19th Global Ophthalmology Summit

February 26-27, 2018 | Berlin, Germany

Special Session

Day 1

Shlomo Dotan, J Clin Exp Ophthalmol 2018, Volume 9
DOI: 10.4172/2155-9570-C1-078

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Shlomo Dotan

Hadassah-Hebrew University Medical Center, Israel

Neuro-ophthalmologic diagnoses you do not want to miss

Aim: The presentation will elaborate on twelve neuro-ophthalmologic disorders, part of a longer list, which can potentially cause death or blindness if not diagnosed and treated correctly

Aneurysmal third nerve palsy. Aneurysm is not the most common compressive lesion causing third nerve palsy, but it has the highest mortality if untreated. Giant cell arteritis is an idiopathic inflammatory vasculitis affecting small –to-medium size arteries, which can cause blindness, but also cerebral infarction and cardiac ischemia. Myasthenia gravis is an autoimmune disease of the neuromuscular junction, which has both an ocular and generalized form. Myasthenic crisis is a neurologic emergency, which causes paralysis of the muscles of breathing. Pituitary apoplexy results from hemorrhagic infarction of the pituitary gland, and causes acute endocrine and neurologic symptoms.

Pseudotumor cerebri or idiopathic intracranial hypertension is a condition of unknown cause that produces elevated intracranial pressure and papilledema primarily in young obese females. In 24% of cases can cause visual dysfunction. Primary optic nerve sheath meningioma is the most common tumor of the optic nerve sheath, and it typically presents with a slowly progressive optic neuropathy characterized by a variable loss of visual acuity. Pituitary adenomas are the most common cause of chiasmal lesions in adults. The most common symptom of a chiasmal compressive lesion is gradual, painless, progressive and bilateral vision loss.

Fungal optic neuropathy may complicate meningitis resulting from a variety of molds and yeasts. The prevalence of these disorders increases in immunocompromised or immunosuppressed patients with diabetes, lymphoreticular disorders or AIDS. Neuromyelitis optica or Devic disease is characterized by acute or subacute loss of vision in one or both eyes caused by acute optic neuropathy preceded or followed within days or weeks by a transverse or ascending myelopathy. Horner syndrome is manifested with acute neck pain and a miotic pupil. It may be caused by a lesion along the sympathetic pathway that supplies the head, eye and neck. Toxic/nutritional optic neuropathies usually develop over months with a painless, bilateral, symmetric and progressive loss of central vision, but some cases may present with acute and severe vision loss such as poisoning with methanol or ethylene glycol. Transient monocular visual loss lasting minutes in an altitudinal fashion should be considered to be ischemic, due to cardioembolic source or giant cell arteritis, until proven otherwise.

Biography

Born in 1950 in the region of Transylvania, Romania. He Graduated from the Hebrew University – Hadassah Medical School in Jerusalem, Israel in 1974. In 1985 he finished his residency in Ophthalmology, and in 1990 a fellowship in Neuro-Ophthalmology at the University of Michigan in Ann-Arbor, MI, USA. For the last twenty-five years is the head of the Neuro-Ophthalmology service at the Hadassah Medical Center in Jerusalem, Israel. In addition to his longstanding clinical work, he has collaborated internationally with several medical services in research studies, wrote few chapters in medical textbooks, co-authored almost forty articles published in the international medical literature, lectured in many Ophthalmological & Neuro-Ophthalmological conferences and organized tens of courses along the years in Neuro-Ophthalmology in various meetings.

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Scientific Tracks & Abstracts
Day 1

Sessions:

Retina & Its Disorder | Ophthalmology Surgery | Ocular Diseases | Eye Development and Control Mechanisms | Ocular Pharmacology and Therapeutics | Retina and Retinal Diseases | Esthetic Medicine | Ophthalmology Imaging and Instruments

Session Chair
Lagogianni Eirini
University of Camerino, Greece

Session Introduction

Title: **Title: Amniotic membrane transplantation with narrow-strip conjunctival autograft vs conjunctival autograft for recurrent pterygia**

Jose Bonifacio Barbosa Jr, Federal University of Sao Paulo, Brazil

Title: **Title: New smartphone app for strabismus screening**

Jorge Antonio Meireles-Teixeira, Federal University of Maranhao, Brazil

Title: **Title: Rosacea acne**

Lagogianni Eirini, University of Camerino, Greece

Title: **Title: Sutureless strabismus surgery, experimental and human studies**

Mahmoud Aly Rageh, Research Institute of Ophthalmology, Egypt

Title: **Title: Radiotherapy and ocular side effects: myths, beliefs and scientific evidences**

Trinanjan Basu, HCG Apex cancer centre, India

Title: **Title: Decision making in duane's syndrome**

Ibrahim Eladawy, Mansoura University, Egypt

Title: **Title: Sights and Sounds of Domestic Violence**

Clifford D Brown, Central Alabama Veterans Health Care System, USA

Title: **Title: Outcome of inverted internal limiting membrane flap technique for chronic macular holes**

Ogugua Okonkwo, Eye Foundation Retina Institute, Nigeria

Title: **Title: Silicone orbital and/or facial prosthesis**

Soung Min Kim, Seoul National University, South Korea

Title: **Title: Different surgical approaches to remove subfoveal blood in hemorrhagic AMD: A comparative study**

Ana Vachiberidze, Davinci Eye Clinic, Georgia

Title: **Title: Choroidal thickness change in central serous chorioretinopathy after low-fluence photodynamic therapy (PDT) using enhanced depth imaging optical coherence tomography (EDI-OCT)**

Mucella Arikan Yorgun, Ataturk Training and Research Hospital, Turkey

José Bonifácio Barbosa Jr. et al., J Clin Exp Ophthalmol 2018, Volume 9
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Amniotic membrane transplantation with narrow-strip conjunctival autograft vs. conjunctival autograft for recurrent pterygia

José Bonifácio Barbosa Jr., Charles Costa De Farias, Flávio Eduardo Hirai and **José Álvaro Pereira Gomes**
Federal University of Sao Paulo, Brazil

Introduction: To compare amniotic membrane transplantation (AMT) associated with narrow-strip conjunctival autograft versus conjunctival autograft alone for the treatment of recurrent pterygium.

Methods & Patients: Prospective consecutive interventional study was performed. Patients with recurrent pterygium were randomly divided into one of two groups; group 1: patients undergoing AMT associated with autologous conjunctival graft, and group 2: patients undergoing conjunctival autograft alone.

Results: Of the 80 operated eyes included in this study, 39 (Group 1, mean patient age: 52.1±11.7 SD years) underwent AMT associated with narrow-strip conjunctival autograft and 41 (Group 2, mean patient age: 45.8±12.9 SD years) underwent conjunctival autograft alone. In Group 1, 6 eyes (15.4%) had grade-1 pterygium, 19 eyes (48.7%) had grade-2 pterygium, and 14 eyes (35.9%) had grade-3 pterygium. In the second group, 5 eyes (12.2%) had grade-1 pterygium, 18 eyes (43.9%) had grade-2 pterygium, and 14 eyes (35.9%) had grade-3 pterygium. No statistically significant difference was found between the two groups (P=0.752). Of the 39 eyes in Group 1, recurrent pterygium was observed in 7 cases (17.9%). However, of the 41 eyes in Group 2, recurrent pterygium was observed in only 4 cases (9.75%). No statistically significant difference was found between the two groups (P=0.2684).

Conclusions: The results of this study indicate that conjunctival autograft alone might be a better surgical choice for the treatment of recurrent pterygia than combining it with AMT, however, this second option provides a good surgical alternative in cases where little conjunctival donor tissue is available.

Recent Publications

1. Taylan Sekeroglu H, Erdem E, Dogan N C, Yagmur M, Ersoz R, Dogan A (2011) Sutureless amniotic membrane transplantation combined with narrow-strip conjunctival autograft for pterygium. Int. Ophthalmol. 31(6):433-438.
2. Hirst LW (2009) Recurrent pterygium surgery using pterygium extended removal followed by extended conjunctival transplant: recurrence rate and cosmesis. Ophthalmology. 116(7):1278-1286.
3. Hovanesian J A, Starr C E, Vroman D T, Mah F S, Gomes J A P et. al (2017) Surgical techniques and adjuvants for the management of primary and recurrent pterygia. J. Cataract Refract. Surg. 43(3):405-419.
4. Barbosa Jr. J B, Farias, C C, Hirai F E, Pereira Gomes J A (2017) Amniotic membrane transplantation with narrow strip conjunctival autograft vs. conjunctival autograft for recurrent pterygia. Eur. J. Ophthalmol. 27(2):135-140.
5. Solomon A, Pires R T, Tseng S C (2001) Amniotic membrane transplantation after extensive removal of primary and recurrent pterygia. Ophthalmology. 108(3):449-460.

Biography

Sandra Moreira has her experience occupational health and safety, environmental health and public health, areas developed in entities of the ministry of health and the ministry of environment. With postgraduate in “Management and environmental policies” his research associated green jobs and occupational health issues.

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Jorge Antonio Meireles-Teixeira, J Clin Exp Ophthalmol 2018, Volume 9
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New smartphone app for strabismus screening

Jorge Antonio Meireles-Teixeira
Federal University of Maranhão, Brazil

Amblyopia is the major cause of unilateral low visual acuity among children and the most important cause of it is strabismus. There are only few strabologists in any country, generating difficulties to early diagnosis of strabismus. That is the reason we decided to work on a smartphone software able to perform strabismus screening and easy to be operated by non-medical professionals. The software localizes the eyes of the subject and based on an algorithm similar to Krimsky method it can disclose the strabismus of the patient (Fig. 1). We first check it with 224 subjects (Fig. 2) among strabismus patients (24) and children and teenagers of public school (200) and it seemed to be reliable to detect the absence of strabismus (only two false negative results compared with strabologists exam), even if it had a greater false positive diagnosis (31). But these false positive results are not really important when talking about screening, once those patients will be referred to a specialist for a detailed examination.

