



17th RESEARCH DAYS

São Paulo, December 10 to 11, 2015

Post Graduate Program in Ophthalmology & Visual Sciences

Organization



Support



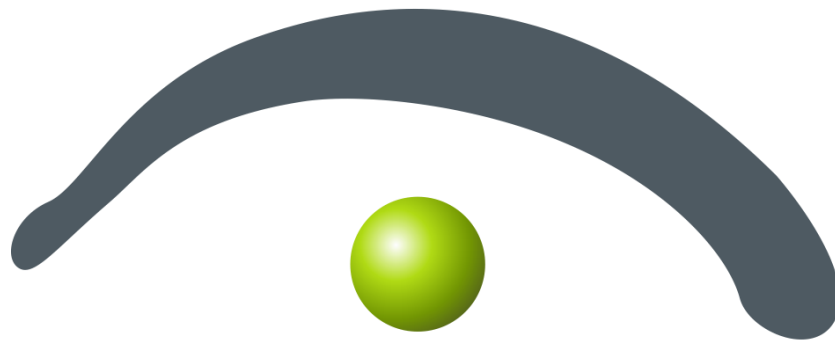
Program at a Glance

December 10, 2015 – Thursday

8:00–8:10AM	OPENING REMARKS	Ana Luisa Hofling-Lima
8:10–8:20AM	PROGRAM HEADLINES AND POST-GRADUATION PROGRAM	Denise de Freitas
8:20–9:05AM	PAPER PRESENTATION – SESSION 1	Glaucoma Moderators: Augusto Paranhos Jr., Paulo Augusto Arruda Mello, Luiz Alberto Soares de Melo Júnior
9:10–9:45AM	PAPER PRESENTATION – SESSION 2	Glaucoma Moderators: Ivan Maynard Tavares, Tiago dos Santos Prata
9:45–10:05AM	COFFEE BREAK	
10:10–10:50AM	INVITED SPEAKER EPIDEMIOLOGY	Vaccination for the Traveler, Ebola Project Jessé Reis Alves, MD Instituto de Infectologia Emilio Ribas, São Paulo, Brasil
11:00AM 12:15PM	PAPER PRESENTATION – SESSION 3	Electrophysiology and Epidemiology Moderators: Solange Rios Salomão, Adriana Berezovsky
12:15–1:30PM	LUNCH BREAK	
1:30–2:40PM	PAPER PRESENTATION – SESSION 4	Strabismus, Uveitis, Ultrasound, Lacrimal System, Oculoplastics Moderators: Norma Allemann, Cristina Muccioli
2:40–3:20PM	POSTER - SESSION 1	Glaucoma, Trauma, Uveitis, Retina and Vitreous Awards Committee: Adriana Berezovsky, Eduardo Büchelle Rodrigues, Luiz Alberto Soares de Melo Júnior
3:00–3:20PM	COFFEE BREAK	

December 11, 2015 – Friday

3:20–4:35PM	PAPER PRESENTATION – SESSION 5	Retina, Vitreous and Oncology Moderators: Maurício Maia, Miguel Burnier Jr.
4:40–6:00PM	PAPER PRESENTATION – SESSION 6	Retina and Vitreous, Laboratory Moderators: Juliana Sallum, Eduardo Büchelle Rodrigues
6:00 PM	CLOSING REMARKS	
8:00–9:50AM	PAPER PRESENTATION – SESSION 7	Cornea and External Diseases Moderators: Ana Luisa Hofling-Lima, José Álvaro P. Gomes, Flávio Eduardo Hirai, Fabio Ramos de Carvalho
9:40–10:00AM	COFFEE BREAK	
10:00–10:40AM	INVITED SPEAKER	Crosslinking: from children to adults and from easy to complex cases Maria Jose Cosentino, MD Instituto de la Visión, Buenos Aires, Argentina
10:50 AM 12:10 PM	PAPER PRESENTATION – SESSION 8	Cornea and External Diseases Moderators: Denise de Freitas, Luciene Barbosa de Sousa, Mauro Campos
12:30–1:30PM	LUNCH BREAK	
1:40–3:15PM	PAPER PRESENTATION – SESSION 9	Refractive Surgery, Bioengineering and Cataract Moderators: Paulo Schor, Wallace Chamon, Walton Nosé, Renato Ambrósio Junior
3:15–3:55PM	POSTER - SESSION 2	Refractive Surgery, Cataract, Cornea and External Diseases, Low Vision Awards Committee: Adriana Berezovsky, Eduardo Büchelle Rodrigues, Luiz Alberto Soares de Melo Júnior
3:40–4:00PM	COFFEE BREAK	
4:00–4:30PM	Awards Committee Evaluation	Awards Committee: Adriana Berezovsky, Eduardo Büchelle Rodrigues, Luiz Alberto Soares de Melo Júnior
4:30–5:00PM	Final Remarks and Awards Announcement	Denise de Freitas
5:00 PM	ADJOURN	Organizing Committee



17th RESEARCH DAYS

December 10 to 11, 2015

The "Research Days" meeting was created in 1999 aiming to stimulate and improve scientific production at the Department of Ophthalmology & Visual Sciences at Federal University of Sao Paulo - UNIFESP. The 2-days meeting includes presentation of papers, fast papers and posters by residents, fellows and postgraduate students. The papers and posters are presented in English and discussion is prioritized. The best scientific work in each category receives an award.

An active participation of the staff as discussants and the participation of well-known investigators in the scientific program are encouraged. Registration is free and open to post graduate programs in Brazil and Latin America. Approximately 50% of the papers presented at the Research Days will be submitted for presentation at the Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO).

The 17th edition will be held in São Paulo from December 10 to 11, 2015. Please visit our homepage <http://www.ofalmo.epm.br/rd/home.html> for the complete scientific program.

INDEX

Organization

Special Guests

Program

01

Paper Presentation	Page	Poster	Page
Glaucoma (Sessions 01 and 02)	01	Glaucoma (Session 01)	06
Electrophysiology (Session 03)	01	Trauma (Session 01)	06
Epidemiology (Session 03)	01	Uveitis (Session 01)	06
Lacrimal System (Session 04)	02	Retina and Vitreous (Session 01)	06
Strabismus (Session 04)	02	Refractive Surgery (Session 02)	08
Oculoplastics (Session 04)	02	Cataract (Session 02)	08
Uveitis (Session 04)	02	Cornea and External Diseases (Session 02)	08
Ultrasound (Session 04)	02	Low Vision (Session 02)	08
Retina and Vitreous (Sessions 05 and 06)	02		
Oncology and Pathology (Session 05)	02		
Laboratory (Session 06)	03		
Cornea and External Diseases (Sessions 07 and 08)	04		
Refractive Surgery (Session 09)	05		
Bioengineering (Session 09)	05		
Cataract (Session 09)	05		

Abstracts

12

Paper Presentation	Page	Poster	Page
Glaucoma (Session 01 and 02)	09	Glaucoma (Session 01)	72
Electrophysiology (Session 03)	16	Trauma (Session 01)	86
Epidemiology (Session 03)	17	Uveitis (Session 01)	87
Lacrimal System (Session 04)	23	Retina and Vitreous (Session 01)	88
Strabismus (Session 04)	24	Refractive Surgery (Session 02)	101
Oculoplastics (Session 04)	26	Cataract (Session 02)	105
Uveitis (Session 04)	27	Cornea and External Diseases (Session 02)	108
Ultrasound (Session 04)	28	Low Vision (Session 02)	121
Retina and Vitreous (Sessions 05 and 06)	29		
Oncology and Pathology (Session 05)	32		
Laboratory (Sessions 06)	41		
Cornea and External Diseases (Sessions 07 and 08)	46		
Cataract (Session 09)	63		
Refractive Surgery (Session 09)	65		
Bioengineering (Session 09)	66		

e-mails

122

Information

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<http://www.ofthalmo.epm.br/rd/home.html>



ORGANIZATION

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Program Director

Norma Allemann

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Augusto Paranhos Jr.
Cristina Muccioli
Denise de Freitas
Eduardo Büchelle Rodrigues
Fábio Ramos de Souza Carvalho
Flávio Eduardo Hirai
Ivan Maynard Tavares
José Álvaro Pereira Gomes
Juliana Maria Ferraz Sallum
Luciene Barbosa de Sousa
Luiz Alberto Soares de Melo Júnior

Maurício Maia
Mauro Silveira de Queiroz Campos
Michel Eid Farah
Miguel Noel Nascentes Burnier
Norma Allemann
Paulo Augusto de Arruda Mello
Paulo Schor
Renato Ambrósio Junior
Rubens Belfort Jr.
Solange Rios Salomão
Tiago dos Santos Prata
Wallace Chamon
Walton Nosé

Awards Committee

Eduardo Büchelle Rodrigues
Luiz Alberto Soares de Melo Júnior
Adriana Berezovsky

Invited Speakers

Jessé Alves Reis
Maria José Cosentino

SCIENTIFIC PROGRAM

December 10, 2015 - Thursday

8:00-8:10 AM	OPENING REMARKS	Ana Luisa Hofling-Lima	
8:10-8:20 AM	PROGRAM HEADLINES AND POST-GRADUATE PROGRAM	Denise de Freitas	
SESSION 1 8:20-9:05 AM	PAPER PRESENTATION GLAUCOMA Moderators: Augusto Paranhos Jr., Paulo Augusto Arruda Mello, Luiz Alberto Soares de Melo Júnior		
8:20-8:27 AM	Intrinsically photosensitive retinal ganglion cell activity is associated with decreased sleep quality and retinal nerve fiber layer thinning in glaucoma	Carolina P. B. Gracitelli	PG1
8:30-8:37 AM	Anti-scarring effect of intraoperative bevacizumab and mitomycin C alone and combined on modified glaucoma filtration surgery in rabbits	Christiana V. R. Hilgert	PG1
8:40-8:47 AM	Measurement of the hypotenuse of the vertical optic disc cupping (HVOC) with Spectral Domain Optical Coherence Tomography – Evaluation of a potential novel parameter for glaucoma structural diagnosis	Fábio Lavinsky	PG1
8:50-9:02 AM	Histopathological changes induced by topical treatment with benzalkonium chloride and cyclosporin in rabbit conjunctival tissue	Núbia Vanessa L. Faria	Post-Doc
SESSION 2 9:10-9:45 AM	PAPER PRESENTATION GLAUCOMA Moderators: Ivan Maynard Tavares, Tiago dos Santos Prata		
9:10-9:17 AM	Correlation between disc damage likelihood scale (DDLs) and cup-to-disc ratio, visual field and retinal nerve fiber layer thickness and visual field in normal and glaucomatous eyes	Andrea C. Kara José Senra	PG1
9:20-9:27 AM	Using pre-laminar neural tissue based indices for glaucoma assessment	Flávio S. Santos Lopes	PG1
9:30-9:42 AM	Applanation tonometry versus pachymetry in newborns	Claudia Cardoso Maestri	Post-Doc
9:45-10:05 AM	COFFEE BREAK		
10:10-10:50 AM	INVITED SPEAKER Vaccination for the Traveler The Ebola Project	Jessé Reis Alves, MD Instituto de Infectologia Emilio Ribas, São Paulo, Brasil	
SESSION 3 11:00 AM 12:15 PM	PAPER PRESENTATION ELECTROPHYSIOLOGY, EPIDEMIOLOGY Moderators: Solange Rios Salomão, Adriana Berezovsky		
11:00-11:07 AM	Gender differences on pattern-reversal and Flash visual evoked potential in healthy adults	Patrícia de Freitas Dotto	PG1
11:10-11:22 AM	Optic nerve head and retinal nerve fiber layer OCT values in a population-based sample of healthy older adults from urban areas of Parintins, Brazilian Amazon Region	Galton C. Vasconcelos	Post-Doc
11:25-11:37 AM	Anterior segment optical coherence tomography in healthy adults from Parintins, Amazonas	João M. Fortes Furtado	Post-Doc
11:40-11:52 AM	Macular thickness measured by optical coherence tomography in healthy older adults from the city of Parintins, Brazilian Amazon Region	Sung Eun Song Watanabe	Post-Doc
12:00-12:03 PM	Visual impairment and blindness In very elderly residents of Maués, Amazonas	Cláudia Osório Chaves	PG0

12:05-12: 08 PM	Prevalence of near vision impairment in older adults in Parintins: the Brazilian Amazon region eye survey, Brazilian Amazon region	Cristina C. Coimbra Cunha	PG0
12:10-12:13 PM	Interobserver agreement of anterior chamber angle measurements with optical coherence tomography in older adults from urban areas of Parintins, Brazilian Amazon Region	Marcos Jacob Cohen	PG0
12:15-1:30 PM	LUNCH BREAK		
SESSION 4 1:30-2:40 PM	PAPER PRESENTATION STRABISMUS, UVEITIS, ULTRASOUND, LACRIMAL SYSTEM, OCULOPLASTICS Moderators: Norma Allemann, Cristina Muccioli		
1:30-1:42 PM	Ultrasound parameters of lacrimal sac in chronic dacryocystitis	Marco A. de C. Machado	Post-Doc
1:45-1:52 PM	Variability in response to large bilateral medial rectus recessions In infantile esotropia	Dayane Cristine Issaho	PG1
1:55-2:02 PM	Immunohistochemical analysis after bupivacaine injection in the rabbit extraocular muscle	Luisa Moreira Hopker	PG1
2:05-2:12 PM	Muller's muscle and conjunctival resection for the treatment of severe ptosis	Juliana de Filippi Sartori	PG1
2:15-2:22 PM	Current practices in ocular toxoplasmosis: survey of Brazilian ophthalmologists specialists in uveitis	Fabio Barreto Morais	PG1
2:25-2:32 PM	Reliability of different diagnostic tools to determine the depth of cornea opacities	Patrícia Novita Garcia	PG1
2:40-3:20 PM	POSTER SESSION 1 Glaucoma (14), Trauma (01), Uveitis (01), Retina and Vitreous (13)		
3:00-3:20 PM	COFFEE BREAK		
SESSION 5 3:20-4:35 PM	PAPER PRESENTATION RETINA, VITREOUS AND ONCOLOGY Moderators: Maurício Maia, Miguel Burnier Jr.		
3:20-3:27 PM	Evaluation of safety parameters and new indications for small gauge pars plana vitrectomy	Leonardo M. Machado	PG1
3:30-3:37 PM	Retinal toxicity of distinct concentrations of dye extracted from the açai fruit (Euterpe oleracea) in rabbits: A potential use for chromovitrectomy in humans	Rafael Ramos Caiado	PG1
3:40-3:47 PM	Retinal pigment epithelium cells derived from embryonic stem cells implanted into an animal model: principles for regenerative cell therapy in humans	Ramiro Magalhães Ribeiro	PG1
3:50-3:57 PM	Effect of ranibizumab and the association with amfenac in human uveal melanoma cell line	Vasco T. F. Bravo Filho	PG1
4:00-4:12 PM	Subretinal implantation of retinal pigment epithelial cells: phase I trial	Bruno Diniz	Post-Doc
4:15-4:18 PM	Retinopathy of prematurity training in Brazilian ophthalmology Residency programs	Camila Oliveira C. Ventura	PG0
4:20-4:23 PM	Color variation assay of the anthocyanins from Açai Fruit (Euterpe oleracea): a potential new dye for vitreoretinal surgery	Cristiane Siqueira Peris	PG0
4:25-4:28 PM	Surgical management of macular hole with 2 years of follow-up	Oswaldo Brasil do Amaral	PG0
4:30-4:33 PM	An innovative surgical technique for subretinal transplantation of human embryonic stem cell derived retinal pigmented epithelium (hESC-RPE) in Yucatan mini pigs: Preliminary results	Rodrigo Brant Fernandes	PG0

SESSION 6 4:40-6:00 PM	PAPER PRESENTATION RETINA AND VITREOUS, LABORATORY Moderators: Juliana Sallum, Eduardo Büchelle Rodrigues		
4:40-4:47 PM	Topical anesthesia for intravitreal injection with and without lidocaine gel 2%	Hélio Francisco Shiroma	PG1
4:50-4:57 PM	Safety and efficacy of intravitreal ziv-aflibercept for the treatment of exudative age-related macular degeneration: six-month results	João Rafael Oliveira Dias	PG1
5:00-5:07 PM	Correlation between phenotype and genotype in patients with Stargardt's Disease	Mariana Vallim Salles	PG1
5:10-5:17 PM	Molecular diagnosis for retinitis pigmentosa patients (RP) based on next generation sequencing (NGS): mutation identification and clinical correlation	Karita Antunes Costa	PG1
5:20-5:27 PM	Multimodal imaging in polypoidal choroidal vasculopathy: correlation between indocyanine green angiography and OCT angiography	Claudio M. Zett Lobos	PG1
5:30-5:33 PM	Intravitreal injections of ziv-aflibercept for diabetic macular edema: a pilot study	Gabriel Costa de Andrade	PG0
5:35-5:42 PM	Change in drusen volume as a novel clinical trial endpoint for the study of complement inhibition in age-related macular degeneration	Carlos A. Garcia Filho	PG1
5:45-5:57 PM	TPA (tissue plasminogen activator) as a possible agent in enzymatic vitrectomy	Silvana Maria P. Vianello	Post-Doc
6:00 PM	END OF SESSION		

SCIENTIFIC PROGRAM

December 11, 2015 - Friday

SESSION 7		PAPER PRESENTATION	
8:00-9:50 AM		CORNEA AND EXTERNAL DISEASES	
Moderators: Ana Luisa Hofling-Lima, José Álvaro P. Gomes, Flávio Eduardo Hirai, Fabio Ramos de Carvalho			
8:00-8:07 AM	Effects of pH variation and temperature on the proteolysis mediated by Acanthamoeba exoproteome	Viviane Peracini Sant'ana	PG1
8:10-8:17 AM	The use of ocular anatomical measurements using a rotating Scheimpflug camera to assist in the scleral contact lens fitting process	Sara La Porta Weber	PG1
8:20-8:27 AM	Corneal endothelial diseases: possible new treatments	Lucas Monferrari Vianna	PG1
8:30-8:37 AM	Low complication rate after the learning curve of Descemet's membrane endothelial keratoplasty	Nicolas Cesário Pereira	PG1
8:40-8:47 AM	Analysis of cytokines and growth factors secreted by corneal limbal stem cells and action in the modulation of epithelial wound healing in vitro and in vivo	Renata Ruoco Loureiro	PG1
8:50-8:53 AM	Detection of herpes simplex 1 and 2 and varicella zoster virus by real-time polymerase chain reaction in corneal scrapings from patients with bacterial keratitis	Heloisa N. Salomão	PG0
8:55-9:07 AM	Cytotoxicity of antibiotics, antifungals and corticosteroids to limbal, conjunctival and human immature dental pulp stem cells cultivated in vitro	Priscila C. Cristovam	Post-Doc
9:10-9:22 AM	Use of topical immunomodulator in the treatment of patients with aqueous deficient dry eye and evaporative dry eye	Rossen Hazarbassanov	Post-Doc
9:25-9:37 AM	HLA association with drug induced Stevens-Johnson syndrome/ Toxic epidermal necrolysis patients with severe ocular complications in a Brazilian tertiary institution	Tais Hitomi Wakamatsu	Post-Doc
9:40-10:00 AM		COFFEE BREAK	
10:00-10:40 AM		INVITED SPEAKER	
Crosslinking: from children to adults and from easy to complex cases		Maria Jose Cosentino, MD Instituto de la Visión, Buenos Aires, Argentina	
SESSION 8		PAPER PRESENTATION	
10:50 AM		CORNEA AND EXTERNAL DISEASES	
12:10 PM		Moderators: Denise de Freitas, Luciene Barbosa de Sousa, Mauro Campos	
10:50-11:02 AM	Long term outcomes with Boston Type 1 Keratoprosthesis in ocular burns	Lauro Augusto Oliveira	Post-Doc
11:05-11:17 AM	Chemical properties and toxicity of biocides used in eye drop formulations	Linda C. Carrijo Carvalho	Post-Doc
11:20-11:32 AM	Oxidative balance of autologous serum eyedrops	Patricia Ioschpe Gus	Post-Doc
11:35-11:42 AM	A clinical trial comparing the safety and efficacy of topical tacrolimus versus methylprednisolone in ocular graft-versus-host disease	Túlio Batista Abud	PG1
11:45-11:52 AM	Quantitative analysis of iris parameters in keratoconus patients using optical coherence tomography	Carlos Gustavo Bonfadini	PG1
11:55-11:58 PM	Study of tear inflammatory mediators in patients with keratoconus	Gustavo Souza Moura	PG0
12:00-12:03 PM	Degeneration and regeneration of subbasal corneal nerves after infectious keratitis: A longitudinal In vivo confocal microscopy study	Rodrigo Thiesen Müller	PG0
12:05-12:08 PM	Corneal and quality of life analysis in individuals with keratoconus Grade II submitted to sequential and/or simultaneous treatments of intrastromal ring and crosslinking	Pablo Felipe Rodrigues	PG0

