also recorded.

Results: 210 presbyopes completed the studies, fitted either with a low (emergent n=65), medium (established n=70) or high (advanced n=75) addition BPS lens. High OVS (median 89) was reported at dispensing with vision satisfaction scores >85 for all distances (median: distance= 88.0; intermediate= 90.0; near= 89.0). High OVS was maintained (median 87.0) with vision satisfaction scores >85 for all distances (median: distance= 88.0; intermediate= 89.0; near= 86.5). OVS at 1-week was predictable based upon OVS at dispensing ($p < 0.001$): 90.4% of wearers reported high OVS at 1-week if OVS at dispensing was ≥ 89.0 , whereas only 41.6% reported the same if OVS at dispensing was < 89 and 10% if < 64 . High comfort was reported after 1 week of wear (median: dispensing 93.0; 1-week 90.0).

Conclusions: The analysis demonstrated that the BPS achieved good vision satisfaction on dispensing and after 1-week of daily wear. Good success predictability is possible at the time of dispensing; high satisfaction scores on dispensing are associated with those after 1-week's daily wear.

Research funding received: Study sponsored by CooperVision, Inc

Paper Number: 5

Presentation time: 15:40-15:50

Trends in soft contact lens wearers with presbyopia behaviours and attitudes during COVID-19

Neil Retallic, Shehzad Naroo, Kimiko Kadohara, Marjolein Maas, Manbir Nagra

Purpose: To characterise the impact of the COVID-19 pandemic on soft contact lens (SCL) wearers with presbyopia in the Netherlands.

Method: SCL wearers with presbyopia (aged ≥ 40 years old) completed an online questionnaire during March - April 2021. Data pertaining to change in lens wear; reasons for reduced wear; and spectacle: contact lens wear ratios, were obtained across 7 established markets, (6 in Western Europe and the USA). Frequency data from the Netherlands was compared to global means.

Results: Single vision lenses were the most worn SCL by respondents from the Netherlands (83.6%); with the remainder wearing multifocal lenses (16.4%). Almost one-quarter of these 110 respondents felt their SCL wear had decreased during the pandemic (22.2% Netherlands, 35.5% globally), and around two-thirds perceived it to have remained the same (65.4% Netherlands, 54.6% globally). Whilst there was an approximate 3-fold increase in individuals exclusively using spectacles during the pandemic; the proportion of exclusive SCL wearers remained unchanged (2.5%). Additionally, those wearing contact lenses $\geq 60\%$ of the time reduced from 67.9% to 63.1%, (59.3% to 45.4% globally). Leaving the house less (68.2%), undertaking fewer contact lens related activities (27.3%); and increased awareness of risk/hygiene (4.5%) were the most cited reasons for reduced wear. Globally these were also the top reasons, although some regions reported difficulties accessing care and cost related issues.

There was a high desire to return to pre-pandemic wear schedules (75% Netherlands, 83.9% globally).

Most of the wearers purchased their lenses from an optician/optical store (69.1% Netherlands, 73.9% globally) with a low proportion buying online (23.6% Netherlands, 20.9% globally).

Conclusions: Contact lens usage amongst those with presbyopia remained high during the pandemic, particularly in the Netherlands, demonstrating a strong motivation for contact lens wear.

Where a reduction in contact lens wear was noted, this was linked primarily to temporary reasons such as leaving the house less often.

Research funding received: This research was conducted by a consumer insights specialist agency (ADK INSIGHTS) based in the Netherlands with funding from Menicon Co., Ltd. Japan.

Paper Number: 6

Presentation time: 15:50-16:00

Clinical Assessment of an Antihistamine-Releasing Contact Lens

Brian Pall, Chung-Kai Sun,

Purpose: Assess the clinical performance of an antihistamine-releasing contact lens.

Method: A multicenter, randomized, double-masked, bilateral, 2-arm parallel group dispensing study was conducted. Subjects were randomized in a 2:1 test (etafilcon A with 0.019 mg ketotifen) to control (1-DAY ACUVUE® Brand Contact Lens) ratio and wore the study lenses for 1 week in a daily disposable modality. Approximately 120 spherical contact lens wearers between 18 and 39 years old were targeted to complete the study. Clinical assessments were recorded at the 1-week follow-up visit and included monocular, contact lens-corrected, high contrast, high luminance logMAR distance visual acuity, slit lamp findings, lens fit acceptability, lens wearing times, and subject-reported ocular symptoms.

Results: 141 subjects (94 test; 47 control) were randomized with 90 females and 51 males and a mean age of 30.1 years. At the 1-week follow-up visit, the mean difference in logMAR acuity (test -control) was 0.0017 (95% CI: -0.021, 0.025) which

was within the predefined non-inferiority margin of 0.1 logMAR units. There were no clinically significant (Grade 3 or 4) slit lamp findings recorded for either study lens and only 1 case of an unacceptable lens fit in the control lens group.

The mean wearing time for the test lens was 14.49 (\pm 1.75) hours and for the control lens was 14.56 (\pm 2.25) hours. Ocular symptoms were recorded in 83/188 (44.1%) of eyes in the test group and in 32/94 (34.0%) of eyes in the control group. The most frequently reported symptoms were burning/stinging (17.0%) and dryness (9.0%) for the test group and dryness (7.3%) and burning/stinging (5.2%) for the control group.

Conclusions: An antihistamine-releasing contact lens demonstrated statistical non-inferiority in logMAR visual acuity as compared to a control lens. Additionally, there were no safety or clinical performance concerns across a variety of key contact lens performance metrics.

Research funding received: Industry-sponsored research as a part of Research & Development activities at J&J Vision Care

End of session