Recent Publications

1. Almeida J D S (2012) Computational methodology for automatic detection of strabismus in digital images through Hirschberg test. Computers in Biology and Medicine 42: 135–146.
2. Carlton J, Kaltenthaler E (2011) Amblyopia and quality of life: a systematic review. Eye, London England. 25(4): 403–413.
3. Sousa De Almeida, João Dallyson, Silva Aristófanes Corrêa, Teixeira Jorge Antonio Meireles, Paiva Anselmo Cardoso, Gattass Marcelo (2015) Computer-aided methodology for syndromic strabismus diagnosis. Journal of Digital Imaging. 27: 1-1.
4. Valente Thales Levi Azevedo, De Almeida João Dallyson Sousa, Silva Aristófanes Corrêa, Teixeira Jorge Antonio Meireles, Gattass Marcelo (2017) Automatic Diagnosis of Strabismus in Digital Videos through Cover Test. Computer Methods and Programs in Biomedicine 140: 295-305.
5. Weber K P et al. (2017) Strabismus Measurements with Novel Video Goggles. Ophthalmology 124(12):1849-1856.

Biography

Teacher at UFMA - Federal University of Maranhão [Official] Studied at the Federal University of São Paulo (UNIFESP) Studied Ophthalmology Residency at Jundiaí Medical School Studied Medicine at UFMA - Federal University of Maranhão [Official] Studied at UFMA Went to Colégio Santa Tereza Lives in Sao Luis, Brazil From São Luís, Brazil

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Rosacea Acne

Lagogianni Eirini
University of Camerino, Greece

What is rosacea acne?: Rosacea acne (rosacea) is a common, chronic inflammatory skin disease that affects mainly the central face (cheeks, nose, forehead, chin). The disease is manifested by erythema, inflammatory papules, pustules and spider veins. It affects 3 to 5 year olds of both sexes, with little preference for women and people with light skin. Rarely, skin lesions extend to the scalp, and more rarely to the neck and upper body. The incidence of the disease ranges from 0.09% to 10%. Rosaceous acne is a harmless disease, but it affects patients psychology, creating a feeling of low self-esteem, affecting their quality of life because facial and nose redness is misleadingly indicative of alcoholism.

Root head acne pathogenesis: The cause of the pathogenesis of the disease remains unknown and is multifactorial. Endogenous factors (genetic predisposition, skin vascular disorders, disorder of natural skin immunity), microorganisms (Demodex folliculorum: a parasite that normally exists in the skin, but rosacea is proliferated), as well as environmental and lifestyle aggravating factors (heat , sun, alcohol and hot drinks, medicines, spices, spicy foods).

Clinical picture: Rosacea disease is manifested by a variety of symptoms (flushing) permanent erythema of the face, spider veins, pustules, inflammatory papules and pustules in the central face, hypertrophy of seborrheic nodules of the nose (rhinophytus), people with rosary acne of severe form often complain of burning, cracking, edema and dry skin, and may also have their eyes affected by keratitis, conjunctivitis and blepharitis.

Rosacea acne is classified into 4 subtypes:

1. Erythro-angiotensive rosacea: Patients have central face erythema. Its progression is gradual and when seborrhea and telangiectasia become permanent. Many times there are pruritus, burning and sensitivity of the skin.
2. Rosemounting rosacea: This type occurs mainly in middle-aged and relatively old-age women. It is characterized by permanent central erythema facials, papules, blisters and intense seborrhea at various points of the face.
3. Prickly rosacea - Rhinophyma: occurs mainly in males. It is characterized by thickening of the skin, due to hyperplasia and fibrosis of the sebaceous glands, mainly causing the nose (rhinitis: a strongly swollen and reddish nose with rough texture) and the parallel appearance of inflammation in the eyes. The forehead (lower back), ears (thigh) or chin (gnatophy) may also be affected.
4. Ocular rosacea: It may co-exist up to 58% of patients suffering from another subtype, but usually remains undiagnosed. It is characterized by hyperemia (erythema) and conjunctival and eyelid conjunctivitis, foreign body sensation, burning, feeling cracked, itching, photosensitivity, blurred vision, erythema around the eyes and eyelids. It is also possible to coexist hazel and barley. There may also be loss of vision due to corneal ulcers. Ophthalmic rosacea is due to dysfunction and inflammation of the meibomian glands (differentiated sebaceous glands). The disorder of lipid build-up of tears leads to thickening of the ocular secretions, decrease in tears and dry eye. There is no correlation of gravity of the eye with dermal rosacea.

There may be progression from one subtype to another, and more than one subtype may occur at the same time during the clinical examination.

How to diagnose rosacea?: The diagnosis of rosacea is performed by a dermatologist and is based on the clinical picture. There is no specific diagnostic test (test). The histological image is not specific. Usually a biopsy is being investigated to exclude other diseases involved in differential diagnosis. The direct microscopic search for Demodex mites, and in particular Demodex folliculorum, which are present in human skin and hyperproliferate during rosacea, helps diagnose and treat the disease. These mites host bacteria and are likely to play an important pathogenic role in rosacea, especially when they are present in large quantities and cause imbalance in the immune system. Contamination by Demodex folliculorum usually remains asymptomatic. Over time, adulthood and constant exposure to sunlight, the skin gradually changes and changes in

the composition of sebum (a fat that helps maintain skin moisture). Studies indicate that semen-fed Demodex mites, in the event of changes in sebum synthesis, increase in number, resulting in an inflammatory condition leading to the emergence of rosacea. When the mites die, bacteria are released that exacerbate the symptoms of rosacea.

The disease coexists with seborrhoeic dermatitis in 26% of patients and scalp in 28%.

Treatment for rosacea: Rosacea is a chronic benign disease with bouts and recesses. Proper treatment is based on patient education to avoid aggravating factors, proper skin care and, of course, appropriate treatment. Good patient and dermatologist collaboration helps keep the disease in a recessive state for a long time and minimize bouts and avoid exacerbations for proper treatment of the disease. Environmental factors and lifestyle affect the symptoms of rosacea. It is advisable to avoid aggravating and excretory factors such as intense exercise, alcohol consumption, hot drinks, spicy food, sun exposure, warm environment, extreme temperatures, hot baths, sauna, of course stress or anger, as well as the use of beauty products and skin care, with acidic and alcoholic ingredients or other substances, irritating to the skin causing intense vasodilation, resulting in disease outbreaks.

It is recommended to daily clean the skin with special cleansers and appropriate medication and dermocosmetics. The choice of treatment is personalized for each patient according to the type of rosacea. It is important and true for all patients, particularly those who suffer from a red-teledgee-like form of the disease, to avoid the use of chemically formulated sunscreen products. products containing natural protective agents are preferred.

For treatment of rosacea there are several treatment options:

1. Oral medicines: antibiotics (tetracyclines, macrolides, metronidazole)
2. Topical treatments: metronidazole and azoleic acid as well as dermocosmetic products
3. Laser devices and light sources to treat erythema and telangiectasia, such as vascular LASER, ie PULSED-DYE LASER, fractional laser, CO2 Laser.
4. Phototherapy has a double effect on the effects of Demodex folliculorum. The phototherapy uses the pure, visible, and life-giving spectrum of light, which is responsible for the presence of life on the planet for the treatment of inflammation and bacteria. With the red light spectrum (633 nm) we achieve a reduction in inflammation, while with the blue light spectrum (415 nm) antibacterial activity, as it affects the bacteria present in the mites. So the treatment of rosacea is effective.
5. Combined use of photodynamic therapy (PDT).
6. In summary, rosacea is a benign dermatopathy with outbursts and recesses, in which good dermatologist and patient collaboration helps to overcome it.

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Sutureless strabismus surgery: Experimental and human studies

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Research Institute of Ophthalmology, Egypt

The use of tissue adhesives in strabismus surgery is known for more than 40 years. However, few reports have been published and most of them were experimental. All techniques described the use of tissue adhesives to weaken an extra ocular muscle either by recessing it or to apply a suture less fadenoperation. To our best knowledge, no study applied tissue adhesives to strengthen an extra ocular muscle. Our research showed that the use of ISO-Amyl-2-Cyanoacrylate is considered one of the least harmful and effective tissue adhesive in strabismus surgery. A comparative histologic studies of strabismus surgery with and without sutures using the ordinary and electron microscopes were carried. Our surgical techniques to weaken or strengthen an extra ocular muscle are shown in our presentation.

Recent Publications

1. Duffy M T et. al Stabismus surgery: Scaffold-enhanced 2-Octyl Cyanoacrylate adhesive versus sutures. ARVO(2749,B588)2003.
2. Mulet et. al (2006) Adal-1 bioadhesive for sutureless recession muscle surgery: a clinical trial. Br. J. Ophthalmology. 90(2):208-212.
3. Scott A B ,Collins C C, O'Meara DM Extra ocular muscle forces in strabismus. Proceedings of the 1st Congress of International Strabismological Association,1971;Saint Louis, MO .St Louis: CV Mosby:1971:125-136.
4. Toneli E Jr,Celestino H A, Bambera E A (2004) Tissue adhesives for a suture less fadenoperation. an experimental study in rabbit model. Investigative Ophthalmology and Visual Science. 45(12):4340-4345.
5. Woodwarch S C, Herman J B, Cameron J L, Brandes G, Pulaski E, Leonard F (1965) Histotoxicity of cyanoacrylate tissue adhesive in the rat .Ann Surg.162(1):113-122.