12:10-1:30 PM LUNCH BREAK

**SESSION 9
1:40-3:15 PM PAPER PRESENTATION
REFRACTIVE SURGERY, BIOENGINEERING AND CATARACT
Moderators: Paulo Schor, Wallace Chamon, Walton Nosé, Renato Ambrósio Junior**

1:40-1:47 PM	Comparison of corneal power, astigmatism, and wavefront aberration measurements obtained by a point-source color LED-based topographer, a Placido disk topographer and a combined Placido and dual Scheimpflug device	Bruna Oliveira Ventura	PG1
1:50-1:57 PM	Developing and implementing a teaching method of phacoemulsification surgery	Gustavo Ricci Malavazzi	PG1
2:00-2:12 PM	Scanning electron microscopy and energy dispersive X-ray spectroscopy analyses of corneal inlays for correction of presbyopia after explantation	Sandra M. Canelas Beer	Post-Doc
2:15-2:27 PM	Numerical clustered visual reading performance in dyslexic persons	Emanuela C. Gonçalves	PG1
2:30-2:37 PM	Literature and humanistic formation among undergraduate students of health technology courses at UNIFESP	Marlon Ribeiro da Silva	PG1
2:40-2:47 PM	New learning concepts applied to the teaching of direct ophthalmoscopy	Thiago G. Martins	PG1
2:50-2:57 PM	Enhanced combined tomography and biomechanics data for distinguish forme fruste keratoconus	Allan Cesar da Luz Souza	PG1
3:00-3:07 PM	Enhanced understanding of the surgical impact after LASIK: percent tissue altered (PTA) as a risk factor for ectasia	Bernardo Teixeira Lopes	PG1
3:10-3:13 PM	Evaluation of a new refraction system for telemedicine	Aline Lutz de Araujo	PG0

**3:15-3:55 PM POSTER - SESSION 2
Refractive Surgery (04), Cataract (02), Cornea and External Diseases (14), Low Vision (01)**

3:40-4:00 PM COFFEE BREAK

4:00-4:30 PM DRAWINGS | AWARDS COMMITTEE EVALUATION

**4:30-5:00 PM FINAL REMARKS AND AWARDS ANNOUNCEMENT
Denise de Freitas**

**5:00 PM ADJOURN
Organizing Committee**

POSTERS

December 10, 2015 - Thursday

2:40-3:20 PM

POSTER - SESSION 1

Glaucoma (14), Trauma (01), Uveitis (01), Retina and Vitreous (13)

Reproducibility of palpation (digital) tonometry among ophthalmologists with different levels of expertise	Fabricio Rodrigues de Andrade	R1
Relationship between axial length and susceptibility to glaucomatous damage in eyes with open-angle glaucoma	Leonardo Moraes de Souza	R1
Vision-related quality of life in glaucomatous patients in brazilian population	Lilian Franca Machado	R1
Learning curve of digital palpation tonometry	Luis Filipe Nakayama	R1
Comparison between vision-related quality of life in glaucoma patients with ocular surface disease and with a control group	Nikoly Tigani Fares	R1
Ocular surface disease prevalence in patients with glaucoma versus patients with cataract	Renata Cavalcanti Portela	R1
Effect of topical corticosteroids in ocular surface disease in glaucoma patients	Vinicius Campos Bergamo	R1
Fibrosis evaluation using hydrophobic materials	Daniel Augusto Ghiraldini Vieira	R2
Association between anticoagulant therapy and occurrence of optic disc hemorrhage in glaucomatous eyes under clinical treatment	Letícia Sant'Ana Cardoso da Silva	R2
Surgical outcomes of a small incision limbus-based revision for failed trabeculectomies	Marcos Paulo Suehiro Dantas	R2
OCT images for macular disturbs after anti-glaucomatous surgery	Alexandre G. Bortoloti de Azevedo	R3
Test time and its reliability for the conventional perimetry examination	Daniilo Andriatti Paulo	R3
Image indicators for papillary and peripapillary retina changes in individuals with high myopia	Felipe Abdo Jorge	R3
Intraocular pressure spikes within the first postoperative hours following standard trabeculectomy: incidence and associated factors	Felipe Taveira Daher	R3
Epidemiological profile of children treated at the ocular emergency room of Hospital São Paulo from June 2014 to May 2015	Mariana Pissante Wisneski	R2
Comparison of intravitreal triamcinolone acetonide and bevacizumab for macular edema in non-infectious uveitis	Mário Pincelli Netto	R3
Multimodal support for primary care ophthalmology facilities	Marina Lourenço de Conti	R1
Structural and functional evolution in diabetes mellitus: a choroidal analysis	Felipe Pereira	R2
Functional and anatomical outcomes in patients submitted to panretinal photocoagulation using 577nm multispot vs 532nm single-spot laser: a clinical trial	José Belúcio Neto	R2
Comparison between OCT angiography and fluorescein angiography features in retinal artery occlusion	Marina Paes Leme Mothé Neder	R2
Structural and functional evolution in diabetes mellitus: analysis from retinal layers	Müller Gonçalves Urias	R2
Comparison between optical coherence tomography angiography and fluorescein angiography in diabetic macular edema	Murilo Bertazzo Peres	R2
Twelve-month follow-up of dexamethasone implants for macular edema from various diseases in vitrectomized and nonvitrectomized eyes: a PACORES group study	Renata Tiemi Kato	R2
Intravitreal bevacizumab versus bevacizumab + 577nm micropulse laser for diabetic macular edema: a clinical trial	Verena Ribeiro Juncal	R3
Correlation between choroidal thickness and ciliary artery blood flow velocity in diabetic subjects	Elmar Torres Neto	Fellow
Optical coherence tomography and en face retinal findings in membranoproliferative glomerulonephritis type 2 - Case series and literature review	Paula Delegregio Borba	Fellow

Choroidal thickness in normal subjects and patients with diabetic macular edema, neovascular age macular degeneration and high myopic in a brazilian population	Vinicius Ferreira Kniggendorf	Fellow
Combined femtosecond laser assisted cataract surgery and small gauge pars plana vitrectomy	Ricardo Miguel Japiassu	Fellow
Comparison between two different kinds of silicone oil used in retinal detachment surgery	Cássia Pereira Leite	PIBIC

POSTERS

December 11, 2015 - Friday

3:15-3:55 PM POSTER - SESSION 2

Refractive Surgery (04), Cataract (02), Cornea and External Diseases (14), Low Vision (01)

Correlation of ocular measurements in individuals submitted to phakic intraocular lens implantation	Fábio Kenji Matsumoto	R2
Assessment of intrastromal corneal ring segment arc 340° position with anterior optical coherence tomography	Mariah Mendes Rufino Uehara	R2
Aberrometry changes in eyes with central keratoconus implanted with intrastromal corneal ring segment arc 340°	Mikael Kwang Chul Chun	R2
Biometry changes in eyes with central keratoconus implanted with intrastromal corneal ring segment arc 340°	Eduardo Bicalho Mariottoni	R3
Toric intraocular lens stability after phacoemulsification	Bruno Rebello de Godoy	R3
Quality management in clinical and surgical eyecare for cataract surgery	Cristiane Okazaki	R3
Paecilomyces spp keratitis in ophthalmic patients	Aline Couto Carneiro	R1
Molecular diagnosis of Acanthamoeba keratitis applied to personalized medicine in ophthalmology and visual sciences	Felipe Marques de Carvalho Taguchi	R1
A case report: Peripheral hypertrophic subepithelial corneal degeneration	Isabel Moreira Borelli	R1
Knowledge on corneal transplantation among medical students at UNIFESP	Veronica Haysa Yamada	R1
Cytotoxicity of cationic polyhexamethylene biguanide to corneal keratocytes	Fábio Iglesias Marujo	R3
Reverse translational research and precision medicine in ophthalmology and visual science applied to the treatment of Acanthamoeba keratitis	Marina Roizenblatt	R3
Application of epidemiologic models to determine associated factors to corneal quality in eye banks	Nathalia Mayumi Thomaz de Aquino	R3
Scheimpflug imaging of school children	Rafael Freire Kobayashi	R3
Anterior segment optical coherence tomography findings in Boston Type I keratoprosthesis	Albert Wilson Santos Machado Silva	R4
Qualitative and comparative analysis of donated corneas preserved in Optisol-GS® vs Eusol-C®	Eduardo Gayger Muller	R4
Discarded corneas due to positive donor's serologic test in the Hospital São Paulo Eye Bank	Iana Fernandes Lavigne	R4
Retrospective study of corneal post-transplant for Acanthamoeba infection	Mauro Sergio de Oliveira Silva	R4
Toxic anterior segment syndrome with ocular complications secondary cataract surgery	Natalia Silva de Mesquita	R4
Goblet cells density after use of topical immunomodulator in the treatment of patients with dry eye disease	José Arthur P. Milhomens Filho	PIBIC
Evaluation of a self-test system for on-line visual acuity measurements	Daniel Assad Diniz da Gama	R1

2015 Research Days Abstract Form

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

(GL) GLAUCOMA

3. PRESENTATION PREFERENCE (REQUIRED) Check one:

Paper

4. The signature of the First (Presenting) Author (REQUIRED) acting as the authorized agent for all authors, hereby certifies that any research reported was conducted in compliance with the Declaration of Helsinki and the 'UNIFESP Ethical Committee'

Scientific Section Descriptions (two-letter code):

(BE) OCULAR BIOENGINEERING
(CO) CORNEA AND EXTERNAL DISEASE
(CA) CATARACT
(EF) ELECTROPHYSIOLOGY
(EP) EPIDEMIOLOGY
(EX) EXPERIMENTAL SURGERY
(GL) GLAUCOMA
(LA) LABORATORY
(LS) LACRIMAL SYSTEM
(LV) LOW VISION
(NO) NEURO-OPHTHALMOLOGY
(OR) ORBIT
(PL) OCULAR PLASTIC SURGERY
(PH) PHARMACOLOGY
(RE) RETINA AND VITREOUS
(RS) REFRACTIVE SURGERY
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Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

1. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Carolina P. B. Gracitelli

Service: (GL) GLAUCOMA

CEP Number: 160.049

5. ABSTRACT (REQUIRED):

Title: Intrinsically photosensitive retinal ganglion cell activity is associated with decreased sleep quality and retinal nerve fiber layer thinning in glaucoma

Author and Co-authors: Carolina P. B. Gracitelli, Gloria Liliana Duque-Chica, Ana Laura de Araujo Moura, Marina Roizenblatt, Balazs V. Nagy, Geraldine Ragot de Melo, Paula Delegregio Borba, Sergio H. Teixeira, Sergio Tufik, Dora Fix Ventura, Augusto Paranhos Jr.

Purpose: To use the pupillary light reflex and polysomnography to evaluate the function of intrinsically photosensitive retinal ganglion cells (ipRGCs) and to correlate this function with structural damage in glaucoma patients.

Methods: A cross-sectional study was conducted, including 76 eyes from 38 patients with primary open-angle glaucoma and 36 eyes from 18 control subjects. The patients were tested in the dark with light stimuli using the Ganzfeld system, and the pupil diameter was measured with the assistance of an eye tracker consisting of two infrared cameras fit to an eyeglass frame. Standard automated perimetry, and high-definition optical coherence tomography were also performed. To assess sleep disorders, polysomnography and the Epworth sleepiness scale (ESS) were administered

Results: The glaucoma patients had significantly lower average total sleep time, sleep efficiency and minimum oxyhemoglobin saturation, compared to the healthy subjects ($p = 0.008$, $p = 0.002$ and $p = 0.028$, respectively). Additionally, glaucoma patients had significantly higher arousal durations after falling asleep and more periodic limb movements ($p = 0.002$ and $p = 0.045$, respectively). There was an inverse correlation between the REM latency and the peak of the pupillary response to the blue flash ($p = 0.004$). The total arousals were inversely correlated with the sustained blue flash response ($p = 0.029$). RNFL thickness was associated with the peak and sustained responses to the blue flash ($p < 0.001$ for both comparisons). The mean ESS score of the glaucoma patients was significantly higher than that of the control group (13.10 ± 5.14 and 9.10 ± 3.73 , respectively, $p = 0.029$).

Conclusion: This study demonstrated that decreased ipRGC function caused by glaucoma affected not only the pupillary response but also sleep quality.

Keywords: intrinsically photosensitive retinal ganglion cells; polysomnography; pupil light reflex; ganglion cells; sleep quality; sleep disturbances; glaucoma

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Purpose, Methods, Results,
Conclusion.

2. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Christiana Rebello Hilgert

Service: (GL) GLAUCOMA | (EX) EXPERIMENTAL SURGERY

CEP Number: 1227/09

5. ABSTRACT (REQUIRED):

Title: Anti-scarring Effect of Intraoperative Bevacizumab and Mitomycin C, Alone and Combined, on Modified Glaucoma Filtration Surgery in Rabbits

Author and Co-authors: Christiana Rebello Hilgert, Alvaro Haverroth Hilgert, Alexandre Nakao Odashiro, Patricia Rusa Odashiro, Augusto Paranhos Jr

Purpose: To determine the effects of bevacizumab and mitomycin C alone and combined on scarring process after modified glaucoma filtration surgery in rabbits.

Methods: This is a randomized, prospective, masked-observer study. Thirty New Zealand white rabbits underwent glaucoma filtration surgery and were allocated into three groups to receive intraoperatively subconjunctival bevacizumab in Group A, mitomycin C and subconjunctival bevacizumab in Group B and mitomycin C in Group C. Scarring was assessed 30 days after the surgery by tissue sectioning and hematoxylin-eosin, Masson's trichrome and picosirius staining. Vascular endothelial growth factor (VEGF) expression was determined by immunohistochemical assay.

Results: The amount of fibrosis detected was similar with all stains used: Group A had a higher level of fibrosis compared to groups B and C ($p > 0.05$). There was less VEGF expression in Group A compared to groups B and C ($p < 0.01$). There was no difference between group B and C regarding VEGF expression.

Conclusion: We concluded that bevacizumab combined with MMC showed less fibrosis compared to MMC alone, but differences were not statistically significant. A greater inhibition of VEGF was found when bevacizumab was used alone rather than when combined with MMC.

Keywords: glaucoma, wound healing, experimental, bevacizumab, mitomycin C

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3. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: Fabio Lavinsky

Service: (GL) GLAUCOMA | (EX) EXPERIMENTAL SURGERY

CEP Number: 90470-320

5. ABSTRACT (REQUIRED):

Title: Measurement of the Hypotenuse of the Vertical Optic Nerve Head Cupping (HVOC) with Spectral Domain Optic Coherence Tomography: Evaluation of a Potential Novel Parameter for Glaucoma Structural Diagnosis

Author and Co-authors: Fabio Lavinsky, Camila Benfica Zanella, Nédio Castóldi, Paulo Augusto de Arruda Mello

Purpose: To evaluate the measurement of the hypotenuse of the vertical optic nerve head cupping (HVOC) with the enhanced depth imaging (EDI) mode of the spectral domain optic coherence tomography (SD-OCT) as a novel structural parameter for glaucoma diagnosis.

Methods: We conducted a prospective, transversal study with patients diagnosed with glaucoma and controls. Patients underwent SD-OCT evaluating the mean retinal nerve fiber layer thickness (RNFL) and the HVOC, which one leg of the triangle represented the depth and the other the length of the cupping. Patients also underwent color pictures and standard automated perimetry (SAP). The evaluation was performed in 83 patients (156 eyes). Patients were divided in 3 groups: 1-MD<-7DB, 2-MD>-7DB and 3-patients without glaucoma. The evaluation using the ROC curve excluded eyes with the vertical diameter of the optic nerve >2.0 and <1.5.

Results: The mean SD-OCT RNFL values were: group 1 (56 eyes): 62.5?m, group 2 (74 eyes) 83.8?m and group 3 (34 eyes) 98.7?m (p<0.0001 and r=-0.66). The means of the MD were: group 1: -16.72 DB, group 2: -2.70 DB and group 3: -1.49 DB(p<0.001 and r=-0.81). The correlation of the SD-OCT RNFL and the SAP was statistically significant (p<0.0001 e r=0.681). The correlation between the HVOC and the MD was Spearman rho= -.465 e Pearson= -.511, and with the RNFL was Spearman rho= -.624, Pearson = -.634 (n=120). The areas under the curve (AUC) of the ROC curve evaluating the HVOC were: for positive cases MD< -3DB= 0.755 (0.664-0.845), MD < -6DB= 0,77 (0.678-0.862) and MD < -12DB= 0.798 (0.705-0.890). The ROC curves of the RNFL were compared with the HVOC using DeLong test, there was no statistically significant difference. For positive cases determined as MD< -12DB they had a borderline difference (p=0.06).

Conclusion: In our study, we found a structural-functional correlation of the HVOC with the MD of the SAP as well as with the RNFL. The AUC of the ROC curves of HOVC were comparable with those of the RNFL. The HOVC has a potential to be used as an additional topographic parameter of the structural evaluation of glaucoma.

Keywords: Glaucoma, Optic Nerve, Optic Coherence Tomography

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4. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: Nubia Vanessa Lima Faria

Service: (GL) GLAUCOMA

CEP Number: 7395051213

5. ABSTRACT (REQUIRED):

Title: Histopatological changes induced by topical treatment with benzalkonium chloride and cyclosporin in rabbit conjunctival tissue

Author and Co-authors: Núbia Vanessa A. Lima H. Faria, Manuella O.B. de Sampaio, Heloisa Helena Abil Russ Giacometti, Fabiano Montiani-Ferreira, Lucia Noronha, Paulo Augusto de Arruda Mello

Purpose: The purpose of this research is to compare histological changes induced by 30 days of topical treatment with BAK 0.1%, cyclosporine and the association of BAK+cyclosporin in the rabbit conjunctiva. The idea was to evaluate if topical cyclosporin to control ocular surface disease in patients with chronic glaucoma after long-term usage of topical ocular hypotensive medications that commonly contain BAK. A 30-day period using BAK 0.1%, the maximum concentration that does not produce immediate primary irritation or act as a sensitizer, was chosen in an attempt to mimic long-term treatment.

Methods: Fifteen female rabbits with 5 months of age and average weight of (1.7 kg) were split in three groups and treated for thirty days with the following eye drops: G1- one drop of BAK 0.1% every 12 hours, in the right eyes, and the left (untreated) eyes served as a control; G2- one drop of Cyclosporin, every six hours, in the right eyes and the left eyes served as a control. G3- one drop of BAK 0.1% every 12 hours and cyclosporine every six hours (after waiting five minutes of instillation interval when the two groups coincided) in the right eye and the left eye served as a control. After histological processing, the samples were stained with H&E and PAS. The conjunctival tissues were then analyzed under light microscopy. Two parameters were counted and averaged: number of goblet cells and number of blood vessels.

