MARSHALL B. KETCHUM UNIVERSITY
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Doc2Doc Referral Program

Home of the University Eye Center at Fullerton | Marshall B. Ketchum University | **WINTER 2014**

The University Eye Center at Fullerton provides the following services:

Jarnagin Primary Eye Care Center
714.449.7401

Stein Family Cornea & Contact Lens Center
714.449.7420

Dry Eye Institute
714.449.7420

Mary Ann Keverline Walls Low Vision Center
714.992.7890

Ocular Disease/ Ophthalmology Consultation & Childs Family Laser Center
714.449.7415

Ocular Prosthetics
714.449.7420

Optical Services
714.992.7801

Pediatric Vision Care
714.992.7870

Pediatric Contact Lens
714.449.7420

Studt Center for Vision Therapy
714.449.7430

MORE BIG NEWS!

The Southern California College of Optometry has recently undergone a change to a university. Marshall B. Ketchum University is Southern California's newest healthcare institution. An outgrowth and expansion of the educational offerings of the 110-year-old Southern California College of Optometry, the University will provide a diversity of health care training opportunities in an environment focused on interprofessional education. The first program to be added is the School of Physician Assistant Studies, which is anticipated to open in 2014.

With the introduction of the new University, we have also recently changed the name of the Eye Care Center. The new name is **University Eye Center at Fullerton**, which will continue its' on-going mission of excellence in patient care, clinical education and research.

We invite you to watch us grow and develop into a vibrant interprofessional campus. Please visit us at any time.

Best regards,

Julie A. Schornack, O.D., M.Ed.
VP for Clinical Affairs, University Eye Center at Fullerton, Marshall B. Ketchum University

LOW VISION REHABILITATION: HOPE FOR THE FUTURE

Patrick D. Yoshinaga, O.D., M.P.H.

The United States Department of Health and Human Services (HHS) Administration on Aging (AOA) reported that in 2009, there were 39.6 million persons 65 years and older accounting for 12.9% of the population. By 2030 however, it is estimated that this number will grow to 72.1 million representing 19% of the population [1]. **Of course as the population ages, eye diseases such as age-related macular degeneration (AMD), diabetic retinopathy, glaucoma, and cataracts that are associated with increasing age, are also expected to increase.** Statistics from the National Eye Institute (NEI) of the National Institutes of Health (NIH) are staggering. The prevalence projections for AMD, which is the leading cause of vision loss in the United States, exceeded 2 million in 2010 and is projected to increase to approximately 3.6 million by 2030 and 5.4 million by 2050. The numbers for diabetic retinopathy, which is the leading cause of blindness in American adults, exceeded 7.6 million in 2010, with expectations to increase to approximately 11.3 million by 2030 and 14.5 million by 2050.

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Our mission is excellence in patient care, clinical education and research.

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In addition, the prevalence projections for glaucoma are over 2.7 million in 2010 and projected to increase to roughly 4.2 million by 2030 and 6.2 million by 2050. **Expectedly, because of these trends the projections for low vision and blindness are predicted to soar.**

Low vision, which is defined by the NEI as best-corrected acuity of less than 20/40 in the better seeing eye (excluding those individuals classified as blind by the U.S. definition), is projected to increase from 2.9 million in 2010 to 5 million by 2030 and 8.9 million by 2050. Blindness, defined in the U.S. as best-corrected visual acuity of 20/200 or worse in the better seeing eye, is projected to increase from over 1.2 million in 2010 to approximately 2.1 million by 2030, and 4.1 million by 2050 [2].

The need for low vision education and care has been recognized nationally. The Department of Health and Human Services, in collaboration with agencies at all levels of government, community based organizations, and individual participants, has developed the **Healthy People 2020 initiative**. This is the fourth in a series of 10 year initiatives, beginning in 1979, to promote health and prevent disease. It provides a national agenda with measurable objectives to improve health outcomes. There are 42 topic areas each with specific objectives. One topic area is "Vision" with eight specific objectives and additional subcategories. Vision objective #7 is to **"Increase Vision Rehabilitation", more specifically, increase the use of vision rehabilitation services by persons with visual impairment and to increase the use of assistive and adaptive devices by persons with visual impairment.** Data from this program showed that in 2008, of people with visual impairment, only 30.2 per 1000 persons used vision rehabilitation services and only 11.2% used assistive and adaptive devices [3,4].