Biography

Mahmoud AlyRageh completed his MSc Ophthalmology from Cairo University in 1983. He was a Fellow at Hugonnier Center Lyon University, France in 1984. He completed his MD degree in Ophthalmology from Cairo University in 1992. He has published more than 20 articles in different scientific journals. He has supervised many theses for the fulfillment of the MSc and MD degrees. He is a former Head of Pediatric Ophthalmology Unit at the Research Institute Of Ophthalmology, Cairo-Egypt. He is the Editorial Board Member at *EC Ophthalmology Journal*. He is Chairman of the Board and the Head of Pediatric Ophthalmology Department at Al Ain Eye Center, Cairo, Egypt (Private Sector). He is a Visitor Consultant for the management of Strabismus and Nystagmus cases at Dar Al Shifa Hospital, Kuwait City since 14 years.

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Radiotherapy and ocular side effects: myths, beliefs and scientific evidences

Trinanjan Basu
HCG Apex Cancer Centre, India

Statement of the Problem: Radiotherapy a curative treatment for majority of head and neck and base skull tumors. It's either postoperative or radical. The typical challenge in base skull or nasopharyngeal malignancies is the proximity of ocular structures (eye, optic nerve, optic chiasm). There have been numerous reports about dreaded and morbid side effects of incidental radiation dosage to these structures. Radiotherapy has improved enormously in previous decade and with modern technology any vision compromising side effects are rare. We will look at the techniques, known side effects, incidences and how we radiation oncologists perceive them.

Methodology & Theoretical Orientation: Literature reported incidences of ocular side effects while treating tumors in and around optic apparatus (base skull/nasopharynx/optic pathway gliomas/pituitary tumors) and their relevance in modern day radiotherapy.

Conclusion & Significance: With modern radiotherapy and improvement in imaging and treatment delivery these side effects are myth only. We hardly witness people becoming blind due to radiotherapy and it's a pure myth.

Recent Publications

1. Basu T, Kataria T, Goyal S, Gupta D. Is There a Hint Towards Clinico-Dosimetric Correlation of Fatigue Among Head and Neck Cancer (HNC) Patients Treated by Modulated Radiotherapy? BAOJ Pall Medicine 2017, 3: 43: 042.
2. Kataria T, Basu T, Goyal S, Gupta D. Need of collaborative radiology–radiation oncology workshops in decision making for head and neck cancer (HNC) management in India: Perspectives of the radiation oncologists. J Can Res Ther 2016;12:1080-3.
3. Kataria T, Gupta D, Basu T, Gupta S, Goyal S, Banerjee S et.al. Simple diagrammatic approach to delineate duodenum on a radiotherapy planning CT scan. Br J Radiol 2016; 89: 20150661.
4. Basu T, Laskar SG, Gupta T, Budrukkar A, Murthy V, Agarwal JP. Toxicity with radiotherapy for oral cancers and its management: a practical approach. J Cancer Res Ther. 2012;8 Suppl 1:S72-84.
5. Basu T, Kataria T, Goyal S, Gupta D, Sharma K. Do we need to spare central nervous system structures during head and neck cancer intensity modulated radiotherapy?. Clin Cancer Investig J 2015;4:216-9.

Biography

Dr Trinanjan Basu is a practicing radiation oncologist from India. He has his training from Kolkata where he was born and then obtained specialized training from Tata Memorial Hospital, Mumbai. Currently he resides in Mumbai and working in a state of the art centre with latest radiation oncology facilities. During his training and early career he has been trained in all latest radiation oncology facilities in Mumbai and Delhi in all latest equipment. He has keen interest in clinical studies and has more than 25 peer reviewed journal publications, authored few books and editorial member of Cambridge Publishing House, UK. He has received grants and trainings from ESTRO and ESMO at Paris and Vienna respectively.

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Ibrahim Eladawy Elmansoura, J Clin Exp Ophthalmol 2018, Volume 9
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Decision making in Duane's syndrome.

Ibrahim Eladawy Elmansoura
Mansoura university, Egypt

This talk answers the following questions:

Is it Duane's or not?

To treat or not.

How to treat

Through the lecture many cases of Duane's syndrome were presented discussing radiology, pathogenesis, diagnosis and management of Duane's syndrome

Biography

Department of Paediatric ophthalmology and strabismus. Works as head in Elmansoura Mansoura ophthalmic Center, Mansoura university.

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Sights and Sounds of Domestic Violence

Clifford D Brown
Central Alabama Veterans Health Care System, USA

As our society becomes more desensitized to violence through exposure to video games, news programs, and even on the streets of our cities we can easily overlook the evidence of this violence in our patients. Even emergency departments and family practice/primary care physicians often do not examine closely the most frequent site of domestic violence, the face and head, while fractures and hemorrhages in the trunk and extremities receive attention. Physicians who diagnose and treat the orbital contents and the adnexiae must be careful not to repeat their mistakes, as we may be the victim's only hope for rescue. We would not ignore signs of diabetic retinopathy, too often we do not examine our patients for signs of domestic violence. To ignore either one can be deadly for our patients. For this reason, some of the signs all of us see in our clinical settings and related issues will be discussed in this lecture.

Biography

Clifford D Brown currently serves in the Central Alabama Veterans Health Care System as Chief of the Eye Clinics and work closely with both the Neurology and TBI Team Leads to provide in depth diagnostic and rehabilitative care for veteran service members. Previously, his active duty assignments have included the Department of Homeland Security (Senior Health Adviser and Senior Analyst/Operations Chief, National Biosurveillance Integration Center), the US Public Health Service (multiple Indian Health Service Hospitals as Chief of Eye Service), the US Army Deputy Chief of Eye Services and Behavioral Vision Chief for the Exceptional Family Member Department (97th General Hospital, Frankfurt, Germany), in Edmonton, Alberta, Canada as a Rehabilitative Consultant for five school districts in Alberta, and Manitoba (private practice), and the US Air Force Security Services Command as the Chief of Eye Care. After completion of under graduate and professional degrees at Pacific University, Oregon in 1973, he completed Fellowship (1986) and Diplomate (2000) studies and a Master of Public Health in 2008. In 2006 the Association of Military Surgeons of the United States awarded him the 2006 David Sullins National Service Award. He served the past eight years as a Reviewer of professional articles for the Journal of Military Medicine and as Examination Board Member for American Academy Diplomate Public Health/Environmental Vision for ten years. He introduced TBI as diagnosis in need of military care in 2004 to Scientific and Research Symposium, and as a source of domestic violence nationally in 2008.

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Outcome of inverted internal limiting membrane flap technique for chronic macular holes

Ogugua Okonkwo, Adekunle Hassan and **Olufemi Oderinlo**
Eye Foundation Retina Institute, Nigeria

Idiopathic macular holes (MHs) are an important cause of vision loss. Since Kelly and Wendel first demonstrated that MHs could be treated, with effective closure of the MH achieved using vitrectomy techniques, many more refinements have trailed the evolution of MH surgery and a majority of eyes can have successful closure of the MH and improvement in functional vision. However, higher rates of MH post operative non-closure are associated with highly myopic eyes, retina detachments, reoperations, chronicity and large size. The inverted internal limiting membrane (ILM) flap technique (in which a piece of peeled ILM tissue, attached to the edges of the MH is trimmed and then flipped over the MH) has been demonstrated by several studies to provide better rates of anatomical closure in larger sized MHs >400 microns. This inverted ILM flap technique is therefore preferred for managing the more difficult MHs. We reviewed the anatomical and functional outcome of MH surgery using the inverted ILM flap technique for chronic large MHs. A retrospective review of a consecutive series of chronic MHs having an MH base diameter equal to or greater than 1000 microns and with symptom duration equal to or greater than three months was done. The primary outcome measures were anatomical MH closure and change in best snellen visual acuity. The secondary outcome measure was the presence of the outer retina on SD-Optical Coherence Tomography (OCT), i.e. the external limiting membrane (ELM) and the ellipsoid zone (EZ). Seven eyes of patients that underwent surgery between April 2015 and January 2017 met the study criteria. Their mean age was 65.7 years; mean MH base diameter, 1241 microns and mean symptom duration at presentation, 19 months. All eyes had an inverted ILM flap technique on which ILM staining was done using brilliant blue G. ILM was then peeled and inverted into the MH. Post-operative examination consisted of a snellen visual acuity test, intraocular pressure, slit lamp biomicroscopy and dilated funduscopy. Post operative SD OCT was done during months the first, second and third months. OCT Angiography was performed in two out of seven eyes. Mean follow up was 10.6 months. Post operatively, all seven eyes had closure of the MH and five eyes had improvement in vision while in two eyes post-operative vision remained same as pre-operative. There was no vision loss in any of the eyes. Also, three eyes had microstructural repair of the outer retina with presence of ELM and EZ. This study demonstrates a functional benefit in a majority of the eyes in which the ILM flap technique was used in the repair of large chronic MHs, which falls into the category of MHs with a poorer post-operative outcome.

Biography

Ogugua Okonkwo is a Consultant Ophthalmic Surgeon/Vitreoretina Specialist. He is a Member of the Ophthalmological Society of Nigeria (Chairman of Scientific Program Committee during the 2012 congress of the society). Currently, he is working on a project aimed at improving vitreoretina services and training in Sub-Saharan Africa.