Results: In the evaluation is the goblet cell count for a significant increase in the group treated with cyclosporine and reduction of these in the group treated with BAK ($p < .0001$). The assessment of the number of blood vessels in conjunctiva, there was a significant increase in BAK-treated group compared to the other groups ($p < .0001$) These results are partial, because the study is in progress

Conclusion: It was found that the increase in the inflammatory response in the group treated with 0.1% BAK when compared with the other study groups, mimicking the chronic use of antiglaucoma eyedrops and cyclosporin acts decreasing this reaction suggesting improvement of the ocular surface.

Keywords: conjunctiva, cyclosporin, BAK, goblet cells, blood vessels

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Title, Author, Co-authors (maximum 6), Purpose, Methods, Results, Conclusion.

5. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Andrea Cotait Kara José

Service: (GL) GLAUCOMA

CEP Number: 1438/05

5. ABSTRACT (REQUIRED):

Title: Correlation Between Disc Damage Likelihood Scale (DDLS) and Cup-To-Disc Ratio, Retinal Nerve Fiber Layer Thickness and Visual Field in Normal and Glaucomatous Eyes.

Author and Co-authors: A.C.Kara-Jose, L.A.S Melo, Jr., M.T. Leite, A.T.N.H. Endo, B.H.V.Escute, I.M. Tavares.

Purpose: To determine the correlation between Disc Damage Likelihood Scale and cup-to-disc ratio, visual field mean deviation (MD) index and retinal nerve fiber layer (RNFL) thickness in normal and glaucomatous eyes.

Methods: One hundred and twenty eyes of 61 healthy individuals and 89 eyes of 49 patients with Primary Open-Angle Glaucoma were included in this observational, cross-sectional study. DDLS score and cup-to-disc ratio were evaluated by a trained physician using a 78-diopter lens. Visual field mean deviation (MD) was obtained by automated perimetry with the Swedish Interactive Thresholding Algorithm (SITA) Standard 24-2 test (HFA II; Carl Zeiss Meditec Inc., Dublin, CA). Peripapillary RNFL thickness was measured by Time-Domain Optical Coherence Tomography (TD-OCT; Stratus; software version 5.0.1, Carl Zeiss Meditec Inc.) and Spectral-Domain OCT (SD-OCT; Spectralis; software version 4.0, Heidelberg Engineering, Dossenheim, Germain). Correlations between DDLS score and cup-to-disc ratio, visual field MD index and RNFL average thickness were evaluated by Spearman's rank correlation coefficient (r).

Results: The Mean (Standard Deviation) for the studied parameters were: DDLS score: 4.5 (2.1), vertical cup-to-disc ratio: 0.67 (0.21), horizontal cup-to-disc ratio: 0.64 (0.21), visual field mean deviation index (dB): -3.52 (5.97), RNFL average thickness (?m) for Spectralis: 92.5 (22.8) and for Stratus: 84.3 (17.9). A strong positive correlation was found between DDLS and vertical and horizontal cup-to-disc ratio (respectively: Spearman $r = 0.87$; $P < 0.001$ and Spearman $r = 0.88$; $P < 0.001$). Weaker correlations were found between DDLS and visual field MD index ($r = -0.43$; $P < 0.001$), Stratus RNFL average thickness ($r = -0.53$; $P < 0.001$) and Spectralis RNFL average thickness ($r = -0.58$; $P < 0.001$).

Conclusion: The present study showed that the DDLS is significantly correlated with both structural and functional parameters in normal and glaucomatous eyes.

Keywords: Visual field, optic disc, retinal nerve fiber layer

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6. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Flavio Siqueira Santos Lopes

Service: (GL) GLAUCOMA

CEP Number: 32733

5. ABSTRACT (REQUIRED):

Title: Using pre-laminar neural tissue based indices for glaucoma assessment

Author and Co-authors: Flavio Siqueira S Lopes, Igor Matsubara, Roberto Vessani, Augusto Paranhos Jr, Tiago S Prata

Purpose: To use pre-laminar neural tissue thickness values obtained through enhanced depth imaging spectral-domain optical coherence tomography (EDI-OCT) to build new structural indices for glaucoma assessment

Methods: We prospectively enrolled glaucomatous patients, glaucomatous suspects, and healthy controls. Exclusion criteria were the presence of significant media opacity or any ocular disease besides glaucoma. All participants underwent EDI-OCT (SDOCT; Spectralis?, Wavelength: 870nm; Heidelberg Engineering Co., Heidelberg, Germany) and visual field assessment using the Humphrey Visual Field Analyzer (24-2; SITA-Standard). The following optic nerve head (ONH) parameters were evaluated: lamina cribrosa and pre-laminar neural tissue thicknesses (PLNTT), scleral canal diameter (Bruch's membrane opening), and cup depth. Two independent examiners assessed all EDI-OCT images (poor quality images were not included in the analysis). Three PLNTT based parameters [PLNTT to disc ratio (PLNTT/D), PLNTT to cup depth ratio (PLNTT/CD), and the PLNTT values itself] were compared among groups using analysis of covariance (accounting for age differences). Areas under receiver operating characteristic curves (AUCs)

Results: In progress

Conclusion: Using the EDI method to evaluate deep ONH structures in vivo, we found a significant reduction in pre-laminar neural tissue thickness in glaucomatous eyes. In this population with moderate glaucomatous damage, the three proposed indices showed good diagnostic performance. We believe these initial results deserve further evaluation, especially in a subset of patients with early functional damage

Keywords: glaucoma, OCT, EDI-OCT, lamina cribrosa

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7. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Claudia Cardoso Maestri Ferreira

Service: (GL) GLAUCOMA | (BE) OCULAR BIOENGINEERING

CEP Number: 152296

5. ABSTRACT (REQUIRED):

Title: Applanation tonometry versus pachymetry in newborns

Author and Co-authors: Claudia Maestri

Purpose: The aim of this study is to evaluate the pachymetry and relate it to applanation tonometry in infants born at term to assist in early diagnosis of glaucoma

Methods: In the first visit, some exams will be executed to collect the data for study as biomicroscopy, measure of intraocular pressure using applanation tonometer, measure of thickness of cornea (part of eye transparent) using pachymeter and reflection fundus . All exams will be done under anesthesia . This procedure takes about 15 minutes.

Results: All measurements were done. We did on one hundred four eyes in newborns with no more than three days of life. Now we are in data analysis and we hope at most within thirty days we may reach a conclusion of research.

Conclusion: In the data analysis

Keywords: Glaucoma ; newborn ; prevention: pachymeter

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8. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Patricia de Freitas Dotto

Service: (EF) ELECTROPHYSIOLOGY

CEP Number: 30972314.0.0000.5505

5. ABSTRACT (REQUIRED):

Title: Gender differences on pattern-reversal and flash visually evoked potentials in healthy adults

Author and Co-authors: Patricia F. Dotto, Adriana Berezovsky, Daniel Martins Rocha, Paula Y. Sacai, Solange R. Salomão

Purpose: To study gender differences on pattern-reversal (PR) and flash (F) transient visually evoked potentials (VEP) in healthy adults.

Methods: Healthy adult volunteers (age >21 years) were recruited among university employees and students. Inclusion criteria were: normal macular aspect, ocular motility, Titmus stereo test and pupillary reflexes; best corrected visual acuity ≥ 0.00 logMAR; refractive error (spherical equivalent) from -6.00 to +6.00. Exclusion criteria were: strabismus, nystagmus, previous intraocular surgery, systemic and/or neurological diseases. Tests were performed at the Laboratory of Clinical Electrophysiology of Vision from July/2011 to July/2013 according to ISCEV standards for PR-VEP (reversal rate=1.9Hz, checkboard stimuli 15° and 60° and 100% contrast) FVEP (3cd/m², rate=1.0 Hz) under binocular and monocular conditions. Amplitudes (microvolts- μ V) and latencies (milliseconds-ms) were determined.

Results: Forty-two subjects (21 males; age mean=40.1+13.8 yrs; median=36 yrs; P=.583) were evaluated. For FVEP, males presented asymmetric median N2P2 amplitudes between right and left eyes (P=.017) and prolonged median N1, P1 and N2 latencies (P=.000) when compared to females; median N2P2 amplitudes in females were symmetric and larger than in males (P=.000). For PRVEP, P100 amplitudes were affected by recording conditions in both genders, presenting mean binocular values larger than monocular ones (P=.001). Mean P100 amplitudes were shorter in males for larger checks (60°) (P=.043) and marginally decreased for smaller checks (15°) (P=.050) as well. Mean P100 latencies in males and females were around 95ms. Mean N135 latency and N75-N135 inter-latency intervals were at least 5ms prolonged in males than females (P<.050), under all conditions and for all check sizes.

Conclusion: Overall, gender differences in F-VEP and PR-VEPs were detected, with women disclosing faster conduction velocity and larger responses than men. These findings are in line with anatomic features as smaller skulls and thinner cranial bones found in women. In the analysis of clinical data for diagnostic and therapeutic purposes it is recommendable to use separate normative values for men and women.

Keywords: visually evoked potentials; gender; norms

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

9. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Galton C Vasconcelos

Service: (EP) EPIDEMIOLOGY

CEP Number: 30210130

5. ABSTRACT (REQUIRED):

Title: Optic nerve head and retinal nerve fiber layer OCT values in a population-based sample of healthy older adults from urban areas of Parintins, Brazilian Amazon Region

Author and Co-authors: Galton C. Vasconcelos, N?vea N. Cavascan, Sung E.S. Watanabe, Paula Y. Sacai, Marcos J. Cohen, Solange R. Salom?o

Purpose: The Brazilian Amazon Region Eye Survey (BARES) is a population-based study to determine the prevalence and causes of visual impairment/blindness in older adults. To investigate optic nerve head (ONH) parameters and retinal nerve fiber layer (RNFL) thickness in healthy eyes, spectral-domain optical coherence tomography (SD-OCT) was performed in a subset of participants from urban areas.

Methods: Subjects were enumerated through a door-to-door survey. Patients with 45 yo and older performed a comprehensive eye exam. ONH e RNFL measurements were obtained through dilated pupils, using iVue-100 SD-OCT. ONH parameters included cup-to-disc area ratio, vertical and horizontal cup-to-disc ratios, disc and rim areas and cup volume. RNFL thickness was measured overall and for inferior, nasal, superior and temporal quadrants. Data from one eye randomly chosen of each participant were analyzed.

Gender, age, IOP and refractive errors were also analyzed. Statistical significance was considered as $p < 0.05$.

Results: 1180 adults were examined and 64 were eligible for this study (36 females). Age ranged from 45 to 65 yo (mean=52.5 years). Considering ONH parameters, mean area, vertical and horizontal cup-to-disc ratios were respectively 0.34 ± 0.16 , 0.53 ± 0.18 and 0.62 ± 0.21 . Mean disc area was $2.34 \pm 0.43 \text{ mm}^2$, rim area $1.50 \pm 0.31 \text{ mm}^2$, and cup volume $0.10 \pm 0.20 \text{ mm}^3$. The mean overall RNFL thickness was $104.14 \pm 9.72 \mu\text{m}$, with thickest RNFL in the inferior quadrant ($132.56 \pm 15.62 \mu\text{m}$), followed by the superior ($130.33 \pm 15.79 \mu\text{m}$), nasal ($76.95 \pm 10.96 \mu\text{m}$) and temporal ($76.48 \pm 10.99 \mu\text{m}$) ones. There were no significant differences in ONH and RNFL parameters for gender, IOP or refractive errors. Older age was significantly correlated with smaller rim area ($r = -0.015$, $p = 0.045$), thinner overall RNFL ($r = -0.497$, $p = 0.032$) and superior RNFL ($r = -0.902$, $p = 0.016$).

Conclusion: This study provided SD-OCT normative values of ONH and RNFL parameters for this cohort of healthy older adults from urban areas of the Amazon region. It suggests that age should be considered when interpreting those measurements, which are important for detection of pathological conditions in this population.

Keywords: optic nerve, retina, OCT, population

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Purpose, Methods, Results,
Conclusion.

10. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: JOÃO M FURTADO

Service: (EP) EPIDEMIOLOGY

CEP Number: 1,183031361e+016

5. ABSTRACT (REQUIRED):

Title: Anterior Segment Optical Coherence Tomography in Healthy Adults from Parintins, Amazonas

Author and Co-authors: Furtado JM, Cavascan NN, Berezovsky A, Cohen MJ, Belfort Jr R, Salomão SR

Purpose: To evaluate anterior chamber angle (ACA) and angle opening distance at Schwalbe's line (AOD-SL) measured by anterior segment optical coherence tomography (AS-OCT) in healthy adults from Parintins, Amazonas.

Methods: The Brazilian Amazon Region Eye Study (BARES) is a population-based study on prevalence and causes of blindness in adults aged 45 and older from urban and rural areas of Parintins, Amazonas. Out of the 1180 urban participants, 63 healthy subjects underwent AS-OCT horizontal scanning (iVue-100, Optovue, Inc) of the nasal and temporal anterior chamber angles of their right eyes. AOD-SL and ACA were assessed by three independent examiners. Their values were analyzed to investigate possible correlations between AOD-SL and ACA. Associations of these variables with gender, age, spherical equivalent (SE) and schooling were also studied.

Results: Mean nasal and temporal ACA were $29.83 \pm 10.32^\circ$ and $27.77 \pm 9.67^\circ$, respectively. Mean nasal and temporal AOD-SL were $454 \pm 187.29 \mu\text{m}$ and $430.65 \pm 187.30 \mu\text{m}$, respectively. There was a good positive correlation between

ACA and AOD-SL when measured nasally ($r=0.75$; $p<0.01$) and temporally ($r=0.76$; $p<0.01$). Nasal and temporal ACA were significantly ($p=0.02$; $p<0.01$) greater in males ($35.30 \pm 8.68^\circ$; $31.79 \pm 10.20^\circ$) than in females ($26.71 \pm 10.04^\circ$; $25.23 \pm 8.51^\circ$). Nasal and temporal AOD-SL were significantly ($p<0.01$; $p<0.01$) greater in males ($579.41 \pm 216.24 \mu\text{m}$; $536.50 \pm 229.37 \mu\text{m}$) than in females ($382.33 \pm 124.79 \mu\text{m}$; $365.51 \pm 118.17 \mu\text{m}$). There was no association between AODSL and ACA with age, schooling or SE.

Conclusion: In agreement with previous published studies, a wider anterior chamber angle and angle opening distance by Schwalbe's line was found in males. These data will help to characterize a normative database for anterior chamber measurements to this population. Further studies with larger sample sizes including patients with prevalent eye conditions in that geographic area, such as cataract and pterygium, should be conducted.

Keywords: anterior chamber, anterior segment, oct

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

11. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Sung E Watanabe

Service: (EP) EPIDEMIOLOGY | (RE) RETINA AND VITREOUS

CEP Number: 262.482

5. ABSTRACT (REQUIRED):

Title: Macular thickness measured by optical coherence tomography in healthy older adults from the city of Parintins, Brazilian Amazon Region

Author and Co-authors: Watanabe, Sung E.; Cavascan, Nivea N.;Cohen,Marcos J.; Cohen, Jacob M.; Berezovsky, Adriana; Salomao, Solange R.

Purpose: To provide normative values of macular thickness in a subset of participants of a population-based ocular eye survey using SD-OCT

Methods: The Brazilian Amazon Region Eye Survey (BARES) is a cross-sectional population-based study to determine prevalence and causes of visual impairment, blindness and ocular diseases in adults aged ≥ 45 years in urban and rural areas of the city of Parintins. Sixty-four eyes of 64 healthy normal subjects (28 males), aging from 45-65 years old (mean=52 \pm 5) had a comprehensive ophthalmic exam. All selected participants had best corrected visual acuity $\geq 20/32$, normal eye exam and no prior ocular surgery. Optical coherence tomography (OCT) was performed using standard scanning protocols. Retinal thickness was calculated for 9 Early Treatment Diabetic Retinopathy Study (ETDRS) subfields from the inner and outer retinal boundaries. The associations between thickness measurements with age, gender, refractive errors and schooling level were investigated. Statistical significance was established at $p < 0.05$

Results: The average central foveal thickness was 252.3 \pm 19.2 μ m, age was negatively correlated with macular thickness in the following areas: inner foveal layer ($p=0.020$); inner nasal ($p=0.004$) and inferior ($p=0.002$) parafovea; outer layer of nasal ($p=0.016$), superior ($p=0.000$) and inferior ($p=0.045$) parafovea; nasal ($p=0.001$) and superior ($p=0.026$) perifovea. Macular thickness showed to be larger in males in the following areas: temporal parafoveal total thickness ($p=0.0198$), temporal inner parafoveal ($p=0.0058$) and nasal outer parafoveal ($p=0.033$). There was no relationship between macular thickness and spherical equivalent. The data suggested a negative correlation between schooling educational level and decrease in retina thickness for inner ($p=0.020$) and outer foveal areas ($p=0.000$)

Conclusion: The current results provide a normative database of macular thickness in healthy Brazilian Amazon population using SD-OCT. We suggest that age should be considered while interpreting the retina thickness. These parameters will be useful to characterize retinal disorders in future studies in this population

Keywords: OCT, macular thickness, Brazilian Amazon population

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Purpose, Methods, Results,
Conclusion.

12. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Claudia Maria Osorio Chaves

Service: (EP) EPIDEMIOLOGY

CEP Number: 4,06801149e+016

5. ABSTRACT (REQUIRED):

Title: Visual Impairment And Blindness In Very Elderly Residents Of Maués, Amazonas

Author and Co-authors: Claudia Maria Osorio Chaves
Marcela Colussi Cypel
Rubens Belfort Jr
Solange Rios Salomão

Purpose: To determine the frequency and causes of visual impairment/blindness in very elderly residents of urban areas from the city of Maués, AM.

Methods: This is an ongoing observational study in which all residents of urban Maués will be invited for a comprehensive eye exam along with a questionnaire to describe nutritional habits. Distance and near uncorrected, presenting and best-corrected visual acuities were taken. Additional tests as intraocular pressure measurement, biomicroscopy and fundus exam were also performed. If necessary glasses prescription, surgery or other kinds of treatment were provided.

Results: A group of 234 participants was examined, with 203 (86.75%) aged 80-90 years; 28 (11.97%) aged 91-100 years and 3 (1.27%) centenarians. From the total of patients 13 (5.55%) shown presenting distance visual acuity > 20/40. After refraction exam considering the best-corrected visual acuity 56 (23.93%) of participants had vision > 20/40. Presenting distance vision was less than 20/200 on the better-vision eye in 108 (46.15%) participants ; the main cause was cataract in 71 (65.74%), age-related macular degeneration in 12 (11.11%), other retinal disorders in 8 (7.41%) , corneal opacities in 6 (5.55%) , glaucoma in 3 (2.77%) and other causes in 8 (7.41%).

Conclusion: A high prevalence of visual impairment and blindness was detected in this convenience sample of very elderly people in the city of Maués. In this preliminary analysis it was evident the importance of refraction and prescription of adequate glasses.

Keywords: visual impairment, elderly, vision, blindness, aging

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FORMAT:

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

13. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Cristina Coimbra Cunha

Service: (EP) EPIDEMIOLOGY

CEP Number: 11830313.6.1001.5505

5. ABSTRACT (REQUIRED):

Title: Prevalence of near vision impairment in older adults in Parintins: the Brazilian Amazon region eye survey, Brazilian Amazon region

Author and Co-authors: Cunha, Cristina C. C.; Berezovsky, Adriana; Cohen, Marcos Jacob; Junior, Rubens Belfort; Salom'o, Solange Rios

Purpose: To estimate the prevalence of near vision impairment and use of correctable spectacles/presbyopia in older adults in Parintins, Brazil.

