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Guest Editorial • Éditorial Invité

President's Podium • Mot de la présidente

Clinical Diagnosis • Diagnostic clinique

Practice Management • Pratique et gestion

Articles • Articles

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Cover: The leaders of optometry from across the country gathered to ponder and answer questions about the future of optometry. To find out more about the CAO Future Summit, see the Guest Article, "*The Future comes soon enough*" (page 39) and the President's Podium, "*The Best Way to Predict the Future is to Invent it*"(page 43).

Couverture: Les dirigeants de l'optométrie de partout au Canada se sont réunis pour réfléchir sur les questions concernant le futur de l'optométrie. Pour en découvrir plus au sujet du Sommet sur l'avenir de L'ACO, voyez L'Éditorial invité, "*L'avenir arrive assez vite*" (à la page 39) et Le mot de la présidente, "*La meilleure façon de prédire l'avenir est de l'inventer*!"(à la page 43).

The future comes soon enough

L'avenir arrive assez vite

Joan Hansen, OD
CAO Past President / La Présidente sortante de L'ACO

Where do we want to be? What will we be learning? What instruments will we use? What drugs will we use? What treatments / procedures will we be providing? How will Optometry be positioned in the health care market? What kind of ODs will be buying our practices – or will they?

On Ground Hog Day in Ottawa, the leaders of Optometry from across the country gathered to ponder and answer the questions posed above. Represented in the group were provincial association presidents, executive directors, college representatives, schools, students, and your CAO Council.

First, the group listened to rapid fire presentations on the future of the population of Canada, new technologies coming on stream, the demographics of Optometrists in Canada, changes at Waterloo (and Schools of Optometry in general), changes in professional regulation, and more.

Those presenting included Dr Dorrie Morrow, President, CAO; Dr Joan Hansen, Past President, CAO; Ms Louise Meyer, Senior Policy Analyst, Health Human Resource Strategies Division, Health Canada; Dr Thom Freddo, Director, School of Optometry, University of Waterloo; Mr. Richard Steinecke, Senior Partner, Steinecke Maciura LeBlanc; and a panel consisting of Mr. Lorne Daniel, General Manager, Doctors Eyecare Network; Mr Paul Hemburrow, Director of Marketing, CIBA Vision Canada Inc; and Mr. Gordon Duross, Supplier Account Director, Optometric Services Inc.

Following these presentations, leaders were put to work in facilitated groups to "*group think*" about where we are heading as a profession.

The evenings were spent in fun group activities, allowing your leaders to interact and continue the discussions under more relaxed conditions. Friday night was the opening ceremonies of Winterlude and most enjoyed the music of Randy Bachman before a late dinner beside the canal. Saturday night was spent on the curling rink, sharing a bonspiel with the Ottawa Society of Optometrists.

The Futures Summit was facilitated by an Ottawa based consulting group which will prepare a report that may be used for future planning at a national and provincial level. It will also be posted to the CAO member only web site.

The "*Optometry ground hog*" did not see his shadow: spring is on the way, and the future of our profession will be bright and exciting. The second century for Optometry will see huge advances.

Où voulons-nous aller? Quelles seront nos connaissances? Quels instruments et médicaments utiliserons-nous? Quels traitements et procédures fournirons-nous? Comment l'optométrie se situera-t-elle dans le marché des soins de santé? Quels types d'optométristes achèteront nos cabinets – ou le feront-ils?

GUEST EDITORIAL
ÉDITORIAL INVITÉ

Lors du jour de la marmotte à Ottawa, des dirigeants de l'optométrie de partout au Canada se sont réunis pour réfléchir aux questions précédentes. Il y avait dans ce groupe les présidents des associations provinciales, les directeurs généraux, les représentants étudiants, des écoles et votre Conseil de l'ACO.

D'abord, le groupe a écouté des exposés rapides sur l'avenir de la population canadienne, les nouvelles technologies sur le point d'arriver, les données démographiques sur les optométristes canadiens, les changements à Waterloo (*et dans les écoles d'optométrie en général*), les modifications apportées à la réglementation professionnelle, et d'autres. Ont présenté des exposés : Dre Dorrie Morrow, présidente de l'ACO; Dre Joan Hansen, présidente sortante de l'ACO; Mme Louise Meyer, analyste principale de politiques, Division des stratégies sur les ressources humaines en santé, Santé Canada; Dr Thom Freddo, directeur, École d'optométrie (UW); M. Richard Steinecke, associé principal chez Steinecke Maciura LeBlanc; et un groupe d'experts composé de M. Lorne Daniel, directeur général, Doctors Eyecare Network; M. Paul Hemburrow, directeur du Marketing, CIBA Vision; et M. Gordon Duross, directeur des comptes fournisseurs, Services optométriques Inc. Après les exposés, les dirigeants se sont réunis en groupes pour examiner collectivement l'avenir de la profession.

Les soirées ont été consacrées à des activités récréatives de groupe, pendant lesquelles vos dirigeants ont pu poursuivre les discussions dans un contexte plus détendu. Aux cérémonies d'ouverture de Bal de Neige vendredi soir, la plupart ont dégusté un dîner en soirée près du canal au son de la musique de Randy Bachman. La soirée de samedi s'est déroulée au curling en compagnie des membres de l'*Ottawa Society of Optometrists*.

Le groupe d'experts-conseils d'Ottawa qui a animé le Sommet sur l'avenir rédigera un rapport susceptible d'être utilisé à des fins de planification ultérieure aux échelons provincial et national. Il sera également disponible sur le site Web de l'ACO (*pour les membres*).

La « marmotte de l'optométrie » n'a pas vu son ombre: le printemps arrive et l'avenir de notre profession sera éclatant et excitant. Le second siècle de l'optométrie sera témoin d'énormes progrès.

Dorrie Morrow, OD
President / présidente

The Best Way to Predict the Future is to Invent it!

La meilleure façon de prédire l'avenir est de l'inventer!

CAO has just completed it's most recent Optometric Leaders' Forum where a group of approximately 50 optometrists, educators and students met to consider the question, "*What will the profession of Optometry look like in the year 2020?*"

Over the last 25 years I have witnessed some amazing changes in our profession and the most notable is the way our profession is perceived. More striking than this perhaps is how we perceive ourselves.

We are at a point within our profession where we have the ability to make choices that will define our profession for years to come. Optometrists are an integral part of the health care delivery system and will need to be ever sensitive to emerging trends.

This includes looking carefully at implications of the changing global demographics, advances in technology and shifting trends in health care delivery. For example, consider the potential strain on optometry's human resources that comes with serving an increasing aging population. We also need to be mindful of trends that emerge with the majority of optometry being practiced within private/solo practices to larger group practices that may be run as corporations. Further, by looking at the advances in technology, we may need to consider the possibility that our role may be charged with predicting, identifying and/or preventing disorders rather than treating disorders.

Technology could impact our day to day practices:

- *The Human Genome Project and it's ability to isolate the genetic roots of many ocular diseases;*
- *The use of genetic markers to screen mass populations, and prevent - through various methods the specific ocular conditions/diseases that individuals are likely to develop;*
- *Nanotechnology that holds the promise of completely new types of drugs that kill certain viruses, repair certain cells or manufacture certain needed proteins or enzymes.*

The direction of healthcare in the future will have a significant impact on our profession:

- *Advances in health-oriented telecommunications, medical imaging, massive databasing, memory miniaturization, and satellite technology will lay the foundation for fundamental changes in the organization of healthcare*
- *With outcome measurements increasingly being used as management tools, the practice of optometry may become more of a science and less of a craft. The future trends towards measuring all interventions by outcome and cost may push all therapies towards greater unity and allow true comparisons of intervention and prevention strategies.*
- *Computer programs called expert systems may help optometrists move more rapidly and effectively through the decisions of diagnosis and therapy and discovering the latest research on the most effective therapies. Its widespread use could significantly change the role of optometrists from "knowing facts" and move us towards the more human elements of our profession, such as making difficult judgments and helping patients change their behavior.*

The theme of this year's OLF posed interesting questions and challenged us all to look beyond our personal experiences and to plan beyond our individual timeframes.

PRESIDENT'S PODIUM
MOT DE LA PRÉSIDENTE

At the end of the weekend, it was evident that if we take a passive approach to our future — if we take the viewpoint that the future is a destination we take as passengers, versus guiding and mapping out a determined course — we and our patients will lose. The path to optometry's future is not for others to decide. It is our responsibility and our legacy to the next generation of optometrists and most notably to the public we serve.

We've asked the question and it is now our responsibility to create the answer. In order to effectively look towards the future it is incumbent upon us to pay respect to our present and our past.