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Silicone orbital and/or facial prosthesis

Soung Min Kim, Mi Young Eo, Yun Ju Cho, T Hoang Truc Nguyen and **Ik Jae Kwon**
Seoul National University, South Korea

The loss of an eye and the associated facial disharmony has major physical, psychological and social consequences for patients undergoing orbital exenteration. Facial composite defects, including those of the eyes, nose, lips, and buccal cheeks, occur mainly because of malignant disease, severe trauma, uncontrolled infection, and animal-bite wounds. In satisfying patient's aesthetic, functional and psychologic desires, many challenges have been reported, including during microvascular flap surgical interventions and in resin-based facial prosthesis fabrication. A magnet-retained prosthesis with an implant has various advantages over both adhesive and spectacle-retained prostheses for reconstruction of the exenterated orbit. Silicone has appropriate physical properties for maxillofacial prosthesis, such as a skin-like texture and being comfortably lightweight, although it has weak edge strength. However, silicone facial prostheses face cementation or adhesion difficulty between the silicone and resin or metal component. The plastic clay used in this report is an exfoliated and intercalated polyurethane organoclay composite that has been used as a raw material for sculpture and the plastic arts. This plastic clay also has a self-decontaminating surface that prevents the outgrowth of pathogenic microorganisms on its surfaces, and this antimicrobial functionality was also approved in recent related articles. This study demonstrates one representative silicone facial prosthesis case with magnet cementation to silicone using plastic clay, which will be applied to various maxillofacial prosthesis strategies in the near future.

Recent Publications

1. Kim S M, Cho Y J, Eo M Y, Kim J S, Lee S K (2017) Silicone facial prosthesia: a preliminary report on silicone adhesion to magnet. J Craniofac. Surg. 29(1):e6-e8.
2. Kim S M, Amponsah E K, Eo M Y, Cho Y J, Lee S K (2017) Pediatric glial heterotopia in the medial canthus. J. Craniofac. Surg. 28(8):e778-e781.
3. Kim S M (2017) Magnet-retained orbital prosthesis using a dental implant. J Craniofac. Surg. 28(2):e151-e152.
4. Kim S M (2017) The removal of an implant beneath the optic canal by modified endoscopic-assisted sinus surgery. Eur. Arch. Otorhinolaryngol. 274(2):1167-1171.

Biography

Oral and Maxillofacial Microvascular Reconstruction Lab, Brong Ahafo Regional Hospital, Sunyani, Ghana Department of Oral and Maxillofacial Surgery, Dental Research Institute, School of Dentistry, Seoul National University, Seoul. South Korea

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Notes:

Ana Vachiberidze et al., J Clin Exp Ophthalmol 2018, Volume 9
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Different surgical approaches to remove subfoveal blood in hemorrhagic AMD: A comparative study

Ana Vachiberidze, Tekla Mamageishvili and **Nikoloz Labauri**
DAVINCI Eye Clinic, Georgia

Purpose: To compare and evaluate anatomical and functional outcomes of two different surgical techniques to treat hemorrhagic AMD.

Methods: The method involved prospective interventional case series. Twelve eyes of 12 patients having subfoveal hemorrhage secondary to wet-AMD were enrolled and divided in two groups. Group 1 includes eight eyes of 8 patients, where PPV was performed. Using 41 Gauge subretinal cannula BSS diluted with tPA (125 mg/ml) was injected to detach the macula. After fluid-air exchange, non-expansile gas was used to fill up only 50% of the vitreous cavity. Group 2 includes four eyes of 4 patients. After PPV peripheral, temporal 200° retinotomy was performed, retina was detached, and free flap was inverted, subfoveal hemorrhage was removed via direct approach and conventional silicone oil tamponade was used. Cases were followed up for 12 months.

Results: In Group 1 submacular hemorrhage was successfully displaced inferiorly within 3 days and then completely reabsorbed after few weeks in all 8 cases. The mean VA improved from baseline 0.01 decimals (varied from HM to 0.02) to 0.2 decimals (varied from 0.09 to 0.7) at 12 months. In Group 2 submacular hemorrhage was completely removed in all cases, but mean VA at 12 months was not as high as in Group 1, where mean preoperative VA was 0.01 decimals (varied from HM to 0.03) and mean postoperative VA was 0.05 (varied from HM to 0.1), respectively. No recurrent subfoveal hemorrhage was observed in any group. Subfoveal fibrosis was progressed in 2 out of 8 eyes in Group 1 and 2 out of 4 eyes in Group 2. Significant Optic Nerve atrophy was observed in Group 1 in all cases. This latest can be the main reason why we couldn't achieve significant improvement of VA in Group 2.

Conclusions: This study shows that the technique used in Group one is superior than the technique used in group 2. Thus, minimally invasive procedure should be considered to treat cases of wet AMD complicated with subfoveal hemorrhage.

Biography

Ana Vachiberidze started from Georgia State Medical University – State Medical College and worked as Faculty of Medicine; Medical Doctor MD at Tbilisi State Medical University TSMU. Currently she is a Junior Doctor at Junior doctor /seeker at "Akhali Mzera" Ltd. by Pof. Merab Dvali as a Residency program in General Ophthalmology.

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Mücella Arıkan Yorgun, J Clin Exp Ophthalmol 2018, Volume 9
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Choroidal thickness change in central serous chorioretinopathy after low-fluence photodynamic therapy (PDT) using enhanced depth imaging optical coherence tomography (EDI-OCT)

Mücella Arıkan Yorgun
Atatürk Training and Research Hospital, Turkey

Purpose: To investigate the change in choroidal thickness and subanalyze Haller and Sattler layers in patients with central serous chorioretinopathy (CSC) following low-fluence photodynamic therapy (PDT) using enhanced depth imaging optical coherence tomography (EDI-OCT).

Methods: The study design used was a retrospective and comparative series. Medical records of the patients that presented with CSC in Atatürk Training and Research Hospital between March 2016 and September 2017 were reviewed. Patients with a diagnosis of CSC and a history of decreased visual acuity for more than three months and treated with half-dose PDT with verteporfin were included the study. Patients who received previous PDT for chronic CSC or had evidence of choroidal neovascular membrane on FA were excluded. Choroidal thickness was measured from the posterior edge of the retinal pigment epithelium to the choroidal-scleral junction at 500 μm intervals up to 2000 μm temporal and nasal to the fovea (nine locations). Main outcome measures were the change in choroidal thickness and subanalyze Haller and Sattler layers after the treatment.

Results: A total of 13 eyes of 13 patients were included in the study. The mean age of the patients with CSC was 49±11 years (min: 40-max: 68). The serous subretinal fluid resolved in all patients after the treatment. The mean subfoveal choroidal thickness decreased significantly from 310.60±89.16 μm at baseline to 308.41±90.03 μm after PDT ($P<0.05$). The mean Haller's layer thickness decreased significantly from 203.40±86.37 μm to 200.20±81.55 μm ($P<0.05$). The thickness of Sattler' layers did not differ significantly after PDT treatment ($P>0.05$).

Conclusion: Half-dose PDT for CSC resulted in thinner subfoveal choroidal thickness after PDT treatment. Sattler's layer had similar thickness in eyes with active CSC and after PDT. This study finding suggested that subfoveal choroidal thickness changes after half dose PDT were likely due to the changes in Haller's layer

Biography

Mücella Arıkan Yorgun, MD, FEBO, graduated from Hacettepe University in 2005 and has completed Residency in Atatürk Training and Research Hospital, Turkey. She is a Research Fellow in the Retina Department in the same hospital.

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Demonstration Session

Day 2

Marta Motllo Caelles, J Clin Exp Ophthalmol 2018, Volume 9
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19th Global Ophthalmology Summit

February 26-27, 2018 | Berlin, Germany

Enric Bach Cuadra

Polytechnic University of Catalonia, Spain

Amblyopia treatment without occlusion: A vision therapy program using artificial intelligence-customized software

Statement of the Problem: Amblyopia is the partial loss of vision in one or both eyes caused by conditions that affect the normal development of visual function. The most frequent conditions causing amblyopia include strabismus and anisometropia, among others. Current treatments strategies range from visual therapy with patching and optical correction to surgery.

Methodology & Theoretical Orientation: We have used an innovative and integrative visual therapy method named Brain VT, which allows the patient to work several tasks, including anti suppression, ocular movements, fixations (form periphery to centre), accommodation, spatial localization, Vestibular reflex, body posture and basic cognitive skills. The program provides a wide variety of visual stimulus for different conditions, ordered according to the subject's level of maturation. The artificial intelligence algorithm proceeds automatically according to the patient's responses. Size, shape, colour, number and timing of stimulus presentation and response are all customized to the patient's needs, and there are many levels according to task difficulty, making ceiling and floor effects unlikely.

Findings: Although studies are still in an early phase and therefore there is a lack of scientific evidence, preliminary clinical results are encouraging.

Conclusion & Significance: Practitioners are advised to take advantage of emerging digital technologies in order to improve the quantity and quality of vision of their patients, particularly in amblyopia.

Recent Publications

1. Clarke M P (2010) Review of amblyopia treatment: Are we overtreating children with amblyopia? Br. Ir. Orthopt. 7: 3–7.
2. Maconachie D E and Gottlob I (2015) The challenges of amblyopia treatment. Biomed J. 38(6): 510-516.
3. Hess R F and Thompson B (2015) Amblyopia and the binocular approach to its therapy. Vis. Research 114:4-16.
4. Eaton N C, Sheehan H M and Quinlan E M (2016) Optimization of visual training for full recovery from severe amblyopia in adults. Learn Mem. 23(2): 99-103.