Methods: The study will be performed in a population-based sample of adults ≥45 years of age residents of randomly selected urban and rural districts in the city of Parintins, AM. Subjects were enumerated through a door-to-door survey and those with ages 45 years and older were invited for measurement of near uncorrected (UCNVA), presenting (PNVA) and best-corrected near visual acuity (BCNVA) measured at 40 cm using a logMAR near vision tumbling E chart and an ocular examination. Presbyopia was defined as UNVA ≥20/40 and with BCVA >20/40 with additional lenses in the better-vision eye. Multiple logistic regression analysis was performed to investigate associations between near vision impairment and presbyopia with age, gender and education level. Statistical significance was set at $p < 0.05$.

Results: A total of 2.383 eligible persons were enumerated and 2.042 (85.7%) examined. The prevalence of UCNVA <20/40 in the better eye was 96.4% (1.953 persons (95% CI: 95,4% - 97,3%)) and 81.2% (1.644 persons (95% CI: 77.7% - 84.3%)) with their presenting correction. Higher educational level was significantly associated with near vision impairment both uncorrected and presenting. Those with more education had less impairment. Presbyopia was significantly associated with higher education. Younger age was associated with uncorrected near vision impairment, presenting near vision impairment and presbyopia. For uncorrected impairment 65-74 age group the odds is almost half compared to the younger group. The odds of PNVA in the group ≥75 is three times higher to the younger group. For presbyopia the older the age the smaller the odds.

Conclusion: The prevalence of near vision impairment in middle-aged and older adults was 82%, a significant public health issue, with most of it correctable optically. Higher educational level and younger age are a risk factors for presbyopia since and its as main cause of near vision impairment was reduced in those aged 70 years and older, when other ocular pathologies become more prevalent.

Keywords: near visions impairment; presbyopia; Amazon

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

14. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Marcos Jacob Cohen

Service: (EP) EPIDEMIOLOGY | (GL) GLAUCOMA

CEP Number: 11830313.6,1001.5505

5. ABSTRACT (REQUIRED):

Title: Interobserver Agreement of Anterior Chamber Angle Measurements with Optical Coherence Tomography in Older Adults from Urban Areas of Parintins, Brazilian Amazon Region

Author and Co-authors: Marcos J. Cohen, Adriana Berezovsky, Nivea N. Cavascan, Joao M. Furtado, Solange R. Salomao, Rubens Belfort, Jr.,

Purpose: To evaluate inter-observer agreement of anterior chamber angle measurements using anterior segment optical coherence tomography (AS-OCT), in older adults.

Methods: The Brazilian Amazon Region Eye Survey (BARES) is a population-based prevalence study of visual impairment, blindness and ocular diseases in adults aged 45 years and older from urban and rural areas of Parintins city, Brazil. All participants are invited to a free-of-charge eye exam. Out of 1180 participants, 63 healthy subjects were selected for imaging of the nasal and temporal anterior chamber angles (ACA) of right eyes. The OCT images were analyzed offline using the iVue-100 (Optovue, Inc) software. Three masked observers graded the images independently to determine ACA (degrees) and angle opening distance (micrometer) at Schwalbe's line (AOD-SL). Inter-observer agreement was qualified by using the intra-class correlation coefficient (ICC).

Results: Mean nasal and temporal ACA were, respectively, 27.4° ± 9.1°/31.7° ± 10.3° for observer A, 36.4° ± 11.9°/27.9° ± 8.74° for observer B and 31.2° ± 10.9°/29.0° ± 7.8° for observer C. ACA measurements demonstrated excellent agreement among the three observers, with ICC=0.91 (95% Confidence Interval [CI]:0.83-0.95) for nasal and ICC = 0.90 (95% CI:0.85-0.93) for temporal quadrants. Mean nasal and temporal AOD-SL were, respectively, 356.6 ± 115.44 micrometer / 348.03 ± 113.8 micrometer for observer A, 474.6 ± 204.2 micrometer / 502.2 ± 200.7 micrometer for observer B and 482.2 ± 194.5 micrometer / 476.8 ± 199.5 micrometer for observer C. For the nasal and temporal quadrants, AOD-SL measurements demonstrated good agreement among the three observers with ICC=0.79 (95% CI:0.56-0.90) and ICC=0.83 (95% CI:0.60-0.91), respectively.

Conclusion: The inter-observer agreement of ACA was excellent and good to AOD-SL measurements for both nasal and temporal quadrants. These results indicate that this technique provides objective documentation by different examiners in routine clinical use.

Keywords: Interobserver; anterior chamber; Angle; Measurements; tomography, optical coherence; Parintins; Amazon; Brazilian.

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

15. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Marco Campos Machado

Service: (US) OCULAR ULTRASOUND | (LS) LACRIMAL SYSTEM

CEP Number: 16883113.6.0000.5505

5. ABSTRACT (REQUIRED):

Title: Ultrasound Parameters of Lacrimal Sac in Chronic Dacryocystitis

Author and Co-authors: Marco Antonio de Campos Machado

Jo?o Amaro Ferrari Silva

Eduardo Alonso Garcia

Norma Allemann

Purpose: The objective of this study is to categorize the sonographic findings of the lacrimal sac in patients with clinical case of chronic dacryocystitis

Methods: Prospective study with 10 patients (8 females) aged between 25 and 75 years (average age: 50.7 years) diagnosed with chronic dacryocystitis, using B-mode ultrasound imaging of the lacrimal sac with a 10 MHz transducer (Aviso, Quantel Medical).

Results: On average, the lacrimal sac diameter dimensions were: anteroposterior = 11.69 mm, vertical = 14.53 mm and horizontal = 11.94 mm. Three patients had cutaneous fistulas and one of these had a multilobulated lacrimal sac. All patients had abnormal lacrimal sac content: 7 had partial obstruction and three had total obstruction with punctate hyperechoic content

Conclusion: Ocular B-mode ultrasonography can be used as a coadjuvant examination method in the study of lacrimal sac of patients with chronic dacryocystitis in that it provides useful information for planning surgeries.

Keywords: ultrasound/ lacrimal sac/ dacryocystitis / chronic

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16. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Dayane Cristine Issaho

Service: (ST) STRABISMUS

CEP Number: 81230340

5. ABSTRACT (REQUIRED):

Title: Variability in Response to Large Bilateral Medial Rectus Recessions In Infantile Esotropia

Author and Co-authors: Dayane C Issaho, Serna X Wang, Denise de Freitas, David Weakley Jr

Purpose: To evaluate factors associated with surgical success in large bilateral medial rectus recessions in infantile esotropia.

Methods: The results of 97 patients with infantile esotropia undergoing surgical correction from January 2010 through December 2013 at Childrens Medical Center, Dallas TX were reviewed. Multivariate logistic regression analysis of risk factors for success and evaluation of relationship of surgical response to baseline characteristics were performed.

Results: We achieved an overall success rate of 59% (57/97 patients) with one surgery. Of age at surgery, preoperative angle, refraction, amblyopia, and simultaneous inferior oblique surgery, none were significantly related to success/failure. The mean dose response was 3.61 ± 1.45 PD per mm of surgery and was modestly correlated only with the preoperative deviation ($r^2=0.32$). Failure was associated with variability in dose response, not inadequate or inconsistent with surgical dosing.

Conclusion: Surgical success with bilateral medial rectus recessions in infantile esotropia is limited by the high variability in surgical dose response.

Keywords: infantile esotropia, strabismus, eye muscle surgery

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Purpose, Methods, Results,
Conclusion.

17. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Luisa Moreira Hopker

Service: (ST) STRABISMUS

CEP Number: ceua 88280

5. ABSTRACT (REQUIRED):

Title: Immunohistochemical analysis after bupivacaine injection in the rabbit extra ocular muscle

Author and Co-authors: Luisa Moreira Hopker, Juliana Neves, Tomas Scalamandre Mendonça, Edmar Zanoteli, Norma Allemann

Purpose: This study aims to show the distribution of myosin subtypes after the effect of Bupivacaine on the extra ocular muscle of rabbits.

Methods: Thirty rabbits were selected. Six rabbits were controls. Twenty-four rabbits received 0.3 ml of Bupivacaine 1.5% in the superior rectus (SR) of right eye (OD) and were sacrificed at 7, 28,60 and 92 days. SR of both eyes were excised and frozen. Immunohistochemistry was performed to analyze myosin types 1 (slow), 2 (fast) and embryonic. Cross sections of each muscle were analyzed for myosin count by manual tracing.

Results: When compared SR OD to SR OS there was no significant difference between type 1 and embryonic myosin proportion in none of the groups. Concerning type 2 myosin, there was an increase on the 7-day (0.64;0.44;p=0.0048) and 60-day (0.61; 0.31;p=0.04), but not on the 28-day (0.37;0.40;p=0.89) and 92-day (0.66;0.50;p=0.07).

When compared injected SR OD to control SR OD for type 1 and 2 myosin there was no statistically significant difference in none of the groups. Embryonic myosin was increased on the 60-day (0.77;0.49;p=0.03).

Conclusion: The change in expression of myosin type 2 and embryonic might play a role in the contractile properties of extra ocular muscles after Bupivacaine injection.

Keywords: Bupivacaine, Extra ocular muscle, Rabbit

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18. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Juliana Sartori sartori

Service: (PL) OCULOPLASTICS SURGERY

CEP Number: 691.472

5. ABSTRACT (REQUIRED):

Title: Muller's Muscle and Conjunctival Resection for the Treatment of Severe Ptosis

Author and Co-authors: Juliana F Sartori MD, Pete Setabutr MD, Allen M Putterman MD, Norma Allemann, MD, PhD, Rubens Belfort Jr. MD, PhD

Purpose: To present our data demonstrating MMCR with or without tarsectomy as an effective surgical option for the treatment of severe blepharoptosis.

Methods: This is a retrospective study of all patients with severe involuntional blepharoptosis from January 2008 to December 2012 that had a MMCR procedure performed at UIC.

Only patients with a neosynephrine response \geq 1.5mm underwent the MMCR procedure.

8.5mm of muller's muscle and conjunctiva is resected to achieve the neosynephrine result. This amount is then increased or decreased to achieve a result greater or less than predicted by the neosynephrine test, respectively. Minimum and maximum tissue resection is 6.5mm and 9.5mm, respectively. If it is felt that the maximum resection will not elevate the eyelid to a desirable height, an adjunctive tarsectomy is performed to augment the lift.

Results: 132 eyelids of 84 patients were included (35 males and 49 females) Mean age and levator function were 65 years (range: 22-88 years) and 15.4mm (range: 10-20mm) respectively. The average follow-up was 5.7 months (range: 1-40.1 months).69 of the 84 patients (84.5%) achieved symmetry defined as a difference in MRD-1 of \geq 1mm between the two eyelids. Four of the asymmetric patients developed contralateral blepharoptosis after a unilateral MMCR. Three patients received MMCR on the contralateral eyelid achieving symmetry and one patient deferred further treatment. Two eyelids were undercorrected with one patient receiving repeat MMCR on the affected eyelid and one patient undergoing ELA. One patient developed acorneal abrasion.

Conclusion: Our results indicate that MMCR with or without tarsectomy is an effective alternative for the treatment of severe, involuntional ptosis. As expected, patients with tarsectomy achieved a greater lift than patients without tarsectomy.

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19. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: FABIO B MORAIS

Service: (UV) UVEITIS | (EP) EPIDEMIOLOGY

CEP Number: 49020130

5. ABSTRACT (REQUIRED):

Title: Current practices in ocular toxoplasmosis: Survey of brasilian ophthalmologists specialists in uveitis.

Author and Co-authors: Fabio Barreto Morais , Tiago Eugunio farias e Arantes , Cristina Muccioli

Purpose: determine current practices in the management of ocular toxoplasmosis by uveitis specialists membres of the Brazilian Uveitis Society.

Methods: : A online m?ltiple choice questionnaire (google forms) was sent by email to 77 members of the Brazilian Uveitis Society. These recipients were asked questions involved the numbers of patients seen, indications for beginning, duration and compliance of treatment, choice of antiparasitic/antimicrobial agents, use of corticosteroids, ocular injections and experience with treatment in special situations.

Results: Among 54(70,1%) respondents, 36(68%) treat all patients regardless of ocular ?ndings. . The most relevant factors for the treatment were first: lesion location (macula and posterior pole), followed by acquired forms (IgM +) and lesion size. Factors considered as less important are the vitreous reaction and decrease visual acuity. The most commonly used regimens are sulphametoxazole / trimethoprim (SMX / TMP) and pyrimethamine / sulfadiazine / ac.folinic (Classic). Among the pediatric patients aged 1-12 years, 54.7% preferred the classical scheme. In elderly patients, SMX / TMP was the first choice for 60.3%. The classic scheme was the first choice for most, in that situations: involvement of macula and optical disk, immunocompromised, acquired form (IgM +), atypical cases (extensive lesions, external punctate retinitis, neuroretinitis and other neuropathies) and in pediatric patients (1-12 years).

Conclusion: For most Brazilian experts, the first choice of treatment for ocular toxoplasmosis was the combination SMX / TMP. However, in more severe situations, a larger majority chose the classical scheme. The combination TMP / SMX was chosen for the most in typical and older cases. Brazilian experts make use almost entirely of only two treatment regimens. The use of oral corticosteroids is part of the management of specialists in some or all situations. Brazilian experts appear to be more aggressive in the treatment of ocular toxoplasmosis in compare to another countrys.

Keywords: ocular toxoplasmosis , uveitis, Brazil, treatment.

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20. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Patricia Novita Garcia

Service: (US) OCULAR ULTRASOUND

CEP Number: 1244010

5. ABSTRACT (REQUIRED):

Title: Reliability of the measures and thickness of depth of the cornea opacities with different diagnostic tools

Author and Co-authors: Patricia Novita Garcia and Norma Allemann

Purpose: To compare measurements of thickness and depth of the opacity in different grades of leukoma using different methods

Methods: We examined 102 eyes: 32 normal, 70 with cornea opacity. Photographic documentation was used to graduate the opacity as mild, moderate and severe. Total thickness was determined in opaque and in normal corneas following a sequence: non-contact tests as Haag-Streit; spectral-domain anterior segment optical coherence tomography (AS-OCT), RTVue Optovue; time-domain AS-OCT, Visante OCT Zeiss; and contact-techniques as ultrasound pachymetry, Corneogage plus Sonogage and ultrasound biomicroscopy, 50 MHz UBM Vumax Sonomed. The depth of corneal opacities was determined using AS-OCT and UBM.

Results: Cornea opacity (70 eyes, 67.96%) was classified in light (28 eyes, 40%), moderate (27 eyes, 38.57%), and severe (15 eyes, 21.43%). OCT measurements. UBM measurements differ from ultrasound pachymetry and OCT (Optovue and Visante).

Conclusion: The hypothesis to be tested was not confirmed by the partial results. There was no difference in measurements when considering normal and opaque corneas considering different methods. In normal corneas and opaque, UBM underestimated measurements in comparison to ultrasound pachymetry and OCT. Considering the depth of the opacity, measurements were similar using different methods.

Keywords: THICKNESS CORNEA OPACITIES

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21. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Leonardo Martins Machado

Service: (RE) RETINA AND VITREOUS

CEP Number: 1071301

5. **ABSTRACT (REQUIRED):**

Title: Evaluation of safety parameters and new indications for small gauge pars plana vitrectomy

Author and Co-authors: Leonardo Martins Machado, Octaviano Magalhães Jr., Andre Maia, Michel Eid Farah, Eduardo Buchele Rodrigues, Mauricio Maia

Purpose: To identify safety parameters and new indications in vitreoretinal surgery in three different studies

Methods: An experimental research was first conducted to observe the impact of air infusion comparing 20 gauge cannulas to 23 and 25 gauge ones. Next, the evaluation of preoperative exams and intraoperative parameters were evaluated in epiretinal membranes using the double peeling technique in a retrospective case series using 23 gauge instruments. In the third study, patients with multifocal intraocular lenses with symptomatic posterior vitreous detachment were studied prospectively after treatment with small gauge pars plana vitrectomy.

Results: In the first study, 25 gauge cannulas showed lower impact pressure readings, compared to 23 and 20 gauge cannulas. The second study demonstrated that the double peeling technique was able to improve patients' visual acuity and that preoperative exams can be correlated to postoperative results. Finally, patients with multifocal intraocular lenses and symptomatic posterior vitreous detachment experienced an improvement in visual acuity and quality of life after treatment with vitrectomy with 23 gauge instruments.

Conclusion: Small gauge pars plana vitrectomy is safe for the treatment of patients with epiretinal membranes or symptomatic posterior vitreous detachment that have good preoperative visual acuity and air infusion with these instruments is theoretically less harmful when compared to 20 gauge ones.

Keywords: Pars plana Vitrectomy, Vitreous, epiretinal membrane

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22. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Rafael Ramos Caiado

Service: (RE) RETINA AND VITREOUS

CEP Number: CEUA 2689281013

5. ABSTRACT (REQUIRED):

Title: Retinal toxicity of distinct concentrations of dye extracted from the acai fruit (*Euterpe oleracea*) in rabbits: A potential use for chromovitrectomy in humans

Author and Co-authors: Rafael Caiado, Cristiane Peris, Acacio A.L. Filho, Emerson Badaro, Michel Eid Farah, Eduardo Rodrigues, Andre Maia, Rita Coimbra, Sung Eong, Mauricio Maia

Purpose: To evaluate the functional and morphological toxicity of different concentrations of a dye extracted from the acai fruit using a rabbit model.

Methods: New Zealand Rabbits were submitted to intravitreal (n=18) injection using the following dye concentrations: 10%, 25%, 35%. Control contralateral eyes were injected with balanced salt solution. To test toxicity, animals were submitted to Fundoscopy, Fluorescein Angiography (FA), Electrophysiology (ERG), Light Microscopy Histology (LM) and Transmission Electron Microscopy (TEM).

Results: Fundus images showed that progressive concentrations presented decrease of vitreous opacity proportional to the concentration. At 24h FA revealed opacity and image blockage. After 7 days the opacity reduced and images did not show reduction from fluorescence. OCT images (for all concentrations) showed retinal surfaces with normal contours, neurosensory retina with normal thickness and preserved internal anatomy as well as normal pigmentary epithelium complex and reflectance similar to control eyes. Student-t test were used and p-values < 0.05 were considered statistically significant. ERG examination at 24h showed a uniform reduction in amplitude from baseline values in all eyes. Median b-wave amplitudes showed progressive reduction and latency showed increase in groups 10% and 25%, but this was not statistically significant; however, for 35% these findings were statistically significant (p<0.05). LMH for 10 and 25% showed no major anatomic signs of toxicity at any time points. At 35%, ganglion cell swelling and misalignment of outer photoreceptors segments was observed at 24h and minimal edema at the ganglion cell layer at 7 days. Discrete signs of pycnosis were seen for this concentration at the outer nuclear layer at every time point. TEM confirmed all data acquired by LM.

Conclusion: The dye from acai fruit in the concentrations of 10 and 25% is safe in this rabbit model and may be useful to improve the identification of the posterior hyaloids and ILM during chromovitrectomy in humans in a clinical trial that our group intend to start this year.