L'ACO vient de terminer son plus récent Forum des dirigeants optométriques où se sont réunis une cinquantaine d'optométristes, d'éducateurs et d'étudiants pour répondre à la question suivante : « *À quoi ressemblera la profession de l'optométrie en 2020?* »

Depuis 25 ans, j'ai remarqué d'importants changements dans notre profession, le plus évident étant notre perception de nous-mêmes.

Comme professionnels, nous sommes maintenant capables de faire des choix qui définiront l'avenir de notre profession.

Cela signifie qu'il faut observer soigneusement les conséquences des changements démographiques globaux, les avancées technologiques et les tendances changeantes dans la prestation des soins de santé. Par exemple, songez au stress qu'une population vieillissante peut imposer sur les ressources humaines en optométrie. Nous devons également tenir compte des tendances émergentes où l'optométrie en cabinet privé se transforme en grands centres de pratique susceptibles d'être gérés comme des entreprises. De même, au vu des avancées technologiques, nous devrons peut-être envisager la possibilité que notre rôle puisse être de prévoir, identifier ou prévenir les maladies plutôt que de les traiter.

La technologie pourrait influencer notre pratique quotidienne:

- *Le projet sur le génome humain et ses possibilités de localiser les racines génétiques de beaucoup de maladies oculaires;*
- *L'utilisation de marqueurs génétiques pour dépister les populations et prévenir, grâce à diverses méthodes, les maladies et affections oculaires particulières susceptibles de frapper les yeux;*
- *La nanotechnologie qui nous promet de nouveaux types de médicaments totalement différents pouvant éliminer certains virus, réparer certaines cellules ou fabriquer certaines protéines ou enzymes.*

L'orientation des soins de santé à venir aura des conséquences importantes pour notre profession :

- *Les progrès dans les télécommunications centrées sur la santé, l'imagerie médicale, l'utilisation massive des bases de données, la miniaturisation des mémoires et la technologie satellitaire seront à la base de changements fondamentaux dans l'organisation des soins de santé.*
- *Comme on utilise de plus en plus la mesure des résultats comme outil de gestion, la pratique de l'optométrie pourrait devenir plus scientifique et moins artisanale. La tendance à mesurer toutes les interventions en termes de résultats et de coûts risque de pousser toutes les thérapies vers une plus grande unification afin que de vraies comparaisons des stratégies d'intervention et de prévention puissent être faites.*
- *Les programmes informatiques appelés systèmes experts pourraient aider les optométristes à prendre des décisions plus rapides et plus efficaces en matière de diagnostics et de thérapies et à leur faire connaître les dernières recherches sur les traitements les plus efficaces. Leur utilisation généralisée pourrait sensiblement modifier le rôle des optométristes qui s'éloigneraient de la « connaissance de faits » au profit des éléments plus humains de notre profession, comme prendre des décisions difficiles et aider les patients à modifier leurs comportements.*

Le thème du FDO de cette année a suscité d'intéressantes questions qui nous amènent tous à regarder au-delà de nos expériences personnelles et à planifier au-delà de nos échéanciers individuels.

À la fin du week-end, il était évident que si nous adoptons une approche passive face à notre avenir, nous et nos patients serons perdants. C'est notre responsabilité et notre héritage pour la prochaine génération d'optométristes et, plus important, pour nos patients.

Nous avons posé la question et nous devons maintenant trouver la réponse. Pour bien envisager le futur, il faut respecter notre présent et notre passé.

CLINICAL DIAGNOSIS

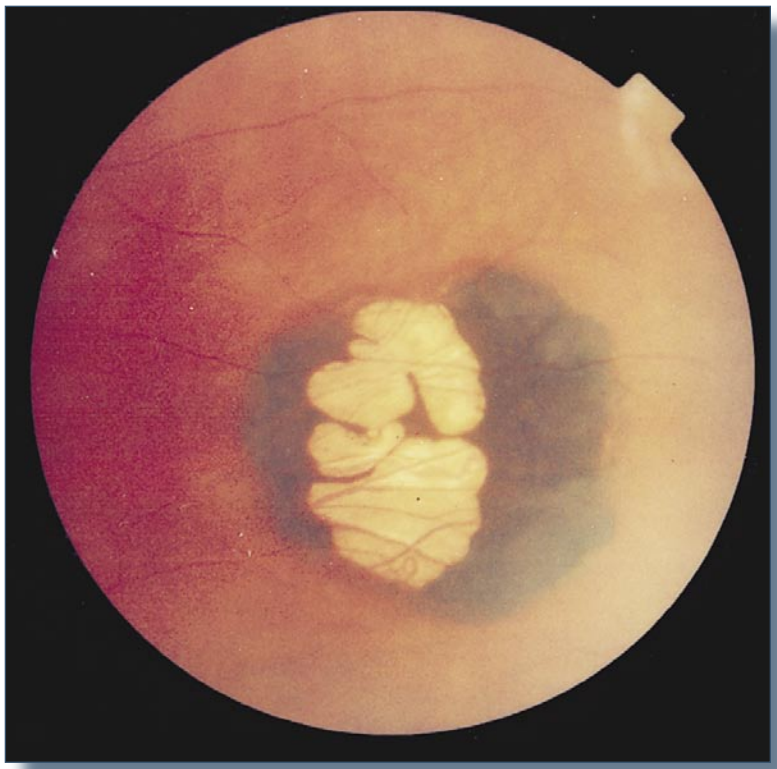


Figure 1: Photo of left fundus é Photographie du fond de l'œil gauche.

Catherine Chiarelli
OD, FAAO
Vision Institute of Canada

A 29 year old female presented for further evaluation of a fundus lesion detected by her optometrist. Ocular history was remarkable for myopia and contact lens wear. No subjective visual difficulties were reported. General health was stated as good; no medications other than oral contraceptives were taken.

Entering aided visual acuities were 20/15 each eye. There was moderate myopia and astigmatism in the right eye (-3.75 -0.50 x 125) and moderate myopia in the left eye (-4.75 sph). Anterior segment examination revealed clear lids, lashes, cornea and conjunctiva with a deep and quiet anterior chamber in both eyes. Dilated fundus

DIAGNOSTIC clinique

examination revealed healthy optic nerve head, retinal vessels and macula in both eyes. A large pigmented lesion was observed temporal to the macula, in the left fundus. It is shown in Figure 1. The retinal grounds and periphery of the right eye were clear.

What condition is shown in Figure 1?

What differential diagnosis is to be considered?

What visual effect is expected?

What follow-up is advised?

(see page 71)

Une femme de 29 ans se présente pour une évaluation plus approfondie d'une lésion du fond de l'œil détectée par son optométriste. Ses antécédents oculaires sont remarquables, compte tenu qu'il y a myopie et port de lentilles cornéennes. On ne signale aucune difficulté visuelle subjective, son état de santé est jugé bon et elle ne prend aucun médicament sauf des contraceptifs oraux.

L'acuité visuelle assistée entrante est de 20/15 pour chaque œil. On remarque une myopie modérée et un astigmatisme de l'œil droit (-3,75 -0,50 x 125) et une myopie modérée de l'œil gauche (-4,75 sph). L'examen du segment antérieur révèle des paupières, des cils, une cornée et une conjonctive sains avec une chambre antérieure profonde et calme dans les deux yeux. L'examen du fond de l'œil dilaté révèle un disque du nerf optique, des vaisseaux rétiniens et une macula en bonne condition dans les deux yeux. On observe une importante lésion pigmentée temporale à la macule dans le fond de l'œil gauche, indiquée à la figure 1. La rétine et la périphérie de l'œil droit sont saines.

Quel état est indiqué à la figure 1?

Quel diagnostic différentiel peut-on poser?

À quel effet visuel peut-on s'attendre?

Quel suivi est conseillé?

(see page 71)

What It Takes To Succeed

As optometrists, we survived the rigors of our training, found our place as entrepreneurs in private practice and enjoy very comfortable lifestyles. From this we may assume that we are successful. However, is this the only measure of success? Is this your personal definition of success?

The definition of success that I like comes from H. G. Wells, who said that the measure of success is the ratio between what we might have become and what we have become. Success is determined by how close you come to your true potential. Have you taken the time to think about what your true potential might be?

A good starting point is to define your purpose in life. What is the meaning of life for you? What are you passionate about? What would you gladly do even if you had to do it for free? You should try and be concise and focus on as few as possible. Concentrate on a purpose for each of your professional and personal lives.

Your life-meaning should answer the question: where would you go, if you could go anywhere in this life?; How would you live?; What would it look like? Try not to think in terms of gaining riches, fame, power or processions – these don't last and are not full-filling in the long run. Your purpose is not tied to these tangible destinations, it is the journey itself.