Optometry has been a significant provider of low vision care involving the management of the many patients with reduced vision due to chronic diseases such as AMD, diabetic retinopathy, glaucoma, and cataracts. It also includes care of patients with other conditions such as albinism; aniridia; coloboma; cortical vision impairment; inherited retinal disorders such as, but not limited to achromatopsia, choroideremia, and retinitis pigmentosa; microphthalmia; optic nerve atrophy; optic nerve hypoplasia; retinopathy of prematurity; stroke; and trauma.

The Mary Ann Keverline Walls Low Vision Rehabilitation Center at the University Eye Center at Marshall B. Ketchum University provides comprehensive low vision care to patients with reduced vision. The service includes testing of vision, refraction, contrast, glare, and central and peripheral visual fields, response to magnification, eccentric viewing, and assessment of assistance with low vision devices. In addition, provision of distance devices including hand held, spectacle mounted, and bioptic telescopes; near devices including high plus adds, microscopic spectacles, hand magnifiers, stand magnifiers, and reading telescopes, visual field enhancement aids; filters to assist with glare or to increase contrast; and a wide variety of non-optical aids are offered. Further referrals can be provided regarding concerns with mobility, activities of daily living, safety, support groups, counseling, and driving programs. In addition, we provide an expansive array of devices and training in our adaptive technology center. These include a wide variety of hand held video magnifiers, closed circuit TVs, and adaptive technology hardware and software to assist those with visual impairments.

If you are in need of assistance for any of your patients with reduced vision, we would be happy to provide a comprehensive low vision evaluation with a complete summary letter, following the visit. The patient would then return to your office for continued care.
If you would like further information or would like to refer a patient, please call (714) 992 -7890.

References:

1. *United States Department of Health & Human Services Administration on Aging. Aging Statistices. Retrieved from: www.aoa.gov/AoARoot/(S(2ch3qw55k1qylo45dbihar2u))/Aging_Statistics/index.aspx*
2. *National Eye Institute, National Institutes of Health, Statistics and Data. Retrieved from: www.nei.nih.gov/eyedata/*
3. *United States Department of Health & Human Services. About Healthy People. Retrieved from: www.healthypeople.gov/2020/about/default.aspx*
4. *United States Department of Health & Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2020. Retrieved from: www.healthypeople.gov/2020/GetInvolved/HealthyPeoplePresentation_2_24_11.ppt*

Save the Date!

WET AMD: WHAT CAN WE LOOK FORWARD TO NEXT?

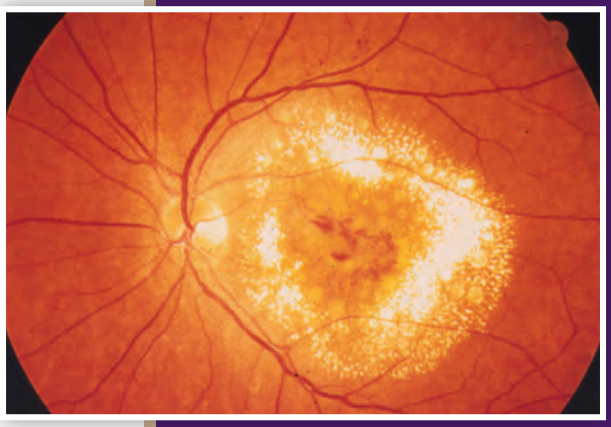
David P. Sendrowski, O.D., FAAO

Anti-platelet-derived growth factor (PDGF) in combination with anti-VEGF (anti-vascular endothelial growth factor) may be the next step in the search for the holy grail of the treatment for wet AMD (Age Related Macular Degeneration).

When wet AMD develops, abnormal blood vessels grow under the macula and lead to vision loss. These new vessels grow mainly but not exclusively from a protein called vascular endothelial growth factor (VEGF). Patient's vision was maintained or improved through anti-VEGF treatments in 30 to 40% of patients. This current treatment with anti-VEGF is formidable in preventing the growth of abnormal blood vessels in wet AMD that lead to vision loss in afflicted AMD patients.