Biography

Enric Bach Cuadra has expertise in visual function evaluation and performance enhancement. He has passion in applying new digital techniques for improving visual-cognitive abilities. He has a Master's degree in Optometry and Vision Therapy and Specialization in Geriatric and Pediatric Optometry from "Centro de Especialización Optométrica" (Madrid, Spain). He holds a Bachelor's in Optics and Optometry (Polytechnic University of Catalonia, Terrassa, Spain. He is a Technical Director of TOT VISIO (Integrative Vision Therapy Clinic). He is a Speaker in national and international congresses.

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Marta Motllo Caelles, J Clin Exp Ophthalmol 2018, Volume 9
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Marta Motllo Caelles

Polytechnic University of Catalonia, Spain

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Scientific Tracks & Abstracts
Day 2

Sessions:

Glaucoma | Ophthalmology Practice | Ophthalmology Surgery | Ophthalmology Imaging and Instruments | Ocular Pharmacology and Therapeutics | Retina and Retinal Diseases | Esthetic Medicine

Session Chair
Saba Al Reshaid
King Khaled Eye Specialist Hospital, Saudi Arabia

Session Introduction

Title: **Title: Retinal pigment epithelial cell replacement strategies**
Carl M Sheridan, University of Liverpool, UK

Title: **Title: High-power blue laser pointer induced maculopathy**
Saba Al Reshaid, King Khaled Eye Specialist Hospital, Saudi Arabia

Title: **Title: Modification of biochemical derangements and VEGF secretion may prevent diabetic retinopathy**
Lakshmi Kanta Mondal, The Regional Institute of Ophthalmology, India

Title: **Title: Sumoylation regulation of lens development**
David W. Li, Sun Yat-Sen University, China

Title: **Title: The prognosis of keratoplasty after previous graft failures in adults**
Samar A. Al-Swailem, King Khaled Eye Specialist Hospital (KKESH), Saudi Arabia

Title: **Title: Acanthamoeba keratitis: Does the increased incidence in a regional eye unit reflect a national trend?**
Faaiq Hassan, University Hospital Coventry & Warwickshire, United Kingdom

Title: **Title: Incidence of posterior vitreous detachment after femtosecond LASIK compared with microkeratome LASIK**
Moataz Osman, Cairo University, Egypt

Title: **Title: Metastatic uveitis in oncologycal patients**
Markosyan Armida Grishai, GVM Care and Research Medical Center, Russia

Title: **Title: The role of corneal densitometry in the ophthalmic examination of Fabry's disease, and in the follow-up of the effect of enzyme replacement therapy**
Rita Agota Gyorine Szechey, Semmelweis University, Hungary

Carl M Sheridan, J Clin Exp Ophthalmol 2018, Volume 9
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19th Global Ophthalmology Summit

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Retinal pigment epithelial cell replacement strategies

Carl M Sheridan
University of Liverpool, UK

Dysfunction of Retinal Pigment Epithelial (RPE) cells and their underlying Bruch's basement membrane leads to subsequent photoreceptor degeneration and irreversible vision loss in several retinal pathologies including Age-related Macular Degeneration (AMD) Subretinal transplantation of a functioning monolayer of cells to replace the damaged or lost RPE cells is a promising area for treatment of AMD. Replacement of the atrophied RPE cell layer has previously shown some potential in restoring visual acuity in patch autograft surgeries. The source of replacement cells (ocular and non-ocular) from induced pluripotent cells, embryonic stem cells, mesenchymal stem cells and adult epithelial cells is the subject of widespread research with some Phase I clinical trials underway. In addition, the choice of underlying substrates for transplant being developed includes biological and artificial substrates that are either degradable or non-degradable. The merits and challenges currently faced in translating the plethora of cross-discipline discovery research into clinical practice will be presented.

Recent Publications

1. Kearns V R, Tasker J, Zhuola Akhtar R, Bachhuka A et. al (2017) The formation of a functional retinal pigment epithelium occurs on porous polytetrafluoroethylene substrates independently of the surface chemistry. J. Mater. Sci. Mater. Med. 28(8):124.
2. Parekh M, Ferrari S, Sheridan C, Kaye S and Ahmad S (2016) Concise review: an update on the culture of human corneal endothelial cells for transplantation. Stem Cells Translational Medicine. 5(2):258-264.
3. Branch M J Yu, W Y, Sheridan, C and Hopkinson A (2015) Isolation of Adult Stem Cell Populations from the Human Cornea. In: Rich, I. N. Stem Cell Protocols. Doi: 10.1007/978-1-4939-1785-3.
4. Doherty K G, Oh J S, Unsworth P, Bowfield A, Sheridan C M et. al (2013) Polystyrene surface modification for localized cell culture using a capillary dielectric barrier discharge atmospheric-pressure microplasma jet. Plasma Processes and Polymers. 10(11):978-989.
5. Mason S L, Stewart R M, Kearns V R, Williams R L and Sheridan C M (2011) Ocular epithelial transplantation: current uses and future potential. Regen Med. 6(6):767-782.

Biography

M Sheridan is an internationally renowned Cell Biologist with research experience in Ocular Cell Biology since 1991. His areas of focus have centered on ocular wound healing and cell transplantation research with published papers concerning the ocular surface, cornea, outflow pathway as well as retinal pathologies such as proliferative vitroretinopathy (PVR) and age-related macular degeneration (AMD). He has published and reviewed for almost all Ophthalmology scientific journals as well as chaired at international Ophthalmology conferences. He has a keen interest in both Tissue Engineering and Regenerative Medicine approaches to prevent and restore sight loss and is passionate that cross discipline research is key to achieving this goal.

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Notes:

Saba Al Reshaid, J Clin Exp Ophthalmol 2018, Volume 9
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19th Global Ophthalmology Summit

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High-power blue laser pointer induced maculopathy

Saba Al Reshaid
King Khaled Eye Specialist Hospital, Saudi Arabia

Laser devices are ubiquitous in modern medicine, industry, military, and everyday life. Lecturers often use hand held laser pointers at conferences. Eye injuries due to laser exposure are a concern because optical radiation from 400 nm to 1400 nm penetrates into various ocular structures. The eye is the only organ vulnerable to this range of wavelength. The blink reflex and aversion response restrict the duration of laser exposure to 0.15-0.25 seconds. These natural protective mechanisms are effective against low power laser pointers. However, retinal injury can occur following prolonged (>10 seconds) exposure to low-power laser pointers as well. High-power handheld laser pointers (up to 1200 mW) are now also publicly available via the internet. These laser pointers can be used to light fireworks from a distance, light cigarettes and burn through plastic bags, this study will show our experience with the patients presented with retina injury caused by momentary exposure to a high-power blue laser pointer. 27 patients with a history of laser pointers were presented with the following: full thickness macular hole (FTMH) in 17 eyes, intraocular hemorrhage in 7 eyes, an outer retinal disruption in one eye, an epiretinal membrane in one eye, and a schisis-like cavity in one eye. Initial best-corrected visual acuity (BCVA) had a mean of 20/290 (range: 20/40 to 4/200). Neodymium: yttrium-aluminum-garnet Nd:YAG hyaloidotomy was performed in five eyes with sub hyaloid hemorrhage and pars plana vitrectomy (PPV) with or without tamponade in 15 eyes. While, observation was elected in 7 eyes, visual acuity improved almost in all patients spontaneously or following intervention. High-power handheld laser pointers are extremely dangerous to the eye and public awareness should be encouraged.

Recent Publications

1. Alsulaiman S M, Alrushood A A, Almasaud J, Alkharashi A S, Alzahrani Y, et al. (2015) Full-thickness macular hole secondary to high-power handheld blue laser: natural history and management outcomes. Am J Ophthalmol. 160(1):107-13.
2. Bhavsar K V, Wilson D, Margolis R, et al. (2015) Multimodal imaging in handheld laser-induced maculopathy. Am J Ophthalmol. 159(2):227-231.
3. Alsulaiman S M, Alrushood A A, Almasaud J, Alzaaidi S, Alzahrani Y, et al. (2014) High-power handheld blue laser-induced maculopathy: the results of the King Khaled Eye Specialist Hospital Collaborative Retina Study Group. Ophthalmology 121(2):566-72.
4. Lim M E, Suelzer J, Moorthy R S and Vemuri G (2014) Thermal macular injury from a 154 mW green laser pointer. J AAPOS 18(6):612-614.

Biography

Saba Al Reshaid is an Ophthalmologist who has experience in handling eye diagnosis, surgeries and recommendations to help patients perform proper care for their eyes. He has excellent skills in performing surgeries and giving treatments, values time and work management, practices effective organizational skills strategies for better coordination with peers. He participates in the training of residents, as well as fellows. He is a dedicated researcher and enthusiastic when it comes to designing research projects, as well as in implementing them. He has 30 scientific publications and 70 scientific poster presentations in international and national meetings.

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19th Global Ophthalmology Summit

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Modification of biochemical may prevent diabetic retinopathy

Lakshmi Kanta Mondal
Regional Institute of Ophthalmology, India

Statement of the Problem: Modification of hyperglycemia induced different biochemical pathways and modulation of up regulated expression of angiogenic vascular endothelial growth factor (VEGF) and its receptor 2 (VEGF, VEGFR2) by peripheral retinal laser photocoagulation (PHC) may prevent vision loss owing to diabetic retinopathy (DR) in type 2 diabetes mellitus (DM). Unutilized enormous intracellular glucose in insulin nondependent tissues including retina, leads to increased formation of advanced glycation end products, activation of polyol pathway, anaerobic glycolysis and oxidative stress, resulting in glutamate toxicity and lipid peroxidation. Ultimately all these pathways converge to upregulation of proangiogenic VEGF and VEGFR2, the crucial player of the development of DR.