Take into consideration your personal strengths, what are your natural talents? It is much easier to swim with the current, so identify your greatest talents and your strongest character traits, then use them to your advantage and propel yourself further, faster.

To achieve any level of success you have to maintain a positive attitude. You need to believe in yourself, believe that you can fulfill your greatest potential. It won't be easy, for there will

be obstacles and adversity. There will be risks, and you may have to overcome some fears, the biggest of which is the fear of failing. All very successful people have had to deal with failure. They learned from their mistakes, put it behind them and went on to greater things. Accept it as one of the prices of admission to fulfilling your purpose. Remember that losers call it failing but winners call it learning.

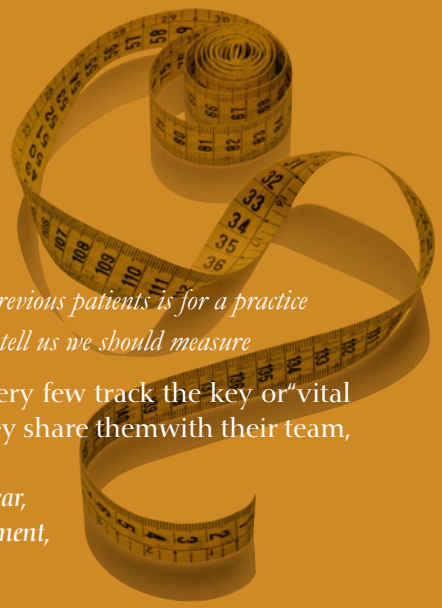
To be successful you will need the help of others; you can't do it alone. Enlist your family and peers to help you fulfill your potential. Surround yourself with people who are honest, helpful and positive about the goals you have. Share these goals with them, create alignment that pushes you forward. It is a bit of a cliché but the people that you surround yourself with will ultimately determine the level of your success.

Even though you live to fulfill your purpose in life, you need to set goals along the way. These act as landmarks to guide you and let you look back to see how far you have come. Don't confuse the act of attaining these goals with attaining success, this only comes from living your life to its greatest potential as defined by your purpose.

Your goals will continue to change over time. You will need these realigned when new opportunities arise or

Is that an Expense or an Investment? Are we benchmarking the right things?

G. R. Leinweber B.Sc., O.D.



Optometrists love reducing issues to numbers. They want to know:

- *what % of gross income to pay their staff*
- *what % of gross income to pay for rent, overhead*
- *what the ideal ratio of new vs previous patients is for a practice*
- *... plus 20 more that "experts" tell us we should measure*

Yet, in my experience consulting with Optometrists from coast to coast, very few track the key or "vital statistics" of their practice. And even fewer track them monthly, nor do they share themwith their team, and as a result, few know the facts they need to lead their team forward;

- *what their gross and net profits were last month, and YTD versus the previous year,*
- *what their GMROI (Gross Margin Return of Investment) was for stock or equipment,*
- *even fewer know how satisfied patients were after being examined or dispensed,*
- *and almost none measure and track how satisfied their staff were.*

I want to focus in this article on what the difference is between an expense and an investment, plus explore why we need to focus on investing. The most vital commodity any successful practice has is TRUST. Trust cannot be bought, bartered, or sold; it must be earned. Optometry is a profession which potentially allows doctors and their team members to increase levels of trust with patients, developing and earning loyalty from patients. So, how do you measure trust? I have found you must measure it indirectly, simply ask patients in an exit interview if they would refer friends or family to your office. If they would, you have earned their trust. If they would not – you have some more work to do.

So what are the basics of the eye care business? People have vision problems which they want solved – and they prefer the experience to be pleasant, maybe even fun. Three models of providing solutions have developed. At the risk of oversimplification, they are; the full service model (e.g. *Optometrists who dispense glasses, CL, etc which they purchase from various suppliers*), the segregated model (*where the examination, CL dispensing, and glass dispensing are provided in separate offices*), and the vertically integrated model (*where the manufacturer owns or controls the dispensing and examinations which are offered in side by side locations*). In the past

when obstacles present themselves. Your life's purpose doesn't change, but your goals shift to deal with the new realities.

A good analogy that demonstrates most of these points is a sailing adventure. Before you leave the dock you should have your final destination in mind and mapped out. You will need a skillful crew that you can rely on and support your journey. Because you can rarely sail directly to your destination, you need to set certain waypoints along the way, your goals. Sometimes it may even seem that the path you are on is moving you away from your destination. As winds and currents change you may need to alter your course, and with the help of your crew you can get yourself back on track, onto your destination.

As you travel along and meet your goals you need to celebrate with your crew. This is especially true when you finally get to your destination and when you get there you'll realize that purpose of the trip wasn't the destination itself, it was the journey with your friends that was the real purpose.

Define your personal and practice success in terms of the potential that both have and work daily to grow to that potential, then success will truly be yours.

decade, the vertically integrated model has captured significant market share from the segregated model. Yet if you survey the public, the majority doesn't care about the delivery model; they want quality, value, and convenience for both diagnostic and treatment options at an office where they can trust the doctor and the staff.

MARKETING - CHALLENGES AND SUCCESSES

The public has more sophisticated consumers than ever. Yet, in North America, they have tremendous unmet wants and needs in their eye care. Three examples we should ponder:

1. far fewer Canadians (7%) wear contact lenses compared to the US population (13%),
2. far fewer North American patients have multiple pairs of glasses than the Europeans,
3. sunglass sales in professional offices were so poor, new chains such as Sunglass Hut have sprung up to fulfil the public's wants and needs.

The concept of having suppliers and Optometrists working together on a message or program is not new, but CAO (through EHCC) created a structure that is indeed different and effective. Yet, unless OD's **and** our suppliers see growth in their businesses – in both the short and the long term – such public relations programs will not be sustainable. While an external marketing program is good to have, your investment in an internal marketing program **that you measure** is essential. I urge every OD in Canada to make a strong investment in an internal marketing program, and that for external marketing, you support CAO and your provincial associations who may piggyback on *"Your Eyes Deserve an Optometrist"*

How can you have an effective internal marketing plan? Involve the suppliers who are key supporters of EHCC with your internal marketing programs, have their reps help train your team about product knowledge. When you sit down and do your annual budget, (I strongly recommend you do one, just a simple 7line budget will do –email me and I'll show you how) consider what investments you will make in your profession, in your office, and in your future. Learn to look at costs to see not all are expenses, but some are indeed investments which can and should:

- *increase your gross and net profits,*
- *increase your ROI (return on investment),*
- *increase patient satisfaction/loyalty, and*
- *have a happy productive support team in your office.*

You can accomplish all this by working with and partnering with suppliers in a quest for mutually beneficial, healthy growth.

The efficacy of the Hiline® gas permeable contact lens for the management of Keratoconus

L'efficacité des lentilles cornéennes perméables au gaz Hiline® pour le traitement du kératocône

ABSTRACT

Purpose: To investigate the efficacy of the Hiline® gas permeable contact lens (Hiline® GP) for keratoconus in clinical practice in correcting visual acuity.

Methods: 218 eyes of 126 patients with keratoconus were fitted with Hiline® lenses. The fit of the lenses was evaluated. Visual acuity measurements were taken with spectacle lenses and with the Hiline lenses. The period of follow-up to observe for complications ranged from 3 to 27 months.

Results: In all eyes, the Hiline® GP provided acceptable vision. There was a statistically significant improvement in vision with the Hiline® GP compared with spectacle lenses ($t=10.90$, $p<0.0001$). Initial evaluation showed that 169 lenses (77.52%) demonstrated a three-point-touch relationship with the cornea 38 lenses (17.43%) had an apical clearance relationship with the cornea and 11 lenses (5.05%) had an apical bearing relationship. No severe complications were observed.

Conclusions: Using corneal topography as a guide, a high success rate was achieved with the Hiline® GP design. It is easy to reach the ideal fit and to improve the visual acuity. These indicate the usefulness of Hiline® lens in clinical practice.

RÉSUMÉ

But: Évaluer, pour le kératocône en pratique clinique, l'efficacité des lentilles cornéennes perméables au gaz Hiline® (Hiline® PG) à corriger l'acuité visuelle.