Keywords: Anthocyanins, chromovitrectomy, Açaí, Euterpe Oleracea

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23. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Ramiro M Ribeiro

Service: (RE) RETINA AND VITREOUS | (EX) EXPERIMENTAL SURGERY

CEP Number: 1710021113

5. ABSTRACT (REQUIRED):

Title: Retinal pigment epithelium cells derived from embryonic stem cells implanted into an animal model: principles for regenerative cell therapy in humans

Author and Co-authors: Ramiro Ribeiro, Rodrigo Brants, Bruno Diniz, Mark Humayun, Mauricio Maia

Purpose: Evaluate surgical feasibility, long-term cell survival and visual response after the implantation of retinal pigment epithelium cells derived from embryonic stem cells (hESC-RPE) seeded on a parylene-C membrane into the subretinal space of an animal model

Methods: Three sets of experiments were performed. 1) Feasibility of the hESC-RPE/parylene cells implantation was evaluated in eleven animals. Six animals were implanted and immediately euthanized to quantify the cell lost caused by the surgical procedure. Five additional animals were used to evaluate the retinal and implanted cells morphologies one week after implant. 2) Long-term cell survival was evaluated by in-vivo confocal near-infrared (NIR) and histology in a series of animals (n=28) for a total period of 8 months. 3) Visual response was measured using optokinetic head tracking in a retinal degenerative animal model (Royal College of Surgeon, RCS, rats) after the implantation of hESC-RPE/parylene cells (n=20) and compared to sham procedure (n=10) and untreated eyes (n=20)

Results: Histology studies, OCT and microscopic images confirmed that the hESC-RPE/parylene cells could be implanted into the subretinal space. The surgical procedure caused a minimum (<2%) cell lost and the morphology of the implanted cells was preserved without causing damage to the retina. The implanted cells were detected for a period of up to eight months by confocal NIR and confirmed with histology and specific human RPE cell markers. The RCS rats implanted with cells had a statistically better (p<0.05) visual response compared to sham group and untreated eyes

Conclusion: The surgical implantation of the hESC-RPE/parylene cells into the subretinal space was feasible; the long-term presence of cells was confirmed by image modality and histology and the group of animals that received the hESC-RPE/parylene cells had a better visual outcome

Keywords: RPE cells, RPE transplantation, dry-AMD, animal model

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(TU) TUMORS AND PATHOLOGY

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24. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Vasco Torres Fernandes Bravo-Filho

Service: (TU) TUMORS AND PATHOLOGY | (PH) PHARMACOLOGY

CEP Number: 3650271114

5. ABSTRACT (REQUIRED):

Title: Effect of ranibizumab and the association with amfenac in human uveal melanoma cell line

Author and Co-authors: Vasco Bravo-Filho;Pablo Zoroquiain; Natalia Vila; Patrick Logan;Rubens Belfort Neto; Miguel Noel Burnier J?nior

Purpose: Uveal Melanoma (UM) is the most common primary intraocular tumor in adults and even with the progress in treating locally the tumor, mortality rate is still high. Also, some tumors are too big to receive radiation therapy. Therefore, we still have to research alternative treatment options and our purpose was to evaluate the effect of ranibizumab in association with amfenac in human uveal melanoma cell line.

Methods: Proliferation and migration were performed, using the 92.1 uveal melanoma cell line, after the administration of ranibizumab and the association with amfenac. Also the proliferation rates of this cell line were assessed after treatment with ranibizumab and the association with amfenac and subsequent radiation exposure. The cell line was incubated with the drugs. Treated and non-treated cell line was then exposed to various doses of radiation: 0, 4 and 8 Gy. MTT assay was used to assess proliferation rates 48h after radiation.

Results: The group of UM cells treated with the association of ranibizumab and amfenac had a lower proliferation compared to the control ($p=0.016$) and to the group treated only with ranibizumab ($p=0.033$). Migration was lower only in the group treated with amfenac ($p=0.014$). Treatment of UM cell line with ranibizumab only, amfenac only and the association prior to 8Gy radiation dose led to a marked reduction in proliferation rates ($p=0.009$; $p=0.01$; $p=0.034$; respectively). There was no statistical difference between the three treatment groups at he 8Gy dose.

Conclusion: Ranibizumab and amfenac had a synergetic effect, decreasing the proliferation rate. Although, only amfenac had significant effect to decrease the migration of UM cell line. The radiosensitivity of this UM cell line was increased by the administration of ranibizumab, amfenac and the association.

Keywords: uveal melanoma; ranibizumab; amfenac

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

25. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Bruno Diniz

Service: (RE) RETINA AND VITREOUS

CEP Number: CAAE: 12018712.5.0000.5505

5. ABSTRACT (REQUIRED):

Title: Subretinal implantation of retinal pigment epithelial cells ? phase I trial.

Author and Co-authors: Bruno Diniz, Rodrigo Brant, Mauricio Maia

Purpose: To evaluate local and systemic toxicity, tumorigenicity and delivery of the SC-RPE (stem cell derived retinal pigment epithelium) as subretinal injection and polarized monolayer in human patients receiving those cells on a phase I trial.

Methods: Prospective human safety / phase I clinical study will be performed to establish the safety and tolerability of subretinal transplantation of SC-RPE on membranes in patients with Stargardt's macular dystrophy (age >18). Pre and postoperative ophthalmic examinations will include visual acuity, fluorescein angiography, autofluorescence and optical coherence tomography. Transplanted patients will be followed up for 12 months.

Results: 12 patients are screened for implantation. The sample includes 7 women and 5 men with a mean age of 48 years (range 32-82). Visual acuity varies from counting fingers to 20/400 in worst eye. Preoperative exams show typical late stage central choroidal atrophy, hipo autofluorescence and abnormal outer retinal structure in the OCT.

Conclusion: The present technique was found to be surgically safe and demonstrated cell survival and functionality in rats and pigs. We provide clinical evidence suggesting that hESC-RPE might be safely transplanted into human patients ? phase I trial.

Keywords: stem cell, retina, rpe

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26. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Camila Vieira Ventura

Service: (RE) RETINA AND VITREOUS

CEP Number: 40890814.0.0000.5505

5. **ABSTRACT (REQUIRED):**

Title: Retinopathy of prematurity training in brazilian ophthalmology residencies

Author and Co-authors: Camila V. Ventura, R.V. Paul Chan, Michael F. Chiang, Nilva Morais, Mauricio Maia

Purpose: Due to the fact that Retinopathy of Prematurity (ROP) is still considered the main cause of childhood blindness worldwide and that there is a lack of data about ROP training in the Brazilian Ophthalmology residencies, the purpose of this project is to provide information about the reality and quality of ROP training in the country. Furthermore, test a new additional tool for ROP training to improve efficiency in diagnosis and treatment of this disease.

Methods: This project consists of two steps. Since there is a lack of information about ROP training quality in the Brazilian Ophthalmology residencies, the first step of this project is to gather information about the training program quality and possible deficiencies through a online survey sent to all third-year Brazilian residents and directors. The second step is supposed to test the efficacy of a web-based ROP training program in Brazil.

Results: We are working on the first step of our project. At this moment, the questionnaire has been sent to all 329 third-year residents and data was collected from 111 of them. From the data collected, 73 residents (65.7%) informed that they had performed between zero and ten ROP screening exams during their entire residency program; 105 residents (94.6%) had never performed a laser during their training and although they received an average of 2.8 ± 2.0 hours of theoretical training on ROP, 84 (75.7%) of them referred not having a formal evaluation on this topic.

Conclusion: Based on the data gathered up to the present moment, it is possible to say that training for ROP in Brazil is inefficient and falls short in both practical and theoretical aspect. Therefore, it becomes indispensable the continuation of this research, now focusing on deploying the web-based ROP training program and testing its efficacy in improving ROP training in Brazil.

Keywords: retinopathy of prematurity, training, residency

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27. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Cristiane Siqueira PERIS

Service: (RE) RETINA AND VITREOUS

CEP Number: 4216091213

5. ABSTRACT (REQUIRED):

Title: Color variation assay of the anthocyanins from Açai Fruit (*Euterpe oleracea*): a potential new dye for vitreoretinal surgery.

Author and Co-authors: Peris CS1, Badaro E, Ferreira MA, Lima-Filho AA, Ferreira EL, Maia A, Rodrigues EB, Farah ME, Maia M.

Purpose: The goals of this study were to determine the potential for use of the natural anthocyanins from the açai fruit (*Euterpe oleracea*) during vitreoretinal surgery and the ideal physicochemical properties of the dye.

Methods: We evaluated the color variations of the dye at different pHs and osmolarities with or without the use of mordants as a potential new tool for internal limiting membrane peeling. The extracts of anthocyanin from the açai fruit were analyzed by spectrophotometry to determine the degree of color variations associated with various pHs and osmolarities. The experiments were conducted in test tubes filled with tryptophan soya media and Petri dishes prepared with agar media.

Results: We observed various shades of green, red, and purple in the extracts of the anthocyanin dye at different pHs and osmolarities. The assay to adjust the anthocyanin solution similar to the physiologic retinal environment (osmolarity, 300 mOsm; pH, 7.00) resulted in a shade of purple that may be useful to stain the intraocular microstructures during vitreoretinal surgery. The physicochemical property of the purple anthocyanin solutions from the açai fruit was observed at physiologic pH and osmolarity.

Conclusion: Anthocyanins from the açai fruit may be useful to enhance visualization of the intraocular microstructures during vitreoretinal surgery.

Keywords: Anthocyanin, vitreoretinal, açai fruit, assay, internal limiting membrane

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28. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: OSWALDO FERREIRA MOURA BRASIL

Service: (RE) RETINA AND VITREOUS

CEP Number: 98.104

5. ABSTRACT (REQUIRED):

Title: Surgical management of macular hole with 2 years of follow-up

Author and Co-authors: Brasil OF, Badaro E, Navarro RM, Lima AA, Brasil OM, Maia M

Purpose: To determine prognostic factors, anatomic success rate and safety of sutureless pars plana vitrectomy and vitreous base removal associated to internal limiting membrane (ILM) peeling, C3F8 injection and 1-day facedown postoperative positioning to manage idiopathic macular holes (MHs) at 2 years follow-up.

Methods: Forty-six eyes with an idiopathic MH underwent pars plana vitrectomy, ILM peeling after Brilliant Blue 0.05 mg/ml staining, and gas tamponade. Patients remained facedown for 1 day postoperatively. Follow-up included measurement of best-corrected visual acuity (BCVA) and optical coherence tomography (OCT) at 1 and 7 days and 1, 6, 12, and 24 months postoperatively. If the MHs was not anatomically closed by 1 month, another procedure was performed.

Results: Primary and final anatomical closure rate were 91.3% and 97.8%, respectively. Mean BCVA improvement (logarithm of the minimum angle of resolution, LogMAR) was 0.3415 (range, 0.0-0.90). No late MH reopening occurred, no surgery-related or ocular dye-related complications developed. The BCVA was less likely to improve in MHs with longer symptomatic periods or larger internal diameters.

Conclusion: Pars plana vitrectomy combined with vitreous base removal and ILM peeling using Brilliant Blue 0.05% associated to C3F8 injection and 1-day facedown postoperative positioning for idiopathic MHs is a safe surgical approach, achieving a MH closure rate of 91.3% after one procedure and 97.8% after a second one. Long symptoms duration and larger inner MH diameter are associated with poor BCVA.

Keywords: chromovitrectomy, Brilliant Blue, macular hole, vital dyes, vitrectomy

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29. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: rodrigo antonio brant fernandes

Service: (RE) RETINA AND VITREOUS | (GL) GLAUCOMA

CEP Number: 12018712.5.0000.5505

5. ABSTRACT (REQUIRED):

Title: An Innovative Surgical Technique for Subretinal Transplantation of Human Embryonic Stem Cell-derived Retinal Pigmented Epithelium (hESC-RPE) in Yucatan Mini Pigs: Preliminary Results

Author and Co-authors: Rodrigo Brant, Bruno Diniz, Ramiro Ribeiro, Mauricio Maia, Rubens Belfort Jr, Mark Humayun

Purpose: To determine whether the surgical implantation of a human embryonic stem cell-derived retinal pigmented epithelium (hESC-RPE) monolayer seeded onto a parylene film into the subretinal space of pigs is a safe procedure.

Methods: Ultrathin films made from parylene were seeded with hESC-RPE and surgically implanted into the subretinal space of eight female, 2 months old , Yucatan mini-Pigs. The surgical procedure was comprised of a pars plana vitrectomy plus retinal detachment with balanced saline solution (BSS) and a limited peripheral retinectomy for insertion of the substrate seeded with cells followed by silicone oil tamponade plus laser. All subjects received oral cyclosporine during the entire follow up period. Three months after implantation, the pigs were sacrificed, and the eyes and organs were submitted to histological analysis. Adjacent sections were processed for immunohistochemical analysis using TRA-1-85 (human blood group antigen) and DAPI antibodies.

Results: The cell monolayer over the parylene scaffold was immunopositive for TRA-1-85 three months after surgical implantation and the human cells did not migrate off the parylene substrate. In one eye, there was a mild inflammatory reaction around the implant, but it was negative for human biomarkers. There was no evidence of intraocular tumor formation. Systemic organs did not show gross evidence of tumor formation.

Conclusion: The hESC-RPE cells survived for at least three months in this animal model. The surgical procedure and subretinal implantation of the substrate with cells was feasible and safe without migration off the substrate or the induction of tumors in the eyes and organs of the immunosuppressed animals.

Keywords: Stem cells, RPE, AMD

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Conclusion.

30. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Helio Francisco Shiroma

Service: (RE) RETINA AND VITREOUS

CEP Number: 0705/10

5. ABSTRACT (REQUIRED):

Title: Topical anesthesia for intravitreal injection with and without lidocaine gel 2%.

Author and Co-authors: Helio Shiroma, Sergio Novello, Muller Urias, Michel Farah, Eduardo Rodrigues

Purpose: There are various anaesthesia methods to control pain during intravitreal injection (IVI), however, there has been no method shown to be superior. The aim of this prospective clinical trial is to compare the patient's comfort and pain, with or without 2% lidocaine gel in patients undergoing to IVI

Methods: Consecutive patients older than 40 years old, who were scheduled to receive at least two IVI ranibizumab (Lucentis; Genentech, Inc., San Francisco, California, USA) or aflibercept (Bayer; Germany), only in one eye, for treatment of neovascular AMD, diabetic macular edema or central vein occlusion were included. Patients were randomly using opaque envelopes, arranged in sequential order to start with 0.5% proparacaine + hydroxypropylmethylcellulose or 0.5% proparacaine + 2% lidocaine gel. No sedation was used in any patients. Thirty days later, in the second IVI, patient received the other option of anesthesia. After five minutes, patients answered a questionnaire about the discomfort during the positioning of the eyelid speculum and the pain felt during the procedure. Using visual analogue scale (VAS) pain, patient's answer was graded on a scale of 0 to 10

Results: In total, 40 patients were included in this study. The subjects included 18 men(45%) and 22 women (55%) with a mean age of 68.15(?10.38). There were no significant difference in age ($p=0.880$), gender ($p= 0.635$) and eye treated ($p= 0.082$). There was significant difference in diagnostic frequencies ($p< 0.001$). The mean pain score during blepharostat placing was 0.75 (?0.98) in placebo group and 0.50 (?0.75) in lidocaine gel group. There was significant difference between groups ($p= 0.040$). The mean pain score during IVI was 1.35 (?1.09) in placebo group and 0.95(?0.96) in lidocaine gel group. There was significant difference between groups ($p= 0.017$). In placebo group, 55% were satisfied with anesthesia and 45% were very satisfied. In lidocaine group, 30% were satisfied and 70% were very satisfied. There was significant difference between groups ($p= 0.031$).

Conclusion: Lidocaine gel appears to have significant benefits over standard topical ocular anesthetic agents. We concluded that association is positive to relieve the pain caused by IVT

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31. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: João Rafael Dias

Service: (RE) RETINA AND VITREOUS

CEP Number: 707034

5. ABSTRACT (REQUIRED):

Title: Safety and efficacy of intravitreal ziv-aflibercept for the treatment of exudative age-related macular degeneration: six-month results

Author and Co-authors: João Rafael de Oliveira Dias, Vinicius Kniggendorf, Gabriel Costa Andrade, André Maia, Michel Eid Farah, Eduardo B?chele Rodrigues

Purpose: Ziv-aflibercept, a systemic chemotherapeutic agent approved for the treatment of metastatic colorectal cancer, has recently drawn attention because of its potential for intravitreal administration, due to its antiangiogenic action. The purpose of this study was to evaluate the safety and efficacy of intravitreal ziv-aflibercept in patients with exudative age-related macular degeneration.

Methods: Since ziv-aflibercept was not associated with ERG-related signs of toxicity in our experimental and in vitro study, and after Federal University of S?o Paulo Ethics Committee approval (IRB 707.034) and signature of informed consent form, all patients underwent a complete ophthalmological exam, including ETDRS best-corrected visual acuity, color fundus image, fluorescein angiography, SD-OCT and full-field and multifocal ERG. All patients received three monthly intravitreal injections of ziv-aflibercept (0.05 mL, 25 mg/mL, total 1.25 mg), under sterile conditions. The patients were examined every 4 weeks and received a new ziv-aflibercept injection as needed or pro re nata (PRN) if they met prespecified retreatment criteria.

Results: To date, fifteen patients completed the 6-month follow-up. Decrease in subretinal fluid was noticed after the first injection of ziv-aflibercept in all patients, which was evidenced after subsequent injections. All patients showed improvement of visual acuity with no signs of intraocular inflammation, change in lens status or retinal toxicity. Full-field ERG showed no signs of retinal toxicity after the injections.

Conclusion: This case series showed that intravitreal ziv-aflibercept was safe and effective for patients with exudative age-related macular degeneration.

Keywords: Ziv-aflibercept, exudative age-related macular degeneration, intravitreal injection

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32. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Mariana Vallim Salles

Service: (RE) RETINA AND VITREOUS | (LV) LOW VISION

CEP Number: 6159

5. ABSTRACT (REQUIRED):

Title: Correlation between phenotype and genotype in patients with Stargardt's Disease

Author and Co-authors: Mariana Vallim Salles, Karita Antunes Costa, Fabiana Louise Motta, Elton Dias da Silva, Patricia Varela Lima Teixeira, João Bosco Pesquero, Juliana Maria Ferraz Sallum

Purpose: Identify genetic mutations in patients with clinical diagnosis of Stargardt disease and correlate with the phenotypic manifestation

Methods: Patients with clinical diagnosis of Stargardt disease were selected. The age of onset, the visual acuity and the fundus characteristics were registered. Peripheral blood was collected for DNA extraction. The ABCA4 gene was sequenced with next generation technique

Results: 24 patients from 21 autosomal recessive families (3 pair of siblings) were included, all of them between 10 and 66 years old. Their initial symptoms appeared near 13 years old average (range 6-32 years). The patients' visual acuity ranged from 20/40 to count fingers at 50 centimeters. At the retina exam macular atrophy and yellow-white flecks were present. The autofluorescence exam showed hypoautofluorescence at atrophic areas and hyperautofluorescence at flecks areas. The OCT showed retina defect at the macular area. The mutations found by the gene sequencing were p.Asn96Asp, p.Arg212Cys, p.Leu541Pro, p.Arg602Trp, p.Thr1019Met, p.Ala1038Val, p.Arg1129Leu, p.Arg1300*, p.Arg1443His, p.Pro1486Leu, p.Glu1574*, p.Ser1642Arg, c.5044_del15bp, p.Gly1961Glu, p.Leu2027Phe, p.Arg2038Trp and p.Arg2107His. The mutations p.Ala1038Val and p.Leu541Pro when present together, they are on the same chromosome. Seven known variations were found (p.Arg212His, p.His423Arg, p.Val643Met, p.Val931Met, p.Arg943Gln, p.Leu1201Arg and p.Ser2255Ile) and 3 new variations: p.Ala192Val, p.Asp915Asn e p.Glu1447Val, that was predicted to be benign by Polyphen-2. In 62% (13/21) families the test was able to identify the 2 pathogenic mutations in ABCA4. In 14% (3/21) families only one mutation was found. In 24% (5/21) families no mutation were identified. Three patients were classified as type 1, eleven as type 2 and 10 as type 3 according to their phenotype manifestation

Conclusion: The molecular exam was able to confirm the diagnostic in 13 families. In the last eight families, different mutations may exist in regions not examined of the gene or another gene shall be involved. No correlation among phenotype and mutation was established

Keywords: Retinitis pigmentosa, Retina, Stargardt disease, Genetic disease, DNA mutational analysis

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

33. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Karita Antunes Costa

Service: (LA) LABORATORY | (RE) RETINA AND VITREOUS

CEP Number: 97206

5. ABSTRACT (REQUIRED):

Title: Molecular Diagnosis for Retinitis Pigmentosa Patients (RP) Based on Next Generation Sequencing (NGS): Mutation identification and clinical correlation

Author and Co-authors: Karita Antunes Costa, Mariana Vallim Salles, Pei-Wen Chiang, Juliana Maria Ferraz Sallum

Purpose: determine for each one of 16 patients the molecular basis of RP by the analyse of 132 genes related to Retinal Dystrophies.