Purpose: The purpose of the present pilot study is to assess the effects of supplementation of B-vitamins (B1, B2, B3, B5 and B6), vitamin E and precedent peripheral laser PHC for pathological retinal degeneration and retinal breaks, on the development of DR.

Methodology: Two hundred patients of diagnosed type2 DM, who had been treated by oral antidiabetic medication along with B-vitamins and vitamin E since 2004, are included in this ongoing study. Baseline detailed fundus examinations excluded the presence of retinopathy. Twenty seven subjects of this group received peripheral retinal laser PHC for symptomatic retinal breaks. Baseline biochemical parameters like lactate/pyruvate ratio, advanced glycation end products (AGEs), malondialdehyde (MDA), VEGF and VEGFR2 were determined. Yearly fundus examinations were documented to detect the features of DR.

Findings: Twenty seven patients who received laser PHC and B-vitamins and vitamin E, do not show any feature of DR. Thirty two among 160 patients who received B-vitamins and vitamin E, developed very mild microangiopathy. Thirteen patients lost the follow-up.

Conclusion: Glycolysis and citric acid cycle should run uninterruptedly to prevent biochemical derangements which leads to increased expression of VEGF and VEGFR2. Previous peripheral retinal laser PHC probably create inhibitory signal for secretion of angiogenic VEGF and VEGFR2.

Flow chart→

Anomalous glycolysis→altered L/P ratio and NAD+ /NADH→reductive stress in cellular level Increased lactate→lowering of cellular pH→reduced action of GLAST→glutamate toxicity→increased intracellular Ca++ →increased lipid peroxidation→diminished activity of G6PD→reduced function of deformed RBC→localized tissue hypoxia→upregulation of VEGF Unutilized glucose→increased AGEs→AGE+RAGE interaction→activation ofNADPH oxidase→increased endothelial and pericyte ROS production→upregulation of NF-kB→upregulation of VEGF Supplementation of B-vitamins→adequate supply of oxidized cofactors(NAD+ ,FAD,FMN,Pyridoxamine) →continuity of glycolysis and citric acid cycle→reduced biochemical derangements→less production of angiogenic VEGF and VEGFR2 Previous laser PHC→inhibitory signal on angiogenic VEGF→less chance of microangiopathy

Notes:

Recent Publications

1. Mondal Lakshmi K, Baidya Krishna P, Bhattacharya Basudev et al. (2006) Relation between increased anaerobic glycolysis and visual acuity in long standing type 2 diabetes mellitus without retinopathy. Indian J Ophthalmol. 54(1):43-44.
2. Choudhuri Subhadip, Mandal Lakshmi K, Dutta Deep et al. (2013) Role of hyperglycemia-mediated erythrocyte redox state alteration in the development of diabetic retinopathy. Retina 33:207-2016.
3. Mondal Lakshmi K, Choudhuri Subhadip, Dutta Deep et al. (2013) Oxidative stress-associated neuroretinal dysfunction and nitrosative stress in diabetic retinopathy 37(6):401-407.
4. Choudhuri Subhadip, Dutta Deep, Sen Aditi, Chowdhury I H, Mitra Bhaskar et al. (2013). Role of N-epsilon- carboxy methyl lysine, advanced glycation end products and reactive oxygen species for the development of nonproliferative and proliferative retinopathy in type 2 diabetes mellitus. Molecular Vision. 19: 100-113.
5. Paine Suman K, Basu Analava, Mondal Lakshmi K et al. (2012) Association of vascular endothelial growth factor, transforming growth factor beta, and interferon gamma gene polymorphisms with proliferative diabetic retinopathy. Mol Vis. 18:2749-2757.

Biography

Lakshmi Kanta Mondal has been acting as a Professor in the Department of Ophthalmology at the Regional Institute of Ophthalmology, Kolkata, West Bengal, India, since 2012. He has been teaching under-graduate and post-graduate students of Ophthalmology since 1998. He is an experienced Vitreo-Retinal Surgeon. His field of interest is biochemical derangements related to development of diabetic retinopathy. He obtained the degree of Doctor of Philosophy in Ophthalmology with major focus on Ophthalmology, Biochemistry and Molecular Biology in 2017.

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Sumoylation regulation of lens development

David W Li,[1,2,3], Lili Gong[1], Weike Ji[4], Fang Yuan Liu[1], Ling Wang[1,2,3], Qian Nie[1,2], Jia-Wen Xiang[1,2], Xiao-Dong Gong[1], Zigang Chen[1,2], Zhong-Wen Luo[1], Lan Zhang[1], Xiang-Cheng Tang[1], Ruili Qi[1,3], Mi Deng[5], Zhaoxia Huang[3], Xiaohui Hu[3], Quan Dong Nguyen[6], and **Yi-Zhi Liu[1]**

[1]Zhongshan Ophthalmic Center - Sun Yat-Sen University, China
[2]Hunan Normal University, China
[3]Truhlsen Eye Institute - University of Nebraska Medical Center, USA
[4]Tongji Medical College - Huazhong University of Science and Technology, China
[5]Byers Eye Institute - Stanford University Medical Center, USA
[6]University of Texas Southwestern Medical Center, USA

SUMOylation is now established as one of the key regulatory protein modifications in eukaryotic cells. It regulates chromatin organization, transcription, DNA repair, macromolecular assembly, protein homeostasis, trafficking, signal transduction, cell differentiation and stem cell development. It also acts as a molecular mechanism mediating global changes at the cellular and organism levels when stress conditions such as heat shock or oxidative stress occur. More importantly, SUMOylation plays causal roles in many major human diseases such as cardiovascular, neuronal diseases and cancers. In the eye, SUMOylation plays a key role in retina development, and it has causal effects on corneal dystrophy. Our recent studies revealed that SUMOylation is necessary to activate the p32 Pax6, the shortest isoform of Pax6, the master regulator for eye and brain development. Moreover, our studies further revealed that sumoylation plays an important role in regulating lens differentiation. Different isforms of SUMO are differentially expressed in the ocular lens and plays contrast roles in regulating lens differentiation. While SUMO1 promotes lens differentiation, SUMO2 and SUMO3 inhibits this process. Mechanistically, SUMO1 and SUMO2/3 can either conjugate different transcription factors or conjugate to the same factor but with different preferred SUMOylation sites. In the present study, we discuss the functions of different SUMO isoforms in controlling lens development.

Biography

David Wan Cheng Li received his PhD degree in Molecular and Cellular Biology from the University of Washington in Seattle, and completed his Postdoctoral training in the Harkness Eye Institute of Columbia Medical Center in New York City. He is currently an elected One-Hundred Talent Professor in the State Key Laboratory of Zhongshan Ophthalmic Center in Sun Yat-Sen University, an elected Lotus Scholar Professor of Cellular and Developmental Biology in Hunan Normal University in China. He made numerous important discoveries in both eye development and ocular diseases as well as cancer research fields, published over 100 articles in *PNAS, NAR, Cancer Research, CDD, Oncogene, MBC, JBC, and IOVS,* etc. He has trained 30 PhD students and Postdoctoral fellows, and lectured in a dozens of countries including German, England, USA, Japan and China. He receiverd the Outstanding Achievements Award of Cataract Research from the National Foundation for Eye Research, USA in 2006.

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Samar Al-Swailem et al., J Clin Exp Ophthalmol 2018, Volume 9
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19th Global Ophthalmology Summit

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The prognosis of keratoplasty after previous graft failures in adults

Samar Al-Swailem and **Omar Ben Husain**
King Khaled Eye Specialist Hospital, Saudi Arabia

Statement of the Problem: The present study provides insights into the contributions of indications for initial keratoplasty to repeat penetrating keratoplasty (PKP), and provides valuable prognostic information that will assist ophthalmologists and patients in making the decision as to whether or not to proceed with another attempt after graft failure.

Purpose: The purpose of this study is to determine graft survival and visual outcome after repeat PKP.

Methodology & Theoretical Orientation: Retrospective review of the medical records of patients who underwent repeat PKP between 1st January 2007 and 31st December 2011. Exclusion criteria were initial keratoplasty performed elsewhere, previous lamellar graft, a clear graft with follow-up <1 year, third and further regrafts, and age <18 years.

Findings: Out of 226 repeat PKP performed, 85 repeat PKP (of 85 patients) were included. The median age at the time of regraft was 59.2 years (range: 21.8-86.1). The most common cause for performing initial PKP was bullous keratopathy (35.3%) followed by keratoconus (23.5%) and therapeutic/tectonic (T/T) graft (20%). Median follow-up was 63.5 and 30 months for clear and failed graft, respectively. Failure was due to recurrence (36.5%) and rejection (49%). Secondary glaucoma (p=0.001) and corneal vascularization (p=0.01) were the most common risk factors associated with rejection. Overall five-year survival rate was 46%. The best graft survival was in eyes with an original diagnosis of keratoconus (80%) and the worst was in eyes with T/T grafts (11.8%). Visual acuity ≥20/60 was achieved in 28% in the first year and 19% at five years. Poor vision <20/200 (27%) were mainly associated with the presence of glaucoma, corneal ulcer, retinal detachment, and optic nerve atrophy.

Conclusion: Although the prognosis for repeat PKP is poorer than that of initial PKP, reasonable outcomes can be obtained with repeat PKP with careful case selection.