Méthodologie: On a utilisé des lentilles Hiline® pour 218 yeux de 126 patients souffrant de kératocône et on a évalué leur ajustement. On a mesuré l'acuité visuelle à

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Key words: gas permeable contact lens, keratoconus, lens design

Mots clés: lentilles cornéennes perméables au gaz, kératocône, conception de lentilles

l'aide de verres de lunettes et de lentilles Hiline. Un suivi allant de 3 à 27 mois a eu lieu pour observer les complications possibles.
Résultats: Les Hiline® PG ont permis une vision acceptable dans tous les yeux. On a noté une amélioration de la vision statistiquement significative avec les Hiline® PG comparativement aux verres de lunettes (t = 10,90, p<0,0001). La première évaluation a révélé que 169 lentilles (77,52 %) touchaient la cornée à trois endroits, 38 lentilles (17,43 %) présentaient une distance entre le verre et l'œil et 11 lentilles (5,05 %) s'appuyaient sur la cornée. On n'a noté aucune complication majeure.
Conclusions: En utilisant comme référence la topographie cornéenne, on constate un taux élevé de succès avec les lentilles Hiline® PG. Il est facile d'obtenir un ajustement optimal et d'améliorer l'acuité visuelle. Ces résultats démontrent l'utilité des lentilles Hiline® en pratique clinique.

INTRODUCTION

For patients with keratoconus, the first choice of corrective lens is a gas permeable (GP) contact lens in order to obtain good corrected visual acuity [1-5]. There are a lot of designs for keratoconus. The Rose K® Lens for Keratoconus is a proprietary design that has gained popularity since its introduction in the United States in 1995[5]. The best benefit of this lens is that it offers better visual acuity and increased comfort for keratoconus patients compared with a standard GP design[5].

Hiline® GP for keratoconus is another patented keratoconus design with a progressive aspheric peripheral curve design to fit Chinese eyes which is manufactured by Hiline Optical Company located in Taipei, Taiwan, China. To investigate the effect of Hiline® GP for keratoconus in clinical practice, this study represents a case series of 218 eyes of 126 patients with keratoconus who wore Hiline® GP in the period from September 2001 to December 2003.

METHODS

Subjects

There were 218 eyes of 126 patients that were definitively diagnosed with keratoconus using an Orbscan II corneal topographer in Zhong-Shang Ophthalmic Center. The criteria for diagnosing keratoconus are corneal cylinder of 2.00D or more combined with the flattest corneal curvature steeper than 7.60mm. There were 176 eyes of 100 males and 42 eyes of 26 females. The ratio of males to female was 3.85:1. The mean age was 25.1±7.9 years, ranging from 9 to 51 years old.

Hiline® GP Fitting and Follow-Up

All patients were examined with the slit-lamp biomicroscope, corneal topographer, cycloplegic retinoscopy, and non-contact tonometer to confirm eligibility for this study.

The fitting procedure followed the Hiline® fitting guide and was performed with a Hiline® diagnostic trial lens set while using the corneal topography result as a reference for fitting. The initial back optical zone radius (BOZR) of the trial lens was 0.2 mm steeper than the average readings taken with the corneal topographer. The optimum central lens-cornea relationship was "light feather-touch." After obtaining an optimal central lens-cornea relationship, the peripheral edge lift was evaluated. The appropriate edge lift, standard, increased or decreased edge lift was ordered according to the Hiline® fitting guide. When the optimal trial lens was obtained for each eye, an over-refraction was performed. The data were used to determine the contact lens power to be ordered. All Hiline® lenses were ordered from Hiline Optical Company, Taipei, Taiwan, China.

After the ordered lenses arrived in our clinic, subjects were evaluated with the ordered lens on their eye. The lens fitting was first assessed under the slit lamp with the use of sodium fluorescein and an acceptable fit would be a slight touch on the apex of the cone with no air bubbles underneath the lens along with moderate amount of edge lift. The best corrected vision was assessed via the standard Landolt C chart under standard room illumination. After the fitting, vision, and comfort were acceptable, the subject was scheduled for follow-up in 2 weeks and then once every month. If the ordered lens was not acceptable, it was reordered with the appropriate changes. Subjects were observed for at least 3 months after the initial dispensing of an acceptable lens. The best corrected visual acuity with the Hiline® lenses was recorded with the use of over-refraction and the subject completed the outcome questionnaires after 3 months of lens wear. The self-reported assessment of comfort was rated on a five-point scale where 5 = very comfortable and 1 = very irritating.

ARTICLE

Statistical Methods

All data were analyzed using SPSS 10.0 software where statistical significance was set at $P<0.05$.

RESULTS

The pre-wear examination

All cases had no contraindications for the wearing of GP lenses according to slit-lamp findings. Subjects were classified according to their average corneal keratometry readings: i.e., 21 eyes (9.63%) had mild keratoconus, below 45.00D, 73 eyes (33.49%) had moderate keratoconus, ranging from 45.00D to 52.00D, 116 eyes (53.21%) had advanced keratoconus, ranging from 52.00D to 62.00D, and 8 eyes (3.67%) had severe keratoconus, above 62.00D. Sub-epithelial scarring was present in 19 eyes. Refractive error was -8.26±4.79D, ranging from –2.00D to –24.00D and astigmatism was -3.85±2.07D, ranging from -1.00D to -14.00D with best corrected visual acuities.

Hiline® diagnostic lens fitting

In 169 eyes (77.52%), an ideal fit or acceptable three-point-touch relationship was achieved after an average of 3 trial fits. There was an apical clearance fitting relationship in 38 eyes (17.43%), and 11 eyes (5.05%) had an acceptable apical bearing relationship. In all 195 lenses (89.45%) were ordered with standard edge lift and 23 lenses (10.55%) required changes to edge lift or lens diameters to optimize lens fit. When apical clearance fitting was achieved, the Hiline® GP design was able to match the Chinese corneal surface more closely compared to other conventional GP lens designs in China.

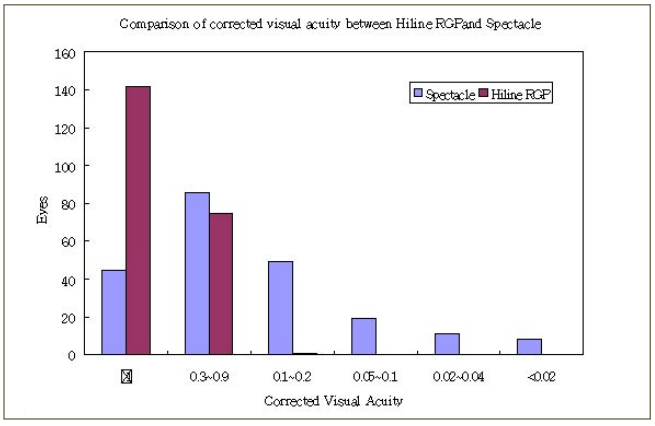

Figure 1. Comparison of corrected visual acuity between Hiline® Keratoconus RGP and Spectacles

Hiline® GP Fitting and Follow-Up

All patients were observed for 3 to 27 months. None of the 126 patients was lost to follow-up. A total of 9 lenses (4.13%) had to be re-ordered due to inadequate lens performance of tight lens fit due to progressive keratoconus. All other cases achieved better visual acuity with the Hiline® GP as compared to spectacles. Figure 1 shows the comparison of decimal visual acuity with Hiline® GP and with spectacles ($t=10.90$, $p<0.0001$). There is a linear correlation between the corrected visual acuity and the Hiline® GP lens back vertex power ($r=-0.2832$, $p=0.0003$), and the steepest corneal radius of curvature ($r=-0.4578$, $p=0.0005$) (Figure 2 and 3 respectively).

Most of the 126 patients initially complained of a foreign body sensation in the first 3 to 7 days after initial lens wear. However this completely disappeared after 1 to 3 weeks. Fluorescein staining of the cornea was observed in 18 eyes (8.26%), but all of the patients were able to continue wearing the lenses after this condition had been resolved by either temporarily discontinuing lens wear or treatment with necessary topical medication related to the appropriate ocular surface diseases. A total of 11 lenses (5.05%) were lost during the entire lens wear process and required replacement. Only one eye underwent penetrating keratoplasty (PKP) because of the instability of the lens. All other patients continued wearing the Hiline® lenses. Questionnaires were used to assess subjective vision-specific quality and contact lens comfort. 191 eyes (87.6%) of 218 eyes rated their lenses as "satisfied" or "very satisfied" after wearing their Hiline® GP lenses for 3 months.

DISCUSSION

Keratoconus is a disease where the cornea becomes thinner and protrudes forward conically, which leads to irregular astigmatism of the cornea, high myopia and visual function disorder. Today, keratoconus patients benefit most from GP lenses. Even patients who were once thought to be candidates for corneal surgery can be refitted successfully with GP lenses6-10.