Methods: 16 patients with the clinical diagnosis of Retinitis Pigmentosa were included. Comprehensive phenotypic data were obtained. DNA was extracted from peripheral blood. Specific primers were designed to be used on a Illumina platform. A library dilution and capture were performed according to Illumina NGS platform protocol. NGS strategy was applied to identify mutations. Genomic variations was analyzed by predictions programs and data banks like the National Center for Biotechnology Information Search database (NCBI), Gene Cards, Human Gene Mutation Data (HGMD), Mutation Taster and Polyphen 2.

Results: Nine patients had probably conclusive results. Patient 5 with a homozygous mutation in CBR1 gene (c.1436 T>C Leu479Pro), patient 6 with a homozygous mutation in RPGR gene (c.905G>C p.Cys302Ser), patient 8 with a hemizygous mutation in RPGR gene (c.1243_1244delAG), patient 9 with a heterozygous mutation in PROM1 gene (c.671C>T Pro224Leu), patient 10 with a heterozygous mutation in RHO gene (c.568G>A p.Asp190Asn), patient 12 with two heterozygous mutation in PDE6B gene (c.3G>T p.Met1Ile, and c.313G>A p.Glu105Lys), patient 14 with a heterozygous mutation in NR2E3 gene (c.166G>A p.Gly56Arg), patient 15 with a heterozygous mutation in SNRNP200 gene (c.2359G>A p.Ala787Thr), and Patient 16 with a heterozygous mutation in PRPF31 gene (c.906_907insGCCAAGTGCACACTGGCAGCC). The "probably conclusive" term have been used due the check on literature about this variations still being made. Seven patient obtained inconclusive results. When a literature report about a specific variant is find it reinforces the probably conclusive results. The information about variations were analysed in different data banks.

Conclusion: At light of the genetic results the patients will receive genetic counselling regarding their Retinal Dystrophy. NGS was a very efficient molecular genetic tool to search for mutations in a RP patients group due to the fact that it can analyze a great amount of genes in the same test.

Keywords: Next Generation sequencing, Mutations, Retinitis Pigmentosa, molecular genetic diagnosis.

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Purpose, Methods, Results,
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34. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Claudio Mauricio Zett Lobos

Service: (US) OCULAR ULTRASOUND | (RE) RETINA AND VITREOUS

CEP Number: 2015

5. **ABSTRACT (REQUIRED):**

Title: Multimodal Imaging in Polypoidal Choroidal Vasculopathy: Correlation between Indocyanine Green Angiography and OCT Angiography

Author and Co-authors: Claudio Zett Lobos, Eduardo A. Novais, Pedro Paulo Bonomo, Norma Allemann

Purpose: To define morphological features of polypoidal choroidal vasculopathy (PCV) using OCT Angiography (OCTA) images and to compare with Indocyanine Green Angiography (ICGA).

Methods: A comparative observational case series. Patients with treatment-naïve PCV were prospectively recruited to be imaged on ICGA confocal scanning laser ophthalmoscope (cSLO) (Spectralis HRA Heidelberg Engineering, Heidelberg, Germany) and ~840 nm spectral-domain OCTA (RTVue XR Avanti; Optovue, Inc, Fremont, California, USA) on the same day. A 3x3mm and 6x6 mm en face OCTA images (OCT angiograms) centered at the fovea were acquired for each patient. Vascular imaging that was obtained using OCTA was compared to ICGA.

Results: Five eyes of 4 patients were included in this study. Spectral-domain OCT angiogram was able to identify medium to large polyps located at the end of the vascular branching network in PCV. However the vascular branching network itself was often obscured on the OCT angiogram, whereas in ICGA these networks were identified. The combination of OCTA, structural en face and OCT B-scans increased the sensitivity for identification of the polyps and the retinal pigmented epithelium (RPE) split, which is located anteriorly to the vascular branching network.

Conclusion: OCT Angiography imaging provides a non-invasive in-vivo tool to detect the vascular branching network and the polypoidal lesions of PCV. However, because of the occult nature of the polyps and their location under the RPE, it can often be challenging to visualize them using spectral-domain OCTA. Our research group hypothesizes that the slow flow present on the polypoidal lesions may be below the minimum threshold identified by commercially available OCTA devices.

Keywords: Polypoidal Choroidal Vasculopathy (PCV), Optical Coherence Tomography Angiography (OCTA), Indocyanine Green Angiography (ICGA), Polyps.

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35. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Gabriel Costa de Andrade

Service: (RE) RETINA AND VITREOUS | (PH) PHARMACOLOGY

CEP Number: 707.034

5. ABSTRACT (REQUIRED):

Title: Intravitreal injections of ziv-aflibercept for diabetic macular edema: a pilot study

Author and Co-authors: Gabriel Costa de Andrade, João Rafael de Oliveira Dias, Andr? Maia, Michel Eid Farah, Carsten H. Meyer, Eduardo Buchele Rodrigues

Purpose: Diabetic macular edema (DME) is the leading cause of blindness in young adults in developed countries. Beyond metabolic control several therapies have been studied as such laser treatment and intravitreal injections of corticosteroids or anti-VEGF drugs. In terms of public health the long term treatment with the current available drugs is very expensive and new therapies with the same or better effect should be investigated. This study sought to evaluate the efficacy and safety of intravitreal injections of ziv-aflibercept for the treatment of patients with DME.

Methods: Seven consecutive patients with DME were enrolled. A complete examination including full-field ERG, visual acuity, central retinal thickness (CRT) and evaluation of systemic and ocular complications was performed before and 24 weeks after intravitreal injections of ziv-aflibercept. The seven patients were submitted to 6 consecutive intravitreal injections of ziv-aflibercept with a 4 week interval.

Results: No significant differences were found in the amplitude or implicit time of any ERG component after intravitreal injections of ziv-aflibercept, and no systemic or ocular complication was observed. The improvement of visual acuity was significant at 24 week ($p < 0,05$). The CRT significantly decreased over the course of 24 weeks.

Conclusion: Intravitreal injections of ziv-aflibercept seems to be a safe and effective treatment option for DME.

Keywords: ziv-aflibercept, diabetic macular edema, diabetic retinopathy

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Purpose, Methods, Results,
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36. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: CARLOS ALEXANDRE DE AMORIM GARCIA FILHO

Service: (RE) RETINA AND VITREOUS

CEP Number: 15126

5. **ABSTRACT (REQUIRED):**

Title: Change in drusen volume as a novel clinical trial endpoint for the study of complement inhibition in age-related macular degeneration

Author and Co-authors: Carlos Alexandre de Amorim Garcia Filho, Zohar Yehoshua, Giovanni Gregori, Renata Portella Nunes, Fernando M. Penha, Michel E Farah, Philip J. Rosenfeld1

Purpose: To evaluate the change in drusen volume following treatment with eculizumab, a systemic inhibitor of complement component 5.

Methods: Single center, prospective, randomized, double-masked clinical trial.

Patients with drusen volumes of at least 0.03 mm³ in the central macula were randomized 2:1 to receive intravenous eculizumab or placebo over 26 weeks. Patients were observed for an additional 26 weeks. The main outcome measure was a decrease in drusen volume of at least 50% at 26 weeks.

Results: Thirty eyes were enrolled. The mean drusen cube root volumes at baseline were 0.49 mm (0.14) and 0.47 mm (0.10) in the eculizumab and placebo groups, respectively (p=0.64). At 26 weeks, mean drusen cube root volumes were 0.51 mm (0.01) and 0.42 mm (0.15) in the eculizumab and placebo groups, respectively (p = 0.17). Only one eye in the placebo group had a decrease in drusen volume of at least 50% at 26 weeks. Through 26 weeks, a total of 2 eyes developed neovascularization, both in the placebo group. At 26 and 52 weeks, the growth in the volume of drusen was dependent on the number of complement factor H at-risk alleles carried by the patients.

Conclusion: Systemic complement inhibition with eculizumab did not significantly reduce drusen volume. However, drusen growth was dependent on the number of complement at-risk alleles carried by the patient, so future trials should consider the use a composite clinical trial endpoint in which efficacy is defined by the treatment's ability to prevent drusen growth, prevent neovascularization, and prevent the formation of geographic atrophy over 1 year.

Keywords: Drusen; AMD; Age-related macular degeneration; Complement inhibition

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37. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Silvana Maria Pereira vianello

Service: (RE) RETINA AND VITREOUS | (LA) LABORATORY

CEP Number: 36021-630

5. **ABSTRACT (REQUIRED):**

Title: TPA (tissue plasminogen activator) as a possible agent in enzymatic vitrectomy.

Author and Co-authors: Silvana maria Pereira Vianello
Eduardo Rodrigues
Eduardo Novais
Larissa Coppini
Michel Eid Farah

Purpose: to study the plasmin activatin in human vitreous after incubation with TPA

Methods: First step: authors analyzed twenty two samples of human vitreous obtained by vitrectomy at 5.000 cuts per minute incubated with tissue plasminogen activator (tPA) ?in vitro?. The absorbance was analyzed after 2h and 24h searching for active plasmin and how much it is present (quantification). The vitreous samples were from patients with vitreoretinal conditions like retinal detachment, diabetic retinopathy, vitreoretinal traction, macular hole, uveitis and glaucoma.

Studies of tPA toxicity were also performed in culture cells.

Second step: a clinical study using tPA in patients with pathological vitreomacular adhesion is analyzing the vitreomacular interface with spectral optical coherence tomography (OCT) to understand how the plasmin activated by tPA injected intravitreally works to release retina-vitreous adhesions, its effects and its possible side effects.

Results: In the first phase of the study all human vitreous samples presented a positive activation of endogenous plasmin and the ocular underlying disease did not affect plasmin activation. The amount of active plasmin was measured on each sample.

There wasn't toxicity of TPA in cells culture
Second phase on going.

Conclusion: The tPA seems to be a valid alternative to be used for PVRA considering the low cost and low toxicity, because it can activate pre-existing proteins (plasminogen) from the patient in plasmin. Clinical on going studies are evaluating the effects of the use of tPA on the vitreoretinal interface and its possible adverse effects.

Keywords: vitreous; TPA; vitreomacular adesion; vitreolisis

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38. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Viviane Peracini Sant'Ana

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0343/12HE

5. **ABSTRACT (REQUIRED):**

Title: Effects of pH variation and temperature on the proteolysis mediated by Acanthamoeba exoproteome.

Author and Co-authors: Denise de Freitas, Annette Silva Foronda, Linda Christian Carrijo-Carvalho, Fabio Ramos de Souza Carvalho.

Purpose: Amoebic keratitis evolves as an infection cascade that causes corneal inflammation and injury to cellular and acellular components of the ocular surface. Acanthamoeba trophozoites secrete extracellular enzymes (exoproteome) that are able to degrade extracellular matrix molecules and play an important role in the pathological process of the disease. The temperature of normal healthy human cornea is $34.51 \pm 0.82^\circ\text{C}$, which can increase by a range of $0.5\text{--}1.0^\circ\text{C}$ to the periphery of the infection site, causing hyperemia. In addition, therapeutic profiles involve topical application of antimicrobial compounds which are able to induce pH variations in the infected corneal tissue. For these reasons, the aim of this study was to evaluate the proteolytic activity of the exoproteome from Acanthamoeba spp under different conditions of pH and temperature.

Methods: The proteolysis assays were performed using SDS-PAGE-Gelatin and exoproteome obtained from clinical isolates of Acanthamoeba spp. The degradation profile resulting from the activity Acanthamoeba exoproteomes subjected to a wide range of pH and temperature were analyzed and compared in the times of 4 and 16 hours.

Results: Acanthamoeba exoproteome showed proteolytic activity at all temperatures and pH variations evaluated after 4 and 16 hours. These findings demonstrate that the enzymes are resistant and stable to extreme conditions. The highest enzymatic activity was observed at 37°C . The optimum pH for proteolysis was 7.0, suggesting that the protozoan proteases have the maximum activity at physiological conditions. The results corroborate with the role of amoebic proteases in the pathophysiological process of the disease, when the pH value presents the tendency to remain neutral and the corneal temperature increases to approximately 37°C , which induce the trophozoites to invade the corneal stroma and to produce virulence factors acting on degradation extracellular matrix components.

Conclusion: The exoproteome produced by Acanthamoeba spp has strong enzymatic activity in different conditions of temperature and pH regardless of the incubation time.

Keywords: Acanthamoeba, exoproteome, temperature, pH.

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39. **FIRST (PRESENTING) AUTHOR (REQUIRED):**

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Name: Sarah La Porta Weber

Service: (CO) CORNEA AND EXTERNAL DISEASE | (RX) REFRACTION-CONTACT LENSES

CEP Number: 180627

5. **ABSTRACT (REQUIRED):**

Title: The use of ocular anatomical measurements using a rotating Scheimpflug camera to assist in the Esclera? scleral contact lens fitting procces

Author and Co-authors: Sarah Weber, Renato Ambrosio, Jr, Cesar Lipener , Cleusa Coral Ghanem and Ana Luisa Hofling Lima

Purpose: To test for associations between Pentacam? derived topography variables and to evaluate the predictive power of those variables in relation to scleral contact lens (SCL) fit.

Methods: Forty-seven patients (63 eyes) were indicated for the use of Esclera? SCL. All patients underwent Scheimpflug imaging before the initial SCL evaluation. Were measured by Pentacam: corneal elevations, thickness, density, and anterior chamber depth (ACD). Correlations between the SCL parameters and the Pentacam measurements were analysed with Pearson?s correlation coefficients. A simple linear regression model was created for each lens parameter using the most-correlated Pentacam variable.

Results: In the total group, the results show correlations between the SCL parameters and the corneal astigmatism, ACD and pentacam-measured corneal height (Hm), with $p < 0.001$ each. In addition, an inverse correlation between the lens sagittal depth (LSD) and the anterior radii minimum was shown ($p < 0.001$). In the keratoconus group, the results show correlations between the SCL parameters and ACD and Hm ($p < 0.001$, each). An inverse correlation between the LSD and the total thickness corneal density average was also observed ($p = 0.003$).

Conclusion: There was a positive correlation between the LSD and ACD, even as LD and ACD in the keratoconus group. Thus, our results suggest that certain Pentacam measurements can be good predictors of the most appropriate Esclera lens to be fitted in keratoconus patients.

Keywords: Scleral lenses, scleral lens fitting, contact lens, Scheimpflug camera, keratoconus, dry eye.

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40. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: Lucas M M Vianna

Service: (CO) CORNEA AND EXTERNAL DISEASE | (CA) CATARACT

CEP Number: 28906115

5. ABSTRACT (REQUIRED):

Title: Corneal endothelial diseases: possible new treatments

Author and Co-authors: VIANNA LM, JUN AS, NOSE W, BELFORT JR R

Purpose: To study Fuchs disease, from clinical aspects to possible new treatments.

Methods: Five different papers published (or "in press") by the authors will be presented showing several aspects of Fuchs disease, from clinical and diagnostic features and currently available treatments to reports that suggest the possibility of cell therapy and mainly the optimization of in vitro culture of corneal endothelial cells and its logistics, in order to help making this new treatment feasible in the future.

Results: Results will be presented separately for the 5 papers and can be summarized in the conclusion.

Conclusion: From our papers, we concluded that:

1. Fuchs' dystrophy cause important visual impact and can be treated by endothelial keratoplasty;
2. Tissues from donors with Diabetes (especially in longer duration cases), Hyperlipidemia/Obesity, or Hypertension are more likely to have failures during Descemet Membrane Endothelial Keratoplasty (DMEK) preparation in an eye bank setting and should be avoided when possible for this purpose. Furthermore, an overall failure rate of 5% or less with an apparent reduction in failures occurring after 100-150 preparations as indicated by our data may provide useful initial guidelines and may contribute to benchmark values for eye banks seeking to establish and maintain DMEK programs.
3. Leaving the host Descemet Membrane (DM) during conversion of Deep Anterior Lamellar Keratoplasty (DALK) to Penetrating Keratoplasty (PK) was uneventful in this case report, although corneal edema was observed in the area overlying the host cornea. It is possible that the retained DM could provide additional autologous endothelial cells to prolong graft survival.
4. Human Serum-Supplemented Media (HS-SM) was similar to Fetal Bovine Serum-Supplemented Media (FBS-SM) for human corneal endothelial cell culture when assessed by cell morphology, proliferation and protein/gene expression.
5. HS-SM was similar to FBS-SM for cryopreservation of cultured HCECs when assessed by cell morphology, proliferation, and protein expression, although marker gene expression by RT-PCR was higher in HS-SM compared to cells grown in FBS-SM. Detachment time was longer with FBS-SM and in lower passages.

Keywords: corneal endothelium; cell culture, corneal transplantation; Fuchs disease

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

41. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Nicolas Cesário Pereira

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: CEP/HOS

5. ABSTRACT (REQUIRED):

Title: Low complication rate after the learning curve of Descemet's membrane endothelial keratoplasty.

Author and Co-authors: Author: Nicolas Cesario Pereira
Co-authors: Adriana dos Santos Forseto, Jose Alvaro Pereira Gomes

Purpose: To evaluate the results and complication rates after the learning curve of Descemet's membrane endothelial keratoplasty (DMEK).

Methods: Retrospective review of 165 consecutive DMEK performed at Sorocaba Eye Bank by the same surgeon (N.C.P.), after a learning curve of 150 cases. Clinical outcomes and complications were described.

Results: There were only 3 partial graft detachments requiring re-bubble (1.8% re-bubbling rate) and were successfully reattached with one air bubble. There was one primary graft failure (0,6%) due to a toxic anterior segment syndrome (TASS). One tissue loss (0,6%) occurred during preparation of the DMEK grafts. There was not a single case of pupillary block. All patients with good visual potential achieved a best corrected visual acuity of 20/40 or better.

Conclusion: The results described in this series has an acceptably low re-bubbling rate (1.8%) and yielded only one case of primary graft failure (0,6%). The complication of pupillary block was never seen in this series. This shows that after the learning curve is possible to achieve a very low complication rate with DMEK.

Keywords: Descemet membrane endothelial keratoplasty, DMEK, lamellar keratoplasty, endothelial dystrophy

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42. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Renata Ruoco Loureiro

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 647.707

5. ABSTRACT (REQUIRED):

Title: Analysis of cytokines and growth factors secreted by corneal limbal stem cells and action in the modulation of epithelial wound healing in vitro and in vivo

Author and Co-authors: Renata R Loureiro; Joyce L Covre; Priscila C Cristovam; José Álvaro P Gomes

Purpose: Identify cytokines and growth factors secreted by limbal stem cells and analyze its epithelial wound healing action, both in vitro and in vivo.