Recent Publications

1. Nasser Al Sabaani, Salem Al Malki, Mohanna Al Jindan, Abdullah Al Assiri and Samar Al Swailem (2016) Femtosecond astigmatic keratotomy for postkeratoplasty astigmatism. Saudi J of Ophthalmol. 30(3):163-168.
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Biography

Samar Al-Swailem is a Senior Consultant in Cornea, Cataract and Refractive Surgeries. She currently holds the position of Chief of Anterior Segment Division, Chair of HE/IRB Committee at King Khaled Eye Specialist Hospital in Saudi Arabia. She is an Editorial Board Member of the *Middle East African Journal of Ophthalmology.* She participates in the training of residents/fellows and in the Scientific Organizing Committee of the World Ocean Council and Sustainable Ocean Summit. She is involved in several projects including KKESH-Johns Hopkins Clinical and Translational Researches, with a focus on keratoconus, OSD, dystrophies, deep anterior lamellar keratoplasty and tumors. She has more than 20 scientific publications and has given presentations at 33 international meetings. She has received many awards including "Exceptional Physician-Year 2015-KKESH", "Best Research-Year 2005-SOS" and "Most Productive Department Head" in taking corrective actions and preventive action towards patient safety incidents 2016-KKESH.

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Faaiq Hassan et al., J Clin Exp Ophthalmol 2018, Volume 9
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Acanthamoeba keratitis: Does the increased incidence in a regional eye unit reflect a national trend?

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Purpose of the Study: To report a series of cases of Acanthamoeba Keratitis (AK) in University Hospital Coventry & Warwickshire (UHCW), Coventry, UK and determine whether incidence is increasing across the UK and other developed countries.

Methods: We examined the incidence trends of AK (confirmed by microbiology) in one tertiary eye unit with an emergency eye service and compared this to the literature reflecting incidence in several hospitals across the UK, America, Australia and Canada.

Results: UHCW has shown a significant increase in new cases of AK over a 4-month time frame with over 12 confirmed cases presenting; a larger amount than found in any of the previous audits carried out in the region. Literature from Bristol and Manchester has found similar trends of increased incidence with flurries of cases across short periods. This is also reflected by a rise in the number of reported AK cases throughout the USA since 2004 and a recent outbreak in British Columbia. The incidence of AK is also increasing in parts of Australia including Brisbane however other areas of Australia such as Melbourne seem unaffected.

Conclusions: There is clearly a significant rise in the incidence of AK across developed countries. With such an abnormal increase in the number of cases within such a short time frame, it is important to document and highlight such events to search for any addressable cause. We hypothesize this rise is due to an increase in the usage of contact lenses across the population and associated improper maintenance. One contributing factor may be the growth of online purchase of lenses. This has limited the amount of teaching contact lens practitioners are able to give patients in the community. Suboptimal dosing of anti-amoebacides in lens solutions and the use of monthly/extended wear lenses also play a role.

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Biography

Hassan F qualified Medicine from Brighton & Sussex Medical School and is a Junior Doctor working in University Hospital Coventry & Warwickshire. He has a specialist interest in Corneal Surgery and Paediatric Ophthalmology.

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Moataz Osman, J Clin Exp Ophthalmol 2018, Volume 9
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Incidence of posterior vitreous detachment after femtosecond LASIK compared with microkeratome LASIK

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Cairo University, Egypt

Aim: This is a prospective, nonrandomized comparative unmasked study. The purpose was to compare the incidence of posterior vitreous detachment (PVD) after femtosecond and microkeratome LASIK.

Methodology: Eligible patients were chosen between femtosecond and microkeratome LASIK after appropriate counseling. B-scan ultrasonography was performed before surgery by a single operator. Patients with preexisting PVD (partial or complete) were excluded. The axial length was also recorded. All surgery was performed by a single surgeon at Rowad Correction Centre, Cairo, Egypt. During surgery, the suction time was measured. Ultrasonography was repeated 1 month after surgery by the same operator to detect PVD.

Results: Ten patients (20 eyes, group M) underwent LASIK using the Moria M2 microkeratome, and 10 patients (20 eyes, group F) underwent femtosecond LASIK with the IntraLase FS- 150. In groups M and F, respectively, the proportion of women was 80% and 70%, and the mean age was 24.7±4 years and 25.7±3.3 years, the mean axial length was 24.2±1.2 and 23.8±1.2 mm, and the mean suction time was 18±2 seconds and 63±4 seconds (P=0.001). After surgery, PVD was detected in 4 eyes (20%) in group M and 17 eyes (85%) in group F (P=0.000044).

Conclusions: The incidence of PVD 1 month after femtosecond LASIK was higher than after microkeratome LASIK. This may be due to longer suction time during femtosecond LASIK despite lower suction pressure.

Biography

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Markosyan Armida Grishai, J Clin Exp Ophthalmol 2018, Volume 9
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Metastatic Uveitis in oncological patients

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The purpose of this report is to describe atypical cases of metastatic uveitis in patients with a cancerous background, in the sub clinical stage. Keeping in mind that the numbers of cancer patients are increasing with each passing year. Thorough examination and cancer support of each patient who has applied to the doctor of any specialisation, in order to identify a possibility of oncological diseases should become a practice in our day and age. In difficult cases, diagnostic specialists and ophthalmologists are obliged to think about a possibility of atypical or complicated course malignant tumor. Doctors should take it up on to them self as rule to fully examine the patient. This tactic is also applied in ophthalmology. Uveal tract of the eye is a dense plexus of small blood vessels where most of them wash out inflammatory or neoplastic process. Imbalance in the immune system is the basis for the pathogenesis of all inflammatory eye diseases, including uveitis, and nevertheless, diagnosis - uveitis has an unclear etiology – it is not uncommon.

And now I would like to take a moment to give my own account of an observation obtained as a result of 5 years work at a multidisciplinary medical center as an ophthalmology consultant.

Patient, 70 year of age, woman, was seeking first aid at our clinic with the following symptoms: weakness, headache, episodes of confusion, clouded consciousness and short-term memory loss, on a top of that red eye and blurred vision of OS for the past 2 weeks. Past ocular history was positive for high myopia, artiphakia and AMD moderate vision loss. On exam Visus OD 20/70 , OS 20/50 . Anterior segment examination of OS: Conjunctiva: positive for 3+ ciliary flush with a small subconjunctival nodule adjacent to the limbus with surrounding engorged radiating vessels. Cornea: edema and folds in descemet shell, 1-2 corneal precipitates. AC: exudative suspension. Iris: an infiltration thickened with engorged adjacent stromal vessels. Posterior synechiae formed superiorly at 7 o'clock. Gonioscopy: open angle with no neovascularization, inferior and inferonasal fluffy material layered in the angle. Lens - artiphakia . Vitreous: destruction. She denies any known systemic malignancy; she confirmed headaches, shortness of breath, weakness, and chronic fatigue during past year. The patient was sent for a CT scan of chest and abdomen . CT scan results have showed a tumor in the region of the right adrenal gland, a tumor of the left ovary, multiple metastases in the liver and peritoneal carcinomatosis. The tumor node biopsy confirmed ovarian cancer.. The patient was made PET CT to exclude metastasis in the uveal tract of the left eye. Eye metastasis was excluded, although micrometastasis of the uveal tract remained under question? After 2 months her ocular lesion had regressed significantly along with systemic improvement and local therapy of uveitis.

Biography

State Educational Institution of Higher Professional Education «I.M. Sechenov Moscow Medical Academy» of Ministry of Health of the Russian Federation. In 2004 she completed her Clinical residency in Scientific Research Institute of Eye Diseases of RAMS and in 2007, Academic fellowship in Scientific Research Institute of Eye Diseases of RAMS.

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Rita Szechey et al., J Clin Exp Ophthalmol 2018, Volume 9
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The role of corneal densitometry in the ophthalmic examination of Fabry's disease, and in the follow-up of the effect of enzyme replacement therapy

Rita Szechey, Kinga Kranitz and **Zsolt Nagy-Zoltan**
Head of the University Department

Objective: To study the corneal densitometric values of Fabry's disease with typical corneal vertigo, and to monitor the effect of the enzyme replacement therapy with a Scheimpflug camera

Patients and Methods: The corneal densitometric values of 6 patients with Fabry's disease were compared to the eyes of 5 healthy subjects. In a hemizygotic male patient and heterozygous female patient, 2 studies were performed on both eyes with 2 years follow-up during the therapy. Measurements were performed with Scheimpflug camera Pentacam HR (Oculus Optikgerate) The results were given in standardized grayscale units (GSU).

Results: The mean densitometric value for the entire cornea was significantly higher in the patient group compared to the control group. In the central layer of the corneal surface of 120 µm the mean densitometric values measured in the deepest 60 µm layer were significantly higher in Fabry patients. In the densitometric values of hemizygotic men and heterozygous women, the superficial 120 µm layer was found to be significantly different. In two years of enzyme replacement therapy, the density values for total cornea significantly and a significant decrease in corneal surface 120 µm and the lower 60 µm .

Conclusions: 1. Fabry's disease with cornea verticillatus and subepthelial haze significantly increased densitometric values compared to normal control eyes. 2. Enzyme replacement therapy resulted in a significant decrease in Fabry's disease in corneal densitometry. In the future, the method in examining the efficacy of therapy, as well as in the standardisation of the ophthalmic parameters of the scoring system, can play a significant role.

Biography

Rita Szechey: Besides my other activities (ophthalmologic rehabilitation: vision and eyelid surgeries) I work as a consultant for Fabry -patients at the Budapest Semmelweis University. I am a member of the Fabry Patient Organization and I am committed to patient treatment and the research of the disease.