For moderate or advanced keratoconus, wearing standard GP lens design often cannot achieve an ideal lens-cornea relationship. The Hiline® GP lens is a multi-curve design with spherical radii clearing the flat mid peripheral and peripheral cornea when fitted. Our data

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show that this design improves the stability of the lens. Most of the patients (125 patients) who were fitted with the Hiline® lens achieved an acceptable fit in this study and only 1 patient underwent PKP. This is a reasonable expectation for fitting GP for keratoconus in clinical practice. Based on our results, a clinician who fits Hiline® lenses should expect that an average of three diagnostic lenses will be needed per eye when determining the appropriate base curve.

Keratoconus patients wearing Hiline® GP lenses with the correct fitting relationship obtained satisfactory corrected vision, even in severe cases, where corneal scarring was already apparent. Based on our lens fitting observation, although best corrected vision was dependant on the location of the corneal scars, as long as the scars did not cover the line of sight, acceptable vision was always obtainable. This is probably one of the major reasons that keratoconus patients chose to keep wearing their Hiline GP lenses.

Of course, the safety of wearing these lenses is very important in addition to efficacy. There were no reported severe complications during the follow-up period which ranged from 3 to 27 months. Most patients can completely adapt to their GP lenses after 1 to 3 weeks, although some patients may feel some foreign body sensation initially. We found that 99.5% of all patients continued to wear their Hiline® GP lenses during the observation period. Only 18 eyes (8.26%), all in the advanced stage of keratoconus with an apical bearing and three-point-touch lens to cornea relationship, showed some fluorescein staining on the cornea. For these patients we recommended removal of their lenses to promote recovery of corneal epithelium and to prevent infection. Although traditionally fitting keratoconus with contact lenses, practitioners frequently need to deal with frequent lens replacement. During our study, only 11 eyes (5.05%) needed replacement Hiline® lenses due to lens loss. We believe the lower rate of lens loss in the Hiline® GP design was mainly due to improved mechanical stability and lens stability on the Chinese eye.

The results of this study showed that achieving the ideal fit was not difficult using Hiline® GP lens and that satisfactory corrected visual acuity was obtained in nearly all patients within 3 trial lens fitting session. This popular lens design in China showed increased lens stability as long as the lenses were correctly fitted initially. When combined with measurements taken by a corneal topographer, Orbscan II, fitting a complicated cornea such as Keratoconus becomes rather easy to manage without any severe clinical complications. After this large lens fitting trial, we strongly recommend using the corneal topographer's average readings to assist selecting the initial trial fitting lens as this can shorten the fitting examination time and thus lead to increased patient comfort and satisfaction.

ACKNOWLEDGEMENTS

This work was supported by a grant from NCET (04-0812), the Natural Science Foundation of Guangdong (04105323), Fok Ying Tong Education Foundation, (91043), SRFDP 20050558075, and the National Natu-

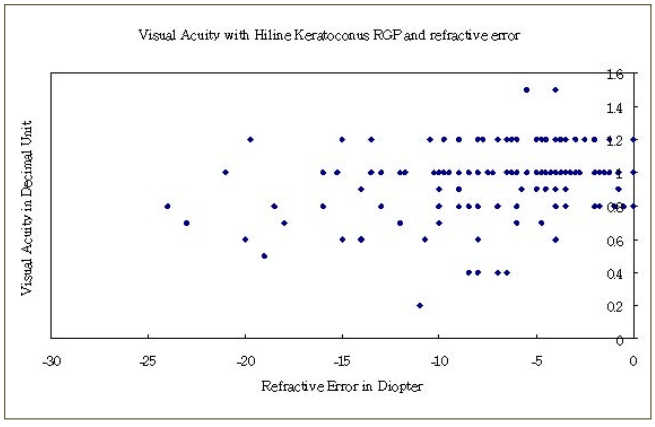

Figure 2. Corrected visual acuity as a function of back vertex power of the contact lens.

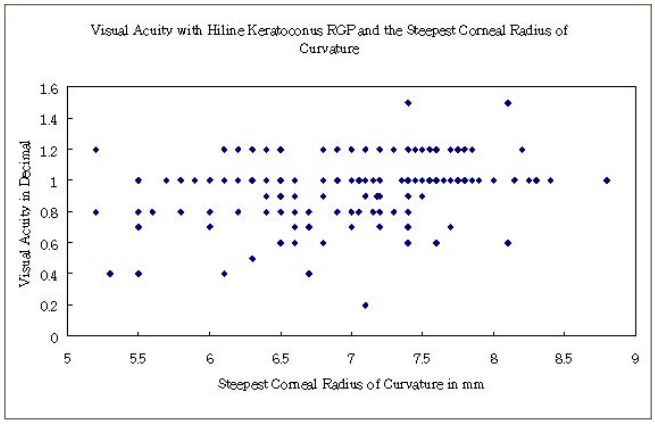

Figure 3. Corrected visual acuity as a function of steepest corneal radius of curvature.

ral Science Foundation of China (30572007).

The authors thank Mr. Jackson Leung from Polymer Technology and Dr. Paul Rose for their critical review and scientific suggestions.

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Competency Corner, Part One: Optometrists – What do we do?

Coin des compétences : Optométristes – Quelles sont nos tâches?

Abstract

In 2001 the Canadian Examiners of Optometry mandated the Competence Committee to describe the competencies required of Canadian Optometrists to provide safe and effective optometric care. The goal of this work was to provide a framework for revision of the Canadian Standard Assessment in Optometry so that questions on this exam could be directly linked to the practise-requirements of Canadian Optometrists. Work from the World Health Organization (WHO) provided an excellent foundation for the Competence Committee's deliberations, emphasizing that Optometrists have professional responsibilities beyond providing eye and vision care. The Competence Committee followed WHO's framework and identified four critical roles of Optometrists. These roles relate to: i. providing eye and vision care; ii. collaborating with and referring to other health care providers; iii. managing their practice, and; iv. educating within their profession. A second set of general attributes was also identified. These general attributes are needed to successfully perform the majority of the professional competencies. The Competence Committee identified five underlying general attributes: knowledge, reasoning and skills; planning and implementation; communication; values and ethics; and, self-directed learning. The next article in this four part series provides the detailed descriptions of these professional competencies and underlying general attributes required of Canadian Optometrists.

Résumé:

En 2001, les Examinateurs canadiens en optométrie ont demandé au Comité des compétences de décrire les

For the Competence Committee of the Canadian Examiners in Optometry. (2001-2002) T. Winslade (Co-Chair, Competence Committee), N. Winslade (External Consultant, Competence Committee), R. Chou (Co-Chair, Competence Committee), S. Burbine B. Hawkins, L. Ryall

December 2006

This article of Competency Corner is Part One of a Four Part series.

compétences nécessaires aux optométristes canadiens pour offrir des soins optométriques sécuritaires et efficaces. Le but de ce travail était de fournir un cadre pour la révision de l'Évaluation canadienne standardisée en optométrie afin que les questions de cet examen soient directement liées aux exigences de pratique des optométristes canadiens. Le travail de l'Organisation mondiale de la Santé (OMS) a fourni une excellente base aux discussions du Comité des compétences, soulignant que les optométristes ont des responsabilités professionnelles qui vont au-delà des soins de la vue et des yeux. Le Comité des compétences a suivi le cadre de l'OMS et déterminé quatre rôles de première importance pour l'optométriste : i. fournir des soins de la vue et des yeux; ii. collaborer avec d'autres fournisseurs de soins de santé et les consulter; iii. gérer sa pratique, et; iv. se former. Il a aussi établi un second ensemble d'attributs généraux, nécessaires pour bien accomplir la majorité des tâches professionnelles. Le Comité des compétences a dégagé cinq attributs généraux sous-jacents : connaissance, raisonnement et compétences; planification et mise en œuvre; communication; valeurs et éthique; et, autoformation. Le prochain article de cette série de quatre présentera une description détaillée de ces compétences professionnelles et attributs généraux sous-jacents nécessaires aux optométristes canadiens.

What would you do if someone asked for a description of every important action done in the role as a practicing Optometrist in Canada? Imagine that you were told the professional future of those entering practice depended on this fair description. The explanation would have to be complete and also rate how important each action was to the safety of your patients. And what if you were asked to make sure the list was organized in a manner that would be understood around the world?