Methods: Limbal tissue will be obtained from human corneal rims of the remaining trephination of in penetrating keratoplasty. Cytokines and growth factors secreted by limbal progenitor cells will be identified in the conditioned medium. For in vitro analysis of epithelial healing, corneal epithelial cells will be cultured, injured and treated with previously collected conditioned medium, the epithelial healing will be analyzed by capturing images. For the in vivo analysis, experimental models will be injured and treated with previously collected conditioned medium, the epithelial healing will be analyzed clinically and by histology and immunohistochemistry.

Results: For the initial in vitro analysis, it was observed the epithelial healing process in both groups, in the group treated with the conditioned medium and in the control group treated with fresh culture medium. However, after 12 hours of treatment, the group treated with conditioned medium showed faster epithelial wound healing when compared with the control group. After 24 hours, the wound was similar in both groups, and after 48 hours of treatment, the lesions were completely healed.

Conclusion: These preliminary results suggest that the conditioned medium accelerates corneal epithelial healing in vitro. Further studies in vitro and in vivo are required to prove the efficacy of the conditioned medium in the epithelial healing process of the cornea.

Keywords: Corneal limbus, cytokines, paracrine communication, wound healing

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43. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Heloisa M Nascimento

Service: (CO) CORNEA AND EXTERNAL DISEASE | (UV) UVEITIS

CEP Number: 1422/06

5. **ABSTRACT (REQUIRED):**

Title: Detection of Herpes Simplex 1 and 2 and Varicella Zoster Virus by Real-Time Polymerase Chain Reaction in Corneal Scrapings from Patients with Bacterial Keratitis

Author and Co-authors: Heloisa Nascimento,MD* Aripuanã Watanabe,PhD? Ana Carolina Cabreira Vieira,MD* Andrea Pelegrini,MsC Maria Cecília Yu,MsC Paulo José Martins Bispo PhD,§ Celso Francisco Hernandez Granato,MD? Ana Luisa Höfling-Lima,MD*

Purpose: To assess the presence of herpes simplex (1 and 2) and varicella zoster virus (VZV) by real-time polymerase chain reaction in corneal scrapings from patients with bacterial keratitis

Methods: The total of 65 patients underwent clinical eye exam and had corneal scrapings studied by gram, Giemsa, culture and real-time polymerase chain reaction (RT-PCR) (study group). Risk factors and epidemiological data were recorded. Control group comprised 25 cases of typical herpes dendritic keratitis that were also analyzed by RT-PCR.

Results: From the study group (n=65), nine patients (13.8%) had negative smears, cultures, or PCR findings. Fifty-six (86,2%) patients had positive cultures, 51 for bacteria, 4 for fungi and 1 for ameba. RT-PCR identified 10 patients from the positive culture patients who were also positive for virus, one with VZV and nine with HSV-1. From the 25 patients that composed control group, 21 had positive RT-PCR analysis for HSV-1.

Conclusion: Herpes may be present in patients with bacterial corneal ulcers and Real-Time PCR may be useful in its detection.

Keywords: herpes simplex virus, infectious keratitis, polymerase chain reaction

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44. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: Priscila Cardoso Cristovam

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 5567

5. ABSTRACT (REQUIRED):

Title: Cytotoxicity of antibiotics, antifungals and corticosteroids to limbal, conjunctival and human immature dental pulp stem cells cultivated in vitro

Author and Co-authors: Cristovam PC, Loureiro RR, Covre JL, Hazarbasanov RM, Kerkis I, Gomes JAP.

Purpose: It is important to verify the best post-op regimen that follows the tenets of the IRB requirements for surgical treatments. Prophylactic use of topical antibiotics is one of the requirements and includes drugs as quinolones, amynoglicosydes. In addition, topical corticosteroid use is recommended and include dexamethasone or prednisolone. The aim of this study is to evaluate and compare the cytotoxicity effect of antibiotics, antifungals and corticosteroids to limbal, conjunctival and hIDPSC cultivated ex vivo.

Methods: Limbal, conjunctival and hIDPSC were cultivated according to the lab protocols. The cells were incubated with amphotericin B, ciprofloxacin, chloramphenicol, dexamethasone, streptomycin, gatifloxacin, gentamicin, moxifloxacin, prednisone and tobramycin at 250, 125, 62.5 and 31.25 µg/mL for 4, 8, 12 and 24 hours. The drugs were diluted in BSS, and prepared without benzalkonium chloride preservative, which was tested separately. The toxicity was evaluated by MTT assay.

Results: Preliminary results performed in the hIDPSC showed that 4h of drugs incubation did not induce morphological changes on the cells. After 8, 12, and 24 hours, the antibiotics that showed higher cytotoxicity were moxifloxacin, tobramycin and streptomycin at all concentrations and the antifungal was amphotericin. The antibiotic that showed less cytotoxic effect was gentamicin. The corticoidsteroids, dexamethasone and prednisone did not induce cell death. Although, benzalkonium chloride showed high cytotoxicity in all periods of time studied, inducing 100% of cells death. The statistical analysis are still needed to compare this results with conjunctival and limbal stem cell, and the final results will be demonstrated in the poster.

Conclusion: These results will help clinicians choose which drugs can maintain antimicrobial activity against commensal microorganisms, while minimizing the harmful effects to the cells to enhance the survival of cell transplantation.

Keywords: cytotoxicity, limbal, conjunctival, human immature dental pulp stem cells

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45. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Rossen Mihaylov Hazarbassanov

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0872/09

5. **ABSTRACT (REQUIRED):**

Title: Use of topical immunomodulator in the treatment of patients with aqueous deficient dry eye and evaporative dry eye

Author and Co-authors: Rossen M. Hazarbassanov, Jose Arthur Pinto Milhomens Filho, Nicolle Queiroz-Hazarbassanov, Jose A. P. Gomes

Purpose: To determine efficacy of an immunomodulating topical medication containing 0.05% ciclosporine A(CsA), on the treatment of aqueous deficient dry eye(ADDE) and evaporative dry eye(EDE).

Methods: Clinical double-blind, efficacy and safety pilot study. Patients were submitted to the following tests during first visit (T0) and follow-up after one month (T1) and three months (T3): Ocular Surface Disease Index (OSDI), meibography and meniscus volume (Keratograph, Oculus), visual acuity (VA), biomicroscopy, Schirmer 1 test without anesthesia, fluorescein break up time (FBUT), staining with fluorescein and lissamine green 1%; plus impression cytology (IC) of superior and temporal conjunctiva followed by HE, as well as HLA-DR immunostaining percentages. All received CsA 0.05% bid for 3 months.

Results: Fluorescein staining was significantly higher for ADDE patients between T0 and T3 (Friedman-Dunn?s, p=0.04). However, IC total score for temporal (Wilcoxon, p=0.02) and superior (Wilcoxon, p=0.04) region and HLA-DR staining in the superior region (Wilcoxon, p=0.02) decreased significantly for ADDE patients between T0 and T3. The tear meniscus volume increased significantly in the ADDE group at T1, when analyzed in the nasal (Friedman- Dunn?s, p=0.04) and temporal (Friedman-Dunn?s, p=0.03) regions.

Conclusion: Treatment of ADDE with CsA exhibited worsening in fluorescein staining, even though tear meniscus increases at T1, but possibly still insufficient at T3. For this same patient group, our findings suggest that CsA attenuates ocular surface inflammation as evidenced by decreasing IC total scores and HLA-DR expression. We did not observe any significant benefit or adverse effect for the EDE group during CsA treatment.

Keywords: dry eye disease , immunomodulator

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46. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Tais Hitomi Wakamatsu

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 05315-030

5. ABSTRACT (REQUIRED):

Title: HLA association with drug induced Stevens-Johnson Syndrome/ Toxic Epidermal Necrolysis patients with Severe Ocular Complications in a Brazilian tertiary institution

Author and Co-authors: Tais Hitomi Wakamatsu, Mayumi Ueta, Katsushi Tokunaga, Renata Ruoco Loureiro, Karita Antunes Costa, Juliana Maria Ferraz Sallum, Chikara Inoue, Chie Sotozono, Shigeru Kinoshita, Jos? ?Ivaro Pereira Gomes

Purpose: To investigate the etiologic factors such as causative drugs and the association between human leukocyte antigen (HLA) class I genes and cold medicine-related SJS/TEN (CM-SJS/TEN) with severe ocular complications (SOC) in Brazilian patients.

Methods: We studied the histocompatibility antigen genes, HLA-A, B and C of 74 patients with SJS/NET with severe ocular surface complications (41 females; 32 males; age range 7 months to 70 years; mean age, 36,01 ? 15,42) and 135 healthy volunteers. The study ethnicity was variable: pardo, n = 38 (51%); white, n = 30 (40%); black, n = 4 (6%); Indian plus white, n = 2 (3%). We performed polymerase chain reaction assay followed by hybridization with sequence-specific oligonucleotide probe using commercial bead-based typing kits.

Results: In our study cold medicine was the main SJS causative drug totalizing 53% of the patients and the second was the anti-convulsant (15%, including Phenobarbital, n = 5; Carbamazepim, n = 3 and Phenytoin, n = 3). The etiology of SJS in five patients was unknown. HLA-A*66:01, HLA-B*44:03 and HLA-C*12:03 were associated, and HLA-A*11:01, HLA-B*08:01, and HLA-B*51:01 were inversely associated with Brazilian CM-SJS/TEN with SOC. After dividing in Pardo and European ancestry, HLA-A*66:01 was associated among individuals with both Pardo and European ancestry; HLA-B*44:03 and HLA-C*12:03 among individuals with only European ancestry.

Conclusion: In conclusion, our findings suggested that HLA-A*66:01 might be a marker in Pardo and European ancestry and HLA-B*44:03 and HLA-C*12:03 might be markers in only European ancestry. Moreover, HLA-A*11:01 might be a marker of resistance to CM-SJS/TEN with SOC.

Keywords: HLA; Stevens-Johnson Syndrome; Severe ocular complications; cold medicine

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47. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: LAURO AUGUSTO OLIVEIRA

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 1179-07

5. ABSTRACT (REQUIRED):

Title: Long Term Outcomes with Boston Type 1 Keratoprosthesis in Ocular Burns.

Author and Co-authors: Lauro Augusto de Oliveira, Fernanda Pedreira Magalhaes, Flavio E. Hirai, Luciene Barbosa de Sousa.

Purpose: To report long term outcomes of Boston type I keratoprosthesis (BKPro) in the management of ocular burn injuries.

Methods: This is a prospective study including all cases of BKPro implantation for ocular burns at the Cornea Service of the Federal University of São Paulo (from February 2008 to February 2015). Twelve patients (12 eyes) were enrolled. Procedures performed to manage ocular injury were identified, and data were collected regarding patients' ocular history, surgical procedure(s) performed, and postoperative outcomes, including visual acuity, retention, complications and required surgical procedures.

Results: A total of 13 Type 1 BKPro were implanted in 12 eyes of 12 patients. The mean follow-up period was 61.2 (5 - 83 months). Preoperative best-corrected visual acuity (BCVA) ranged from count fingers to light perception. Postoperative BCVA was better than 20/200 in 83% of the patients and better than 20/60 in 58.3% of the patients. The overall BKPro retention rate was 83.3%. The most common complications were retroprosthetic membrane formation (41.6%) and persistent corneal epithelial defect evolving to corneal melting (33.3%). Patients who underwent ocular surface procedures such as limbal transplantation prior to BKPro implantation had a lower incidence of corneal melting/thinning ($p = 0.07$), although this was not statistically significant.

Conclusion: The anatomical and functional results identified in this study support the use of BKPro in managing bilateral limbal stem cell deficiency secondary to ocular burns.

Keywords: Keratoprosthesis, ocular burn.

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Conclusion.

48. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Linda Christian Carrijo-Carvalho

Service: (CO) CORNEA AND EXTERNAL DISEASE | (LA) LABORATORY

CEP Number: 559063

5. ABSTRACT (REQUIRED):

Title: Chemical properties and toxicity of biocides used in eye drop formulations

Author and Co-authors: Carrijo-Carvalho LC, Carvalho FRS, Freitas D

Purpose: Biocides are antimicrobial compounds used as an active substance, preservative or chemical adjuvant in the treatment of external ocular diseases and corneal infections. However, chemical properties of topical biocides remain poorly explored. This paper aims to evaluate the differences and similarities in the properties of biocides currently used in eye drop formulations and their role in the treatment of amoebic infections in the context of personalized ophthalmology.

Methods: Organic compounds of wide-spectrum antimicrobial activities, such as benzalkonium chloride (BAK), diamidines and biguanide derivatives were included in the analyses. The properties were based on physico-chemical predictors and a standard databank platform. Then, the modes of action and corneal toxicity were compared among the biocides.

Results: All the compounds presented chemical structures with similar characteristics, although from distinct classes, favoring electrostatic and hydrophobic interactions. The modes of action of the biocides resembled the mechanism of a cationic surface-active agent, including three main steps: 1) membrane binding, 2) cell internalization and 3) leakage of intracellular contents. The high cytotoxicity of the biocides are a major concern for long-term usage. Results of comparative physico-chemical analyses showed the ability of chemical compounds to be graded considering the base moieties. Thus, biocides were classified [I] according to the molecular mass (biguanides > diamidines > BAK), [II] positive net charge at neutral pH (biguanides > diamidines > BAK), [III] lipophilicity (BAK > biguanides > diamidines), [IV] solvent accessible surface area (biguanides > BAK > diamidines) and [V] tissue absorption levels by means of the bioconcentration factor (BAK > biguanides = diamidines).

Conclusion: Knowledge concerning chemical properties of biocides is a key factor to direct the application of these compounds in precision ophthalmology. Toxicity to corneal cells was considered as the main challenge to develop a safe and effective therapeutic approach.

Keywords: Eye drops, biocides, cornea, personalized ophthalmology

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

49. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Patricia Ioschpe Gus

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 90480-003

5. **ABSTRACT (REQUIRED):**

Title: Oxidative Balance of Autologous Serum Eyedrops

Author and Co-authors: Patricia Ioschpe Gus, Diane Marinho, Felipe Nicola, Samira Zelanis, Ana Laura Kunzler, Claudete Locatelli, Luciene Barbosa.

Purpose: To evaluate the total reactive antioxidant potential (TRAP) and the concentration of reactive oxygen species (ROS) in samples of 50% Autologous Serum Eyedrops (AS) from patients with severe ocular surface diseases and healthy controls. Results were correlated with patient's health, demographic characteristics and lifestyle habits.

Methods: Peripheral venous blood was collected for preparation. AS was diluted with methylcellulose 0,5% (1:1) and produced as recommended by the Infection Committee of Hospital de Clínicas de Porto Alegre in a laminar flow cabinet. Biochemical evaluation detected ROS (pmol/mg) and TRAP (UTrolox/?) from patients's samples and controls taking vitamin E as standard. Samples from 15 patients with ocular surface diseases and 16 controls matched by gender and age were evaluated before freezing (0), and thawed after 15 and 30 days in the freezer. All patients answered a questionnaire on demographic characteristics, behavioral habits, medical diagnoses and medication used. Mann-Whitney, Spearman's and Wald tests were used to analysis, and $p < 0,05$ was considered statistically significant.

Results: A total of 33 patients were included, 16 cases and 17 controls: 47% were male, 90,9% declared to be non-smokers and 57,6% had at least one known systemic disease. TRAP and ROS concentration were identified in all samples. There was no difference in ROS ($p=0,429$) and TRAP ($p=0,475$) means between cases and controls. When ROS and TRAP were compared overtime (day 0 x day 15 x day 30), there was also no difference ($p=0,361$). No difference was found for only ROS overtime ($p=0,087$) or TRAP overtime ($p=0,93$). Demographic characteristics, lifestyle habits and health conditions presented no relation with the independent variables tested.

Conclusion: The 50% AS presents antioxidant capacity both fresh and frozen, demonstrating stability overtime and after thawing. The concentration of free radicals was also stable, without enhancement overtime nor after thawing. None of the variables assessed in the questionnaire influenced the oxidative balance, suggesting that patients undergoing AS are source of the same antioxidant capacity than healthy subjects' eyedrops.

Keywords: autologous serum, TRAP, ROS, dry eye, antioxidant, oxidative stress

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

50. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Tulio Batista Abud

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 13-067H

5. **ABSTRACT (REQUIRED):**

Title: A Clinical Trial Comparing the Safety and Efficacy of Topical Tacrolimus versus Methylprednisolone in Ocular Graft-Versus-Host Disease

Author and Co-authors: Abud TB, Amparo F, Saboo US, Ciolino JB, Hamrah P, Dana R

Purpose: To evaluate the safety and efficacy of topical tacrolimus 0.05% vs. topical methylprednisolone 0.5% in patients with ocular graft-versus-host disease (GVHD).

Methods: Forty patients with ocular GVHD were randomized; 24 patients were treated with topical tacrolimus 0.05% and 16 patients with topical methylprednisolone 0.5% twice a day for 10 weeks, in addition to continuing their baseline treatment regimen.

Results: After 10 weeks of treatment, no major adverse events occurred in either treatment group, and there was no significant difference in the composite tolerability scores between the two groups ($P=0.06$). However, burning sensation was more pronounced with tacrolimus ($P=0.002$). Topical tacrolimus was more effective than methylprednisolone in reducing the CFS score at week 10 (55% vs. 23% reduction, respectively; $P=0.01$), and achieved significant improvement in TBUT when compared to baseline ($P<0.001$). OSDI score reduction achieved statistical significance with tacrolimus (27% reduction; $P=0.02$) but was marginal with methylprednisolone (32% reduction; $P=0.06$). ICAM-1 expression by ocular surface epithelium decreased significantly in both groups (tacrolimus $P=0.003$; methylprednisolone $P=0.008$), while HLA-DR expression significantly decreased only in the tacrolimus group ($P=0.03$). Schirmer test scores did not change significantly in either group during the study; IOP increased significantly with methylprednisolone at week 10 ($P=0.04$).

Conclusion: Topical tacrolimus 0.05% is safe, generally well tolerated and effective for the treatment of ocular GVHD, without the hypertensive effects of topical corticosteroids.

Keywords: GVHD; ocular GVHD; dry eye; tacrolimus

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

51. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Carlos Gustavo Bonfadini Rocha

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: NA_00051452 JHM-IRB X

5. **ABSTRACT (REQUIRED):**

Title: Quantitative analysis of iris parameters in keratoconus patients using optical coherence tomography.

Author and Co-authors: Gustavo Bonfadini; Karun Arora; Lucas M. Vianna; David Friedman; Albert S. Jun; Mauro Campos.

Purpose: To investigate the relationship between quantitative iris parameters and the presence of keratoconus.

Methods: Cross-sectional observational study that included 15 affected eyes of 15 patients with keratoconus and 26 eyes of 26 normal age- and sex-matched controls. Iris parameters (area, thickness, and pupil diameter) of affected and unaffected eyes were measured under standardized light and dark conditions using anterior segment optical coherence tomography (AS-OCT). To identify optimal iris thickness cutoff points to maximize the sensitivity and specificity when discriminating keratoconus eyes from normal eyes, the analysis included the use of receiver operating characteristic (ROC) curves.

Results: Iris thickness and area were lower in keratoconus eyes than in normal eyes. The mean thickness at the pupillary margin under both light and dark conditions was found to be the best parameter for discriminating normal patients from keratoconus patients. Diagnostic performance was assessed by the area under the ROC curve (AROC), which had a value of 0.8256 with 80.0% sensitivity and 84.6% specificity, using a cutoff of 0.4125 mm. The sensitivity increased to 86.7% when a cutoff of 0.4700 mm was used.

Conclusion: In our sample, iris thickness was lower in keratoconus eyes than 32 in normal eyes. These results suggest that tomographic parameters may provide novel adjunct approaches for keratoconus screening.