The current problem lies in the fact that these vision gains are unsustainable. After monthly treatments of one to two years, the neovascular membrane, present at the start of the treatments did not decrease in size. In some cases, even with excellent visual acuity results, the membrane actually increased in size. The MARINA and ANCHOR studies laid the groundwork for today's anti-VEGF therapy for wet AMD. They have shown that patients did not experience neovascular membrane regression. In the HORIZON extension study that followed the MARINA and ANCHOR subjects, patients received anti-VEGF therapy every four weeks for two years and then were treated on an as-needed basis. Despite two years on monthly injections, patient's visual acuity declined practically to baseline. In the CATT (Comparison of Age Related Macular Degeneration Treatment Trials) study, in which patients were switched to PRN dosing after they had received monthly injections for a year, vision returned to almost the same level as those who received PRN dosing from the outset.

Patient and family burden was another Quality of Life (QOL) factor to consider. After the 18th to 20th injection, many patients felt that "This treatment modality is becoming too burdensome for me and my family". Many patients face multiple doctor visits in which family members are required to take time off from work to transport the family member with AMD for another round of treatment.



Studies have suggested that anti-VEGF monotherapy does not result in disease modification and induces no structural advantage in neovascular AMD. What role does anti- PDGF therapy play in the treatment? When anti-PDGF is combined with anti-VEGF, the anti-PDGF chemically strips pericytes from the neovascular complex, in doing so, it makes the complex susceptible to anti-VGEF treatments. The combination of these two agents' targets pericytes and endothelial cells, achieving more vascular regression than either agent could accomplish alone.

The prospective phase 2b study, demonstrated enhanced visual outcomes with Fovista (Opthotech corporation; anti-PDGF formulation - 1.5mg) combination therapy compared to Lucentis monotherapy at every monthly interval in the study. **The study concluded that the visual benefits of anti-PDGF combination therapy compared to the Lucentis monotherapy were greater at six months than at three months.** If the upcoming phase 3 study confirms the phase 2b results, the new combination therapy may dramatically alter the treatment model for patients with wet (neovascular) AMD.

These are exciting times for the treatment of wet macular degeneration.

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The future is expecting us.

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HEREDITARY EYE DISEASES

Raman Bhakhri, O.D.

Countless patients are diagnosed with low vision as a result of more prevalent and well known conditions such as macular degeneration, glaucoma, and diabetic retinopathy. However, many of the patients seen at the Mary Ann Keverline Walls Low Vision Center have been diagnosed with hereditary conditions including Stargardt disease, retinitis pigmentosa and albinism that result in low vision. As these conditions are hereditary, they manifest early in a patient's life, making low vision intervention even more vital.

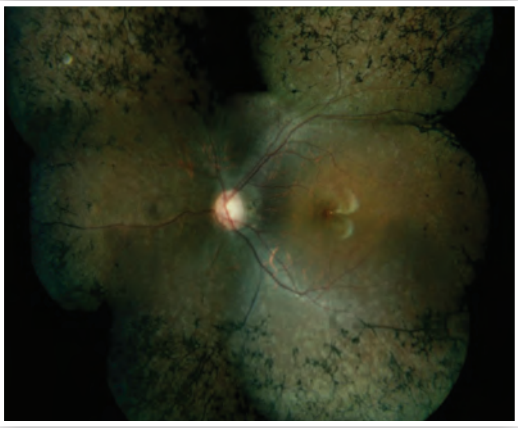
Stargardt disease is a genetic eye disorder that causes progressive vision loss. This disorder affects the macula, and therefore leads to central vision loss which can affect activities such as reading, driving, and recognizing faces. The signs and symptoms of Stargardt disease typically appear in late childhood to early adulthood and worsen over time.

Retinitis pigmentosa (RP) is the name given to a group of inherited eye diseases that affect the photoreceptors of the eye. This leads to a progressive loss of night vision, visual field, and visual acuity. The signs and symptoms typically appear during late childhood to early adulthood and worsen over time.

Albinism refers to a group of inherited conditions in people with little or no pigment in their eyes, skin, or hair. This is due to altered genes that do not make the usual amounts of a pigment called melanin, resulting in reduced vision and photophobia for affected patients. The signs and symptoms appear at birth but remain stable over time.

The Low Vision Center can provide the tools and equipment necessary for these patients to succeed in their everyday life including:

- Low vision devices including magnifiers, telescopes and CCTV's
- Filters and tints to enhance contrast and reduce photophobia
- Visual field testing and referrals for orientation and mobility training
- Ocular health examinations and referrals for genetic testing and counselling



If you would like to schedule an appointment for your patients suffering from hereditary diseases, please call 714-992-7890.