Don't panic, this is not a homework assignment but a glimpse at the task faced by members of the Competence Committee of the Canadian Examiners in Optometry in 2001. Since 1995, the Canadian Examiners in Optometry (CEO) has administered the Canadian Standard Assessment in Optometry (CSAO). The CSAO measures competence — the ability of candidates to provide safe and effective optometric care in Canada. In the fledgling years of establishing the CSAO, CEO used the American National Board of Examiners in Optometry (NBEO) model and based the exam on a syllabus, much like a university course. This syllabus described the range of topics assessed in a complete and detailed manner. The link between each detailed item of knowledge, skill or judgment and the daily activities required of practising Optometrists was, however, less clear. Demonstration of such a link strengthens the validity of the examination process and makes it consistent with professional qualifying examinations of other health professions[1]. Unlike the National Board Exams, which are written as the student proceeds through their optometric education, the CSAO is taken after graduation. As these differences became more apparent, CEO realized that a Canadian description of competence was required. The CEO Competence Committee was created to complete this task. This article, and the following three in the series, describes the work of the Competence Committee to support the transition of the CSAO to a competence-based exam.

Where to start? It was a daunting task. The committee members began by researching the literature to determine if any professions had addressed this same task. The members started with the World Health Organization (WHO) as the WHO personnel had been interested in this topic for several years. In the mid 1980's WHO completed a worldwide survey of training programs for physicians and nurses[2]. In analyzing their results they noticed a striking similarity among the functions listed by programs around the world and summarized these responsibilities as:

The professional responsibilities of identifying and analyzing health problems to:

1. Provide treatment
2. Provide preventative care
3. Plan policies, activities and services (management)
4. Participate in the health education of the population
5. Collaborate with other services
6. Train health personnel
7. Participate in research

ARTICLE

The self-oriented responsibilities of using methodologies to:

1. Evaluate one's own activities
2. Develop one's own skills continuously

WHO went on to state that it was not surprising that *all* health professionals should have similar responsibilities at a very broad level and that the differences among the health professions would emerge from the more detailed descriptions of tasks associated with these responsibilities.

This work from WHO provided an excellent foundation for the Competence Committee's deliberations, emphasizing that Optometrists have professional responsibilities beyond providing eye and vision care. In its first year of deliberations, the Competence Committee followed WHO's framework and *identified four critical roles of Optometrists.* These roles relate to: i. providing eye and vision care; ii. collaborating with and referring to other health care providers; iii. managing their practice, and; iv. educating within their profession. The Competence Committee created brief descriptions of these roles, again using literature as a baseline. For the descriptions, the Committee adapted work from the Association of Faculties of Pharmacy of Canada[3] and the National Association of Pharmacy Regulatory Authorities[4], resulting in the following descriptions:

Competence Committee's Key Roles for Competence as a Canadian Optometrist

Provide comprehensive eye and vision care: Optometrists meet patients' eye and vision care-related needs with the objectives of achieving appropriate outcomes and maintaining or improving patients' quality of life.

Collaborate: Optometrists support an integrated health care system by collaborating with other health care professionals and service providers to facilitate the management of the overall health needs, and to encourage the well-being, of patients.

Manage: Optometrists apply management skills to optimize the care of patients and make efficient use of health resources.

Educate: Optometrists provide education with the goal of encouraging appropriate, effective and comprehensive eye and vision care.

The next challenges faced by the Committee were two-fold:

1. To describe these various roles in a thorough, structured, succinct and understandable manner.
2. To incorporate WHO's self-oriented responsibilities such as self assessment and continuous professional development.

A series of research reports written by the Australian Office of Education, Employment and Training addressed these two issues[5]. This group had focused on developing both specific methodologies for describing the performance expected of professionals and specific terminology to use so that such descriptions could be compared among different professions and across professions within different countries. This group also recommended that, in defining competencies for a profession, focus be maintained on the professional competencies such as providing primary care and collaboration. A second set of general attributes should also be identified that underlay the successful performance of these professional competences. Since several of these general attributes would be required to perform each professional competency the professional competencies and general attributes would be cross-linked. The underlying attributes discussed included WHO's concepts of self-assessment and continuing professional development along with others such as communication and professionalism. The Competence Committee modified, with permission, work from the Association of Faculties of Pharmacy of Canada to identify the following general attributes that underlay Optometrist's successful performance of the professional competencies required of Optometrists.

General Attributes Necessary to Fulfill the Professional Competencies

① *Knowledge, reasoning and skills.*

Optometrists have knowledge and comprehension of the core information associated with their profession. They are able to make evidence-based decisions during daily practice and to apply their knowledge to appropriately perform required professional skills.

② *Planning and implementation.*

Optometrists have effective planning and implemen-

tation abilities including time management, resource management, delegation skills and organizational skills. Optometrists have the necessary skills to plan and implement change, to understand and consider the human reaction to change, and to recognize when change is required for fulfillment of professional and societal responsibilities.

③ *Communication.*

Optometrists have effective communication skills, including the ability to effectively use and respond to written, verbal and non-verbal communications.

④ *Values and ethics.*

Optometrists are able to apply ethical principles in professional and social contexts. They will have developed a behaviour that both recognizes and respects cultural and personal variability in values, communication and life styles. Optometrists will apply ethical principles when decision-making and will take responsibility for outcomes associated with their decisions.

⑤ *Self-directed learning.*

Optometrists have self-directed learning capabilities in order to maintain and advance their practice and professional role in society. They will be able to effectively self assess and use feedback from others to identify their learning needs and to satisfy these needs on an ongoing basis.

In the next article we will explain the template used by the Competence Committee to describe the professional competencies in detail, and the vocabulary used to describe competence as an Optometrist in Canada.

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Canadians receive distinctions at the AAO meeting in Denver, Colorado

Prepared by
Etty Bitton,
AAO Student/Faculty Liaison, Montreal
and
Luigina Sorbara
AAO Student/Faculty Liaison, Waterloo

Members from the two Canadian schools of optometry participated at the American Academy of Optometry (AAO) annual meeting held for the last time in December in Denver, Colorado. Next year will be the first time the AAO annual meeting will be held in October. Several Canadian members were honored at the annual awards as well.

ÉCOLE D'OPTOMÉTRIE, UNIVERSITÉ DE MONTRÉAL, MONTRÉAL, QUÉBEC

A. Participation

Bitton E.	A closer look at the tear film	conférence (1hr)
Bitton E, Keech A, Simpson T, Jones L	Inter and intra-observer variability in tear meniscus determined using OCT	poster
Bitton E, Keech A, Jones L, Simpson T	Overnight variation in tear ferning	poster
Corbeil M-E, Faubert J	Perception of first-and-second order stimuli in humans after early visual deprivation	poster
Diaconu V, Vucea V, Frenette B	Optical fournier transform to evaluate surface quality of ophthalmic lenses	poster
Frenette B, Citek K, Fontaine N, Larocque AM	Comparitive study of physical and mechanical properties of last generation anti-reflect treatments	poster
Giasson C, Djouahra S, Sauvageau P, Danion A, Vermette P	Absorption spectra of soft contact lenses with multilayers of liposomes as a model for ophthalmic drug release	poster
Lovasik JV, Kergoat H, Parent M	Quantifying the foveal and perifoveal choroidal blood flow and pulsatility index for the human eye	poster
Selvin G, Hom M, Michaud L, Huang S, Edmondson W, Anderson M	Grand Rounds :Cornea and Anterior Segment	conférence (2hrs)
Michaud L, Marinier JA	Intacs as a low-vision treatment for a keratoconic patient with down syndrome	poster
Dubuc S, Wittich W, Overbury O, Kapusta M	What charts results convey & what patients subjectively report: the same or different?	poster
Allard R, Carcenac G, Faubert J.	Aging and the sensitivity loss to complex stimuli	paper
Total : Poster : 9	**Paper : 1**	**Conferences : 2**

A. Distinction

Student Travel Grants: Judith Renaud (Low Vision Student travel Fellowship); Remy Allard (Canadian Student Travel Fellowships, Vistakon); Sara Dubuc (Vistakon educational grant).