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Young Researchers Forum Day 2

Arina Tupīte et al., J Clin Exp Ophthalmol 2018, Volume 9
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Ophthalmic problems among children with orofacial clefts

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Statement of the Problem: Cleft lip and/or palate are the most common form of craniofacial defects and may occur isolated or in association with many other structural abnormalities of the adjacent vital structures of the face like the ears, eyes, nose, teeth and brain. Eyes originate as an extension of the forebrain, malformations involving ocular structures invariably accompany those of the face and brain and vice versa. It is estimated that these defects affect approximately 1 in every 600 newborn babies worldwide. Each year in Latvia, about 30-40 babies are born with an orofacial clefts (OFCs).

Aim: The aim of this study was to identify and analyze the prevalence of ophthalmologic problems faced by parents of children with OFCs.

Materials & Methods: Total of 153 parents were surveyed in Riga Cleft Lip and Palate Centre during November 2015 to December 2016. The questionnaire consisted of 10 questions asking parents about child's concomitant and ophthalmologic diseases. Data was statistically analysed with Microsoft Excel, IBM SPSS 22.0.

Findings: In total, 153 questionnaires were included in this study. Of the 153 patients with cleft lip and palate screened, 13 (8.5%) had ocular abnormalities. Eye pathologies were most commonly encountered among patients with isolated cleft palate (18%) less common (14%) among patient with cleft lip and palate and infrequently (6%) affected patient with cleft lip. Eyelid aabnormalities were the commonest accounting for 63 % of the total defects. Second commonest abnormality was squint (27%), abnormalities of the nasolacrimal apparatus (8%) and refractive errors (2%).

Conclusion: Our survey revealed that eyelid abnormalities, nasolacrimal duct disfunction and refractive errors are the commonest ophthalmic pathologies. Children with OFCs are at high risk of developing ophthalmic pathologies should be assessed as soon as possible after birth by a multidisciplinary team involving the Ophthalmologist as well.

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Biography

The 6-th year student of Latvian university faculty of Medicine. The author and co- author of many scientific publications in ophthalmology : publication in the Latvian medical journal ''Limbal stem cell deficiency. Surgical treatment options'' (2016), participation and oral poster presentation in the Latvian University International scientific conference ''The surgical treatment options of pterygium'' (2017) oral presentation in Latvian University International scientific conference 2018 with thesis ''The most frequent visual apparatus diseases among patients with cleft palate'' . Awards: Second place winner in Rigas Stradins University International student conference 2017 (thesis: Feeding disorders among the children with orofacial cleft) Arina Tupite is a student University of Latvia, Faculty of Medicine. Her sphere of interests is to study congenital ophthalmic pathologies in children with orofacial clefts. After graduating from the faculty, she wishes to continue studies in the Department of Ophthalmology.

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Antimicrobial contact lenses: Crosslinked quaternary organosilane and gelatin films

Edward Lim Jianyang
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Background: Contact lenses are used by over 100 million people globally for various medical and non-medical applications. However, microbial contamination of contact lenses or cases predispose wearers to adverse ocular surface complications and can lead to vision loss or impairment. An example is microbial keratitis, affecting over 500,000 people yearly. With increasing usage of contact lenses, there is a pressing need for antimicrobial lenses without affecting their optical transparencies and ocular toxicity.

Purpose: To determine the antimicrobial properties and cytocompatibility of crosslinked gelatin-silane films against Gram-positive and Gram-negative bacterial strains.

Methods: Films were prepared by slow crosslinking of gelatin with silane containing quaternary ammonium groups. To augment the antimicrobial spectrum of the films, tobramycin was incorporated. Gelatin films were casted on petri dishes and allowed to air-dry, followed by exposure to ammonium carbonate for 48 hours to induce crosslinking. Antimicrobial assessment of the films was assessed via disc diffusion method. After exposing the films to human conjunctival epithelial cells (corneal fibroblasts) for 24 hours, cytocompatibility of the films with cells were tested by LDH and ATP assays after which optical microscopic images were taken to determine cell morphology changes. The presence of crosslinking and surface characterizations of films were performed via FT-IR and SEM, respectively. Strengthening of films and crosslinking were proven via tensile strength assessments.

Results: Crosslinked films and tobramycin incorporation did not affect optical transparency. Crosslinked films showed contact mediated inhibitory activity against bacterial strains. These properties were enhanced after incorporating tobramycin. However, no zone of inhibition was observed for MRSA strains. Furthermore, crosslinked films featured smooth and uniform surfaces, along with increased mechanical strength without inducing significant cytotoxicity.

Conclusion: Crosslinked gelatin-silane films with/without tobramycin display antimicrobial properties whilst preserving optical transparency. This potentially yields prospects in the design of antimicrobial contact lenses and even clean-room surface coverings.

Biography

Edward is a 3rd year Medical Student from Singapore's Yong Loo Lin School of Medicine. An ex-national Sailor who won many awards, he is now pursuing his passion in Ophthalmology. He started with internships at well-established eye centers and is now working on contact lens-related research projects. As a new-comer, he has shown great potential in the field of research. Recently, he emerged 1st place in a local medical university symposium and also won People's Choice Award for his inspiring and engaging oral presentation. Aside from juggling clinical work and research commitments, he also explores the Bio-design industry. He recently completed a course from Singapore Stanford Biodesign and innovated to produce a device that allowed for earlier ICU mobilization to help patients enjoy shortened length of stays.

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Mücella Arıkan Yorgun, J Clin Exp Ophthalmol 2018, Volume 9
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Choroidal thickness change in central serous chorioretinopathy after low-fluence photodynamic therapy (PDT) using enhanced depth imaging optical coherence tomography (EDI-OCT)

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Purpose: To investigate the change in choroidal thickness and subanalyze Haller and Sattler layers in patients with central serous chorioretinopathy (CSC) following low-fluence photodynamic therapy (PDT) using enhanced depth imaging optical coherence tomography (EDI-OCT).

Methods: The study design used was a retrospective and comparative series. Medical records of the patients that presented with CSC in Atatürk Training and Research Hospital between March 2016 and September 2017 were reviewed. Patients with a diagnosis of CSC and a history of decreased visual acuity for more than three months and treated with half-dose PDT with verteporfin were included the study. Patients who received previous PDT for chronic CSC or had evidence of choroidal neovascular membrane on FA were excluded. Choroidal thickness was measured from the posterior edge of the retinal pigment epithelium to the choroidal-scleral junction at 500 μm intervals up to 2000 μm temporal and nasal to the fovea (nine locations). Main outcome measures were the change in choroidal thickness and subanalyze Haller and Sattler layers after the treatment.

Results: A total of 13 eyes of 13 patients were included in the study. The mean age of the patients with CSC was 49±11 years (min: 40-max: 68). The serous subretinal fluid resolved in all patients after the treatment. The mean subfoveal choroidal thickness decreased significantly from 310.60±89.16 μm at baseline to 308.41±90.03 μm after PDT ($P<0.05$). The mean Haller's layer thickness decreased significantly from 203.40±86.37 μm to 200.20±81.55 μm ($P<0.05$). The thickness of Sattler' layers did not differ significantly after PDT treatment ($P>0.05$).

Conclusion: Half-dose PDT for CSC resulted in thinner subfoveal choroidal thickness after PDT treatment. Sattler's layer had similar thickness in eyes with active CSC and after PDT. This study finding suggested that subfoveal choroidal thickness changes after half dose PDT were likely due to the changes in Haller's layer.

Biography

Mücella Arıkan Yorgun, MD, FEBO, graduated from Hacettepe University in 2005 and has completed Residency in Atatürk Training and Research Hospital, Turkey. She is a Research Fellow in the Retina Department in the same hospital.

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Association between dry eye syndrome and depressive symptoms, anxiety in postpartum women with sleep disturbance

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[2]Dr. Solomatin Eye Rehabilitation Clinic, Latvia
[3]Maternity Hospital, Riga, Latvia
[4]Daugavpils Psychoneurological Hospital, Latvia

Objective: The aim of the study was to investigate the association between DES and psychosomatic conditions in postpartum women, such as depression, anxiety and the distribution of sleep disturbance.

Materials & Methods: In this case control study, case group (N=50) postpartum women with depression were tested and control group (N=50) women without it. Each subject was tested and diagnosed as having DES, depression, anxiety and sleep disturbance or not, using: OSDI, Schirmer's test, TBUT, PHQ-9, GAD-7, PSQI. All data was analysed using Mann Whitney U test for continuous data and Fischer's Exact test for categorical data using IBM SPSS Statistics 22, Microsoft® Excel for Mac 2016.

Results: The case group involved (N=50) with median age of 31.5 years (IQR 27.8-34.0) and control group (N=50), median age 33.5 years (IQR 26.8-38.0) had statistically significant differences in DES (OR 13.1, 95% CI 4.8-35.3, P<0.001), OSDI (no disability vs. any disability, OR 17.5, 95% CI 5.9-52.2, P<0.001), Schirmer's (10 (IQR 6-12) vs. 18 (IQR 12-22), P<0.001) and TBUT test (7 (IQR 5-9) vs. 12.5 (IQR 8.0-16.8), P<0.001) results, anxiety (GAD-7, OR 17.6, 95% CI 7.6-41.0, P<0.001) and sleep disturbance (PSQI, OR 34.3, 95% CI 15.6-75.3, P<0.001).

Conclusion: Postpartum women with depression, anxiety and sleep disturbance are more likely to have DES. Moreover, confirming the risk factors by tests and examination, this study found new association between DES and postpartum depression with above mentioned psychosomatic disturbance.

Biography

Julija Mescerjakova is a student of Latvian University, Faculty of Medicine. Her sphere of interest is to study congenital opthalmic pathologies in children with orofacial clefts. After graduating from the faculty, she wants to continue studies in the Department of Ophthalmology.

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