SCHOOL OF OPTOMETRY, UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO
A. Participation

Hildebrand J, Spafford M, Schryer F, Lingard	Learning how to write optometry referral letters: situated opportunities and constraints	Poster
Spafford M M, Schryer F, Lingard, Hildebrand M	Where's the Patient? Patient-centered talk in referral and consultant letters	Poster
Spafford, M M, Laliberte R, Leipert D, Klinger, Huot	When the time is right: Reasons why older adults with low vision are without low vision services	Poster
Suryakumar R, Chan, Irving L, Bobier R	Photorefractive assessment of the dynamic differences between accommodation and disaccommodation	Paper
Hovis J K, Robertson, Chou	Laboratory studies of constant and variable thickness visors	Poster
Babu R J, Leat J, Irving L	Looming: Effects of speed and target location	Poster
Rose P A, Hudson	Age related changes in retinal arteriolar and venular blood flow and reactivity in clinically healthy subjects	Poster
Venkataraman S T, Hudson, Fisher A, Rachmiel, Buys, Trope E, Flanagan G	Retinal arteriolar vascular reactivity in response to isoxic hypercapnia in primary open angle glaucoma pre & post treatment - Preliminary results	Poster
Flanagan J G, Chauhan, Quigley A	Truths, Half Truths and Lesser Truths: A Practical Guide to the Recent Clinical Trials in Glaucoma	Conf.
Schulze M M, Simpson L, Hutchings	The accuracy of grading scales for bulbar redness	Paper
Jones D, Woods A, Jones W, Morgan B	The use of silicone hydrogel contaact lenses by Canadian optometrists: 2000-2006	Poster
Chou B R, Suwala, Hovis K	Effect of Nike Maxsight contact lenses on traffic signal visibility	Paper
Cooper S, Hrynchak K	Results of the Canadian Bridging Program for internationally trained optometrists	Poster
Duench S, Sorbara, Simpson L, Jones W, Fonn	The use of fluorophotometry to measure corneal epithelial permeability to contact lenses and contact lens care regimens	Poster
Woods C A, Dumbleton, German, Dong, Fonn	The assessment of contact lens symptomology using wireless handheld communication devices	Paper
Dumbleton K A, Woods A, Jones W, Feng , Moezzi M, Fonn	Comfort and adaptation to silicone hydrogel lenses for daily wear	Paper
Dumbleton K A, Jones W, Woods A, Feng, Moezzi M, Fonn	Clinical performance of a hydrogel peroxide care regimen with silicone hydogel lenses	Paper
Shinde L, Cronje, Jayanna, Sweeney F, Fonn	IACLE's role in improving contact lens education in India: a case study	Poster
Woods C A, Roy, Fonn	Radial power profiles of single vision silicone hydrogel lenses	Poster
Woods C A, Tsang, Fonn	Comparing gravimetric and refractive methods of measuring water content for various soft lenses	Poster
Woods J, Woods A, Varikooty, Jones W, Simpson L, Fonn	A novel method of recording corneal staining that facilitates parametric analysis	Poster
Keir N J, Situ, Richter, Jones W, Fonn	Clinical performance of alexidine-based and polyquad-based multi-purpose solutions when used with daily wear Etafilcon lenses	Poster

ARTICLE

Moezzi A M, Fonn, Simpson L	Comparison of overnight corneal swelling induced by prototype Lotrafilcon A Toric versus Balafilcon A Toric	Paper
Keir N J, Dumbleton A, Jones W, Fonn D	A 12-mo. clinical comparison of continuous wear surface modified and non-surface modified silicone hydrogel contact lens materials	Paper
Srinivasan S, Varikooty, Subbaraman N, Chan, Woods, Simpson, Jones, Fonn	Atypical manifestation of upper lid margin staining in silicone hydrogel lens wearers with symptoms of dry eye	Poster
Varikooty J, Srinivasan S, Subbaraman, Chan, Woods, Jones, Simpson L, Fonn	Clinical manifestations of upper lid staining in adapted silicone hydrogel lens wearers	Poster
Varikooty J, Srinivasan, Subbaraman N, Feng, Jones W, Simpson L, Fonn	The influence of pre-soaking single-use Etafilcon contact lenses on ocular comfort in symptomatic & asymptomatic contact lens wearers	Poster
Keir N J, Dumbleton , Woods A, Jones, Simpson L, Fonn, Cohen R, Potter B	The influence of a lubricant eye drop on ocular discomfort in symptomatic hydrogel contact lens wearers	Poster
Bitton E, Keech, Simpson L, Jones W	Inter & intra observer variability in tear meniscus determined using OCT	Poster
Srinivasan S, Jones, Joyce, Simpson L, Senchyna	Characterization of clinical signs and symptoms in asymptomatic and symptomatic dry eyed postmenopausal women	Poster
Jones L, Dumbleton	Specialty Applications of Silicone Hydrogel Contact Lenses	Conf.
Luensmann D, Glasier, Zhang, Jones W	A novel in vitro method to determine the penetration profile of albumin into silicone hydrogel and conventional hydrogel contact lens materials	Paper
Bitton E, Keech, Jones W	Overnight variation in tear ferning	Poster
Suwala M, Glasier, Subbaraman N, Jones	Quantity and conformation of Lysozme deposited on conventional and silicone hydrogel contact lens materials using an in vitro model	Poster
Dalton K N, Rogers, Jones W	Osmolality, PH, viscosity and surface tension of multi-purpose contact lens solutions	Poster
Srinivasan S, Joyce, Jones, Senchyna	Tear osmolality and ferning patterns in postmenopausal women with and without symptoms of dry eye	Paper
Subbaraman L N, Glasier, Senchyna, Sheardown, Jones W	Lysozyme uptake kinetics on PMMA, FDA groups I, II, IV and first & second generation silicone hydrogel contact lens materials	Poster
Subbaraman L N, Jones W, Srinivasan, Varikooty, Glasier	Activity of lysozyme deposited on one-day etafilcon contact lenses is correlated with subjective comfort	Paper
Total : Poster : 25 Paper : 10 Conferences : 2		

B. New Fellows (FAAO)

Lakshman N Subbaraman; Subha Trichy Venkataraman; Dr Rajaraman Suryakumar

C. Distinctions/Awards

Student Travel Grants: Adam Keech (Vistakon educational grant); Sruthi Srinivasan (Canadian Student Travel Fellowships, Vistakon); Lakshman Subbaraman (Canadian Student Travel Fellowships, Vistakon); Doerte Luensmann (Vistakon educational grant); Marc Schulze (Vistakon educational grant); Raiju J Babu (AAO travel grant); Jenna M Hildebrand (AAO travel grant); Subha T Venkataraman (AAO travel grant)

Michael G. Harris Family Award for Excellence in Optometric Education:

Awarded to Dr. Lyndon Jones, PhD, FCOptom, FAAO

« *This award is presented by the American Optometric Foundation (AOF) to an optometric educator who has demonstrated ongoing and consistent excellence in the education of optometry students and/or the advancement of optometric education.* »

'Your Eyes and You' ... in Video

Doris Mirella
CAO Director of
Communications

CAO Members will have received a half hour DVD, "*Your Eyes and You*", in this special issue of the Canadian Journal of Optometry.

CAO's National Public Education Committee (NPEC) produced this video in response to members' interest in receiving resources for their reception areas. The video loop contains footage generously provided by the BCAO, news footage of optometry in the media, and clips from select B-rolls done in 2005. Optometry Giving Sight is also featured. The DVD is conveniently divided into ten tracks, as follows:

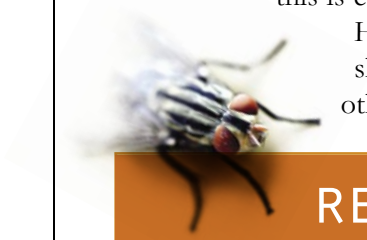
- *Introduction: Your Eyes Deserve an Optometrist (2 minutes).*
- *Children's Vision (7 minutes)*
- *Adult Eye Health (3 minutes)*
- *Work & Your Eyes (2 minutes)*
- *Computers & Your Eyes (2 minutes)*
- *Frequently Asked Questions (3 minutes)*
- *Sun and Your Eyes (2 minutes)*
- *Getting Older (7 minutes)*
- *Full Service: Contacts and Glasses (2 minutes)*
- *Optometry Giving Sight (4 minutes)*

While it is unlikely patients will be seated in the waiting/reception area long enough to be able to view the entire video from beginning to end, the overriding objective was to give members access to a comprehensive overview of eye health in video format. All CAO members are now furnished with a consistent message for the public as well as an educational communication about vision care and eye health from birth to the golden years.

Importantly, the video neatly ties into the

national branding exercise and effectively utilizes the images and messaging also found in the paid media advertising. In this way, when your patients come into your office for their eye examination, they will see the video and further identify with the message of preventive eye health examinations. It is critical to the success of the branding exercise that members somehow tie into their NPEC investment and leverage the national branding platform. This extended effort will allow for 'preventive eye health examinations' to grow deeper roots and become increasingly identifiable.

While the video provides members with an excellent in-office resource, it is also a valuable tool that can be sent to family doctors, community centres, schools and health care facilities. The CAO office often receives calls from nurses and community centres for educational materials and resources to put on display — this is especially true during October Eye Health Month. Brochures, fact sheets, posters, bookmarks and other complementary materials (all branded to leverage the television advertising) are used in the effort to promote awareness about eye health. These printed materials will continue to play an important role in disseminating information to the public but it is now supported by a dynamic video format, which will assist in broadening the impact of the eye health message.



When Eye Health Month rolls around in October, think about forwarding a copy of the "*Your Eyes and You*" DVD to strategic centres in your area. Encourage health education hubs to play the video during October, or on World Sight Day which falls on October 12.

Of interest, CAO's National Public Education Committee has embarked on a comprehensive public relations campaign. These efforts will play an important role in furthering the momentum of the television advertising. In this way, consider what you can do for October Eye Health Month. This year will be an ideal time to expand on the effort and, together, ensure our collective voices are heard.

CAO is proud to offer this valuable resource and wishes its members happy viewing of "*Your Eyes and You*".

REMEMBER TO TAKE PART IN THE EYE DARE YOU *CHALLENGE* IN OCTOBER

CAO IS HOLDING ITS THIRD EYE DARE YOU CHALLENGE TO ENCOURAGE MEMBERS TO BUILD ON THE NATIONAL TV BUY AND TO CREATE A BUZZZzzzzz ABOUT OCTOBER EYE HEALTH IN THEIR AREA.

IT IS NOT TOO EARLY TO START PLANNING NOW FOR YOUR OCTOBER EHM PROJECT. DON'T FORGET TO SEND DETAILS TO *EYEDAREYOU@OPTO.CA*. THE PROVINCE WITH THE MOST ENTRIES WILL BE ANNOUNCED IN THE NOVEMBER ISSUE OF THE CJO AND ONE OF ITS MEMBERS WILL BE ELIGIBLE TO WIN AN AMAZING PRIZE, YET TO BE ANNOUNCED. STAY TUNED!

WHAT CAN YOU DO? DOWNLOAD ONE OF THE POWERPOINT PRESENTATIONS FOUND ON THE CAO MEMBER WEBSITE; SEND PUBLIC SERVICE ANNOUNCEMENTS (PRINT, RADIO & TV) TO MEDIA CENTRES; PICK UP EXTRA COPIES OF BROCHURES, POSTERS OR OTHER NATIONAL RESOURCES AND DISTRIBUTE THEM IN YOUR AREA; ARRANGE TO SEND A DVD TO HEALTH CENTRES ...

USE THE NATIONAL RESOURCES, TIE INTO THE MEDIA MESSAGE, MAKE AN IMPRESSION, AND CREATE A BUZZ ABOUT OCTOBER EYE HEALTH MONTH! IT'S NEVER TOO EARLY TO START PLANNING! TAKE THE CHALLENGE AND LET US KNOW WHAT YOU ARE DOING IN YOUR AREA!

ALBERTA WON IN 2005. BRITISH COLUMBIA WON IN 2006. WHO WILL WIN IN 2007?

Congenital Hypertrophy of the Retinal Pigment Epithelium

from page 46

The lesion observed in the fundus of the left eye is characteristic of congenital hypertrophy of the retinal pigment epithelium (CHRPE). This is a flat, well-demarcated, black pigmented lesion often bordered by a hypopigmented ring. Depigmented lacunae commonly are seen within borders of the lesion, as in this case. CHRPE also may present as a group of smaller pigmented spots, with or without lacunae. Histologically, CHRPE is comprised of a single layer of tall RPE cells with dense pigment granules. There is retinal thinning and degeneration of the overlying photoreceptors. The lesion generally is non-progressive.

Differential diagnosis includes RPE hyperplasia (an inflammatory lesion), choroidal melanoma and adenocarcinoma of the RPE. RPE hyperplasia appears as a black pigmented lesion with non-delineated edges, and does not have depigmented lacunae within its borders. Choroidal melanoma presents as a slightly elevated, vascularized, green-gray pigmented lesion with irregular borders. Adenocarcinoma of the RPE, a melanotic tumour, is very rare, and often resembles a choroidal melanoma on presentation. The lesion pictured here is not characteristic of any of these conditions.

Congenital hypertrophy of the retinal pigment epithelium has little effect on overall functional vision. A localized visual field defect is expected, due to the absence of photoreceptors in the overlying retina.

Some variations of CHRPE (usually presentations of bilateral, randomly distributed, grouped pigmentations with telangiectasis and dilatation of peripheral retinal vessels) have been associated with familial adenomatous polyposis (FAP). Mutations of the adenomatous polyposis coli (APC) gene, which causes the formation of carcinogenic polyps in the colon and rectum, also impairs the function of the RPE. Hypertrophy and increased pigment density result, along with an inability to phagocytose and digest photoreceptor outer segments; this leads to the degeneration of photoreceptors and localized visual field defect.

Therefore, RPE lesions are valuable as a clinical marker in predicting familial adenomatous polyposis (FAP). Patients with characteristic presentations of CHRPE should be screened for FAP. Patients with CHRPE also should undergo periodic retinal monitoring for the rare development of a melanotic tumour.

Hypertrophie congénitale de l'épithélium pigmentaire rétinien

de la page 47

La lésion observée dans le fond de l'œil gauche est caractéristique de l'hypertrophie congénitale de l'épithélium pigmentaire rétinien (HCEPR). Il s'agit d'une lésion noire, pigmentée, à plat, bien démarquée et souvent bordée d'un anneau hypopigmenté. On trouve habituellement des lacunes dépigmentées à l'intérieur de la lésion, comme dans ce cas. L'HCEPR peut également se présenter comme un groupe de plus petites tâches pigmentées avec ou sans lacunes. Histologiquement, l'HCEPR se compose d'une couche unique de grandes cellules EPR avec des granules pigmentés denses. On remarque un amincissement rétinien et une dégénérescence des photorécepteurs sus-jacents. La lésion est généralement non progressive.

Le diagnostic différentiel comprend une hyperplasie de l'EPR (lésion inflammatoire), un mélanome choroïdien et une adénocarcinome de l'EPR. L'hyperplasie de l'EPR se présente sous la forme d'une lésion noire pigmentée avec des bords non délimités, sans lacune dépigmentée sur sa surface. Le mélanome choroïdien se présente comme une lésion pigmentée vert-gris, vascularisée et légèrement élevée avec des bords irréguliers. L'adénocarcinome de l'EPR, une tumeur mélanique très rare, ressemble souvent à un mélanome choroïdien. La présente lésion n'est caractéristique d'aucun de ces états.

L'hypertrophie congénitale de l'épithélium pigmenté rétinien a peu d'effet sur la vision fonctionnelle globale. On s'attend à une lacune localisée du champ visuel compte tenu de l'absence des photorécepteurs dans la rétine sus-jacente.

Certaines variations de l'HCEPR (habituellement une présentation de pigmentations groupées, bilatérales et distribuées au hasard, avec télangiectasie et dilatation des vaisseaux rétiniens périphériques) ont été associées avec la polypose adénomateuse familiale rectocolique (PAR). Les mutations du gène de la polypose colique familiale (PCF) qui causent la formation de polypes cancérogènes au côlon et au rectum, affectent également le fonctionnement de l'EPR. Il en résulte une hypertrophie et une intensification de la densité pigmentaire de même que l'incapacité de phagocytoser et de digérer les segments extérieurs des photorécepteurs, menant ainsi à une dégénérescence des photorécepteurs et un trouble du champ visuel.

Les lésions de l'EPR sont donc des indices cliniques valables pour prédire la polypose adénomateuse familiale (PAF). On devrait chercher une PAF chez les patients ayant des symptômes caractéristiques de l'HCEPR. Les patients avec HCEPR devraient également subir des examens rétiniens périodiques pour dépister l'apparition rare d'une tumeur mélanique.

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Walwyn Long: End of an Era

It was with great sadness that I learned of the death of Walwyn Spencer Long (Wally), a retired and distinguished member of the School of Optometry. Wally was born in Saskatchewan and received his primary and secondary education in that province. He completed a Diploma in Optometry from the College of Optometry of Ontario in 1943 and served as an optometrist in the RCAF during World War II. He completed a B.A. from the University of Toronto in 1948 and joined the teaching faculty of the College of Optometry that same year. Wally spent a year as a visiting Professor in Optometry at the University of California, Berkeley, in 1964-65. He received an OD degree from the College of Optometry of Ontario in 1966 and he was among the first five faculty members to establish the new School of Optometry at the University of Waterloo in 1967. He retired from the School in 1984 after serving a term as Director and after having occupied a variety of administrative positions over the years.

Wally wrote articles on clinical topics related to dynamic retinoscopy, strabismus and amblyopia. He was a remarkable teacher and the two teaching manuals he produced on the optometric examination and binocular vision are such superb examples of succinctness and logic used in the School's curriculum for decades.

Wally was a very modest individual who refused any special recognition or acknowledgement from the School or the University. I think of him as one of the unsung heroes of optometry. His death represents the end of an era in the development of our profession and School. *– provided by Dr Jake Sivak, School of Optometry (UW)*