Keywords: Tomography, optical coherence; Iris; Keratoconus; Cornea; Dilatation pathologic; ROC curve

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
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52. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Gustavo Souza Moura

Service: (CO) CORNEA AND EXTERNAL DISEASE | (EP) EPIDEMIOLOGY

CEP Number: 647.550/2014

5. ABSTRACT (REQUIRED):

Title: Study of tear inflammatory mediators in patients with Keratoconus

Author and Co-authors: Gustavo Souza Moura, Lauro Augusto de Oliveira, Luciene Barbosa de Sousa

Purpose: This study aims to characterize the tear film immunologic profile (IL-2, IFN-gamma, IL -10, IL -4, IL -17, IL -23, IL-6) in keratoconus patients. Correlate the immunologic profile with keratometric measurements and with disease progression or stability over time

Methods: Tear samples were collected using a capillary tube and stored at -80°C before analysis in a keratoconus patients group and in a control group. Tear cytokines? levels will be measured using the Cytometric Bead Array system (CBA), following the method suggested by the manufacturer. Keratometric measurements were used as a diagnostic tool for ectatic disease as well as to identify cases of disease progression. Disease progression was defined as an apical keratometric increase of 0.75 D in 6 months evaluation. Correlations between cytokines profile, keratometric measurements and disease status will be analyzed longitudinally in the keratoconus group. Cytokines profile will be compared between keratoconus and control group

Results: We expect to characterize the tear film immunologic profile in keratoconus patients comparing to a control group and also to establish a correlation between the level of inflammatory cytokines and status of disease (keratometric measurements; progression or stability)

Conclusion: There is no conclusion at this point. Currently, we are collecting samples and optimizing the CBA analysis

Keywords: tear inflammatory mediators; Keratoconus

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FORMAT:

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

53. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Rodrigo Thiesen Muller

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 933.141

5. ABSTRACT (REQUIRED):

Title: Degeneration and Regeneration of Subbasal Corneal Nerves after Infectious Keratitis: A Longitudinal In Vivo Confocal Microscopy Study

Author and Co-authors: Muller RT, Abedi F, Cruzat A, Witkin D, Baniasadi N, Cavalcanti BM, Jamali A, Chodosh J, Dana R, Pavan-Langston D, Hamrah P

Purpose: To investigate the longitudinal alterations of subbasal corneal nerves in patients with infectious keratitis (IK) during the acute phase, cessation of treatment, and the recovery phase by in vivo confocal microscopy (IVCM).

Methods: Corneal sensation and serial IVCM of the central cornea were performed prospectively using the Heidelberg Retina Tomograph 3/Rostock Cornea Module (Heidelberg Engineering, Heidelberg, Germany). The IVCM images were assessed at 3 time points: at the acute phase (first visit to the cornea service), at cessation of antimicrobial treatment, and up to 6 months after the resolution of infection.

Results: Corneal nerves were reduced significantly during the acute phase in eyes with IK compared with controls across all subgroups, with total nerve length of 5.47 ± 0.69 mm/mm² versus 20.59 ± 1.06 mm/mm² ($P < 0.0001$). At the cessation of treatment, corneal nerves in patients with IK had regenerated, including total nerve length (8.49 ± 0.94 mm/mm²; $P = 0.02$) and nerve branch length (4.80 ± 0.37 mm/mm²; $P = 0.005$). During the recovery phase, after resolution of infection, corneal nerves regenerated further, including total nerve length (12.13 ± 1.97 mm/mm²; $P = 0.005$), main nerve trunk length (5.80 ± 1.00 mm/mm²; $P = 0.01$), and nerve branch length (6.33 ± 0.76 mm/mm²; $P = 0.003$) as compared with the acute phase, but were still significantly lower when compared with controls ($P < 0.05$ for all parameters). Corneal degeneration and regeneration correlated with corneal sensation ($r = 0.47$; $P = 0.0009$).

Conclusion: Patients with IK who sustain profound loss of corneal nerves during the acute phase of infection demonstrate increased corneal nerve density during the first 6 months after the resolution of infection. However, despite significant nerve regeneration, corneal nerve density does not recover fully and remains low compared to controls. By providing an objective methodology to monitor corneal re-innervation, IVCM adds potentially important findings that may have implications for clinical management and surgical planning.

Keywords: cornea, infectious keratitis, in vivo confocal microscopy, ivcm

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

54. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Pablo Felipe Rodrigues

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 5505

5. **ABSTRACT (REQUIRED):**

Title: Corneal and Quality of Life Analysis in Individuals with Keratoconus Grade II Submitted to Sequential and/or Simultaneous Treatments of Intra-Stromal Ring and Crosslinking.

Author and Co-authors: Pablo F. Rodrigues, Eliane M. Nakano, Prof. Dr. Denise de Freitas,

Purpose: 1. To quantify the quality of life of patients before and after every procedure performed.
2. To report, quantify and analyze the changes in higher-order aberrations (HOA) before and after every procedure.
3. To report, quantify and analyze the topographic, volumetric and corneal asphericity changes before and after every procedure performed.
4. To determine the interference and/or synergistic action of cxi and icrs procedures in disease progression.
5. To determine the possibility of reducing the ICRS action (isolated) and / or after cxi, by comparison with the control group (cxi after ICRS);
6. Quantitative development of criteria for keratoconus;
7. Quantitative measurement of visual quality standards before and after every procedure, as well as their interference in the quality of life of patients.
8. Corneal structural analysis in groups whose combined procedures are not concurrent. In order to observe the effect of a single procedure to the cornea and quality of life of patients.
9. Quantitatively determine the scattering of light rays in keratoconus patients and its changes as they take place the procedures as well as its correlation sensitivity with the contrast (evaluated by the Oqas HD Analyser, Visiometrics, Terrassa, Spain).

Methods: Randomized prospective study. Patients with stage II keratoconus disease (Krumeich classification) will be categorized in 3 groups, as ICRS implanted 6 months first of crosslinking, crosslinking 6 months first ICRS and simultaneous procedures. All patients presents keratoconus topography progression.

Mean outcome Measures: Quality of life questionnaire, aberrometry, accomodation/ deph of focus and visual acuity, corneal tomography changes.

Results: this study is in recruitment phase.

Conclusion: There isn't conclusion yet.

Keywords: keratoconus, intracorneal ring, crosslinking, quality of life

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Purpose, Methods, Results,
Conclusion.

55. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Bruna Vieira Oliveira Carvalho Ventura

Service: (CA) CATARACT

CEP Number: 059899/2014

5. ABSTRACT (REQUIRED):

Title: Comparison of corneal power, astigmatism, and wavefront aberration measurements obtained by a point-source color LED-based topographer, a Placido disk topographer and a combined Placido and dual Scheimpflug device

Author and Co-authors: Bruna V. Ventura, Li Wang, Shazia F. Ali, Douglas D. Koch, Mitchell P. Weikert

Purpose: To evaluate and compare the performance of a point-source color LED-based topographer (?Color-LED?) in measuring anterior corneal power and aberrations with a Placido disk topographer (?Placido?) and a combined Placido and dual Scheimpflug device (?dual Scheimpflug?).

Methods: This study is a retrospective observational case series. Sixty-four normal eyes and 15 post-refractive surgery eyes were consecutively measured using Color-LED, Placido, and dual-Scheimpflug. Main outcome measures were anterior corneal power, astigmatism, and higher-order aberrations (HOAs) (6-mm pupil), which were compared using the t test.

Results: There were no significant differences between Color-LED and Placido or dual Scheimpflug for corneal power measurements in normal and post-refractive surgery eyes, and for astigmatism magnitude in post-refractive surgery eyes (All $P > .05$). In normal eyes, there were no significant differences between Color-LED and Placido in 3rd order coma and 4th order spherical aberration (SA), and between Color-LED and dual Scheimpflug in HOA root-mean-square, 3rd order coma, 3rd order trefoil, 4th order SA, and 4th order secondary astigmatism (All $P > .05$). In post-refractive surgery eyes, agreed with Placido and dual-Scheimpflug considering 3rd order coma and 4th order SA (All $P > .05$).

Conclusion: In normal and post-refractive surgery eyes, all 3 devices were comparable with respect to corneal power. The agreement in corneal aberrations varied.

Keywords: Devices; Corneal power; Astigmatism; Wavefront aberrations

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

56. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: gustavo ricci malavazzi

Service: (CA) CATARACT

CEP Number: 09475113.2.0000.5505

5. ABSTRACT (REQUIRED):

Title: Developing and implementing a teaching method of phacoemulsification surgery

Author and Co-authors: Gustavo Malavazzi, Eduardo Soriano, Walton Nose

Purpose: To develop a method of education that can be reproduced when teaching phacoemulsification, based on the inverted sequence of the procedure steps
To implement the method in the routine of a training group.

Methods: Record book of 20 surgeries developed ?log book?

Each group were oriented in an evolution of the procedure steps regarding its complexity and difficulty.

The method was implemented and observed during the period of 2 years at Santa Casa de Sao Paulo department of Ophthalmology.

Each second year resident had to complete the 20 surgeries by the method proposed and data was collected analyzing the number of complications presented.

Results: The total number of complications of the new method was lower in a 2 fold when compared with the previous method.

Conclusion: The implanted method was created.

The results showed significant reduction in the total number of complications when teaching residents.

Lesser number of surgeries and faster learning process with same results to international reference teaching programs.

Keywords: teaching, cataract, phacoemulsification

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Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

(RS) REFRACTIVE SURGERY

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Title
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Conclusion.

57. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: SANDRA MARIA CANELAS BEER

Service: (RS) REFRACTIVE SURGERY

CEP Number: 03104512.0.00005505

5. ABSTRACT (REQUIRED):

Title: Scanning Electron Microscopy and Energy Dispersive X-Ray Spectroscopy analyses of Corneal Inlays for Correction of Presbyopia after explantation.

Author and Co-authors: Sandra M C Beer, MD, Liliane Werner MD, Eliane Mayumi Nakano, MD, Flavio Hirai, MD, Claudia Francesconi, MD, Mauro Campos, MD

Purpose: To report the scientific analyses after explanted inlays which was analysed by Confocal

Methods: Corneal Inlays (Presbia Flexivue Microlens?, Presbia Netherlands) were implanted in the non-dominant eye of emmetropic presbyopic patients.

Results: Confocal microscopy images were small and hyper-reflective over the inlay area in all eyes. No signs of active acute inflammation were seen. Three inlays were explanted and SEM and EDS analyses were performed; no areas of evident erosion or degradation were found on the surface and edge of the implant, which overall appeared smooth. EDS analyses of at least 2 different areas with the deposits/material only showed Carbon and Oxygen.

Conclusion: The Presbia Flexivue Microlens? seem to be stable in terms of histological activity and material compatibility over time.

Keywords: PRESBYOPIA,CORNEAL INLAY,REFRACTIVE SURGERY

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Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

58. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Emanuela C R Gonçalves

Service: (BE) OCULAR BIOENGINEERING

CEP Number: 597982

5. ABSTRACT (REQUIRED):

Title: Numerical Clustered Visual Reading Performance in Dyslexics Persons

Author and Co-authors: GONÇALVES, E.C.R; NAVARRO, M; SCHOR, P

Purpose: The aim of this study was to develop a clinical approach and retrieve results from dyslexics and non-dyslexics individuals using visual aspects related to reading performance.

Methods: Three reading charts were designed using Psychopy software. Two of them were designed according to MNREAD - P (Minnesota Reading Acuity Chart, adapted to Portuguese) presented in two different ways: MNREAD ? P1L* (one-line sentence) and MNREAD ? P3L* (three-line sentence) The other chart was a Numerical Reading Chart (NCREAD) in which three numbers were clustered together and should be read as a centesimal number.

The sentences were presented in a 19 inches LCD monitor (HP Compaq LA1951g, 1280x1024 resolution at 75Hz) which avoided specular reflections. Voice data was recorded using Macintosh and eye movements were recorded using a non-commercial eyetracker (DEV 1.0).

20 participants performed the reading tests. They were classified as non-dyslexic (15 participants) and dyslexic (6 participants).

Results: All 21 participants successfully read the MNREAD ? P1L*, P3L* except one that was not able to read NCREAD. Reading speed in critical print size, minimum reading speed above critical print size and amount of errors made while reading were statistically different between dyslexic and non-dyslexic groups ($p < 0.05$) for both MNREAD ? P* charts. Reading speed in critical print size, minimum reading speed above critical print size and amount of errors made did not demonstrate statistical difference between groups ($p > 0.05$) for NCREAD.

Conclusion: The results of this study are consistent with the literature, which pointed out that dyslexic people usually make more mistakes while reading (as word omissions and insertions and word substitutions) and have lower reading speed than non-dyslexic people. However under NCREAD test the answers were binary (yes or no read possible).

It was expected that dyslexic participants would commit errors reading NCREAD once the literature points out that this group may reverse numbers as well reverse words. The only case that one literate participant did not read NCREAD may indicate some level of dyscalculia.

Results presented in this study pointed out that clustered numbers are a new method that can be used to evaluate dyslexic people.

Keywords: eyetracker, dyslexia, reading speed

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Conclusion.

59. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Marlon Ribeiro Silva

Service: (BE) OCULAR BIOENGINEERING

CEP Number: 554.224

5. ABSTRACT (REQUIRED):

Title: Literature and humanistic formation among undergraduate students of health technology courses at UNIFESP.

Author and Co-authors: Marlon Ribeiro da Silva. Paulo Schor

Purpose: From elective course offered to students of undergraduate courses in health technologies (Ophthalmic Technology, Radiology and Health Informatica). This paper presents preliminary results relative to the experience of classical literature reading as a means of humanistic and humanizing formation among students of health technology courses at UNIFESP. We seek to verify, from a didactic experience and art aesthetics, through literature, how can the humanities broaden perspectives of technologies related to culture, health and human life in its range.

Methods: The discipline is about experiencing and discussing classics of world classical literature. In this research we use the books Frankenstein by Mary Shelley, 1984 by George Orwell, Brave New World by Aldous Huxley and Hamlet by William Shakespeare. All activity has been recorded digitally, in addition to the notes in the field notebook. The meetings are basically divided into three steps: History of reading, Route discussion and coexistence stories. Data analysis is based on qualitative methodology, namely participant observation and oral history of life.

Results: As the research is in its final phase of realization, the results are still preliminary. For now we checked that literature can have great influence on the re-signification of technology, and the introduction of services in the area of health and also related to product development and innovation in the healthcare area.

Conclusion: We believe that the humanistic formation based in the arts is critical to expanding meanings of both, possibilities of professional actions, and training to work with technology in healthcare.

Keywords: Humanistic formation. Humanization in Health. Literature. Medical technologies

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60. FIRST (PRESENTING) AUTHOR (REQUIRED):

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Name: Thiago Goncalves dos Santos Martins

Service: (BE) OCULAR BIOENGINEERING

CEP Number: 04023-062

5. ABSTRACT (REQUIRED):

Title: New learning concepts applied to the teaching of Direct Ophthalmoscopy

Author and Co-authors: Ana Luiza Fontes de Azevedo Costa, Elizabeth Nogueira Martins, Otaviano Helene, Ricardo Vieira Martins, Andre Frazão Helene , Milton Ruiz Alves and Paulo Schor

Purpose: To develop a new model and teaching method of direct ophthalmoscopy based on neuroscience concepts of learning.

Methods: We conducted a survey of 133 doctors without ophthalmic training. In this survey, physicians reported the level of confidence in the diagnosis of hypertensive and diabetic retinopathy, papilledema and suspicious cup disc ratio, using the direct ophthalmoscope. Most doctors showed low confidence in the examination of direct ophthalmoscopy. Based on the survey results, we decided to develop a model that resembles the human eye, simulating its main features, with a simple step by step manual in which students could actively participate in the construction of this model.

Results: Medical students trained with the model in two stages. We recorded the hit rate and the time taken to identify a numerical sequence of 6 digits in the model with different pupil sizes (3, 4 and 5 mm). Students also trained with different photos of reduced fundus. After the training was repeated with the model, students did the training with other students, and finally, carried out a real examination on a patient with dilated pupils . We recorded the success rate and time spent by students to identify injuries.

A second group of students, selected randomly, trained only with classmates and then went through the same test with patients with dilated pupils . We recorded the success rate and the time taken to identify the lesions.

We conducted a questionnaire with all students participating in the study with the model, and 93% of the respondents said that the playful activity with the model, which increased their interest of the subject, and the repeated training with the model, were important for the retention of their knowledge

Conclusion: The use of alternative teaching strategies is efficient and can contribute effectively to the formation of memories and have a great impact on education.

Keywords: direct ophthalmoscopy, model, teaching medical students, neuroscience.

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Title
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Purpose, Methods, Results,
Conclusion.

61. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Allan Cezar Luz

Service: (RS) REFRACTIVE SURGERY | (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 2012/10

5. **ABSTRACT (REQUIRED):**

Title: Enhanced Combined Tomography and Biomechanics data for distinguish Forme Fruste Keratoconus

Author and Co-authors: Allan Luz, Bernardo Lopes, Bruno Valbon, Paulo Schor, William J. Dupps, Jr., Renato Ambrósio Jr.

Purpose: To evaluate the performance of Ocular Response Analyzer (ORA) investigator derived variables and Pentacam HR tomographic parameters in differentiating forme fruste Keratoconus (FFKC) from normal corneas. To assess a combined biomechanical and tomographic parameter to improve outcomes.

Methods: Seventy-six eyes of 76 unaffected patients and twenty-one eyes of 21 FFKC patients matched for age, thinnest point, central corneal thickness and maximum keratometry from Instituto de Olhos, Rio de Janeiro, Brazil. Fifteen variables were derived from exported ORA signals to characterize putative indicators of biomechanical behavior, also thirty-seven ORA waveform parameters were tested. Sixteen tomographic parameters from Pentacam HR were tested. Logistic regression was used to produce a combined biomechanical and tomography linear model. Differences between groups were assessed by the Mann-Whitney test. The area under the receiver operating characteristics curve (AUC) were used to compare diagnostic performance.

Results: Twenty-three of seventy-seven parameters showed significant differences between the FFKC and control group (Mann-Whitney test, $p < 0.05$). Among the ORA waveform measurements, the best parameter were those related to the area under the first peak, p_{area1} (AUROC, 0.717 ± 0.065). Among the investigator ORA variables, a measure incorporating the pressure-deformation relationship of the entire response cycle was the best predictor (Hysteresis loop area (HLA), AUROC, 0.688 ± 0.068). Among tomographic parameters BAD-D showed the highest predictive value (AUROC, 0.91 ± 0.057). A combination of parameters showed the best result (AUROC, 0.953 ± 0.024) outperforming individual parameters.

Conclusion: Tomographic and biomechanical parameters demonstrated the ability to differentiate forme fruste Keratoconus from normal eyes. A combination of both types of information further improved predictive value.

Keywords: Ocular biomechanical, Corneal Tomography, Keratoconus

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

62. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Bernardo Teixeira Lopes

Service: (RS) REFRACTIVE SURGERY

CEP Number: 250924

5. ABSTRACT (REQUIRED):

Title: Enhanced understanding of the surgical impact after LASIK: Percent tissue altered (PTA) as a risk factor for ectasia

Author and Co-authors: Bernardo Lopes

Purpose: To test the percent tissue altered (PTA) as a risk factor for ectasia after LASIK accordingly to preoperative corneal topography and to develop a novel function to estimate the impact on corneal tissue from LASIK procedure that better predicts ectasia risk.

Methods: Preoperative data from 316 eyes from 158 patients with stable LASIK outcomes with minimal follow up of two years and from 65 eyes from 46 patients who developed post-LASIK ectasia were retrospectively collected. Pentacam HR (Oculus, Wetzlar, Germany) data were analyzed. Abnormal topography was detected if KISA was greater than 60%, or if I-S (inferior?superior asymmetry) was greater than 1.4 or if there was a positive Oculus topographic keratoconus classification. Normal topography groups were subdivided in very symmetrical (I-S lower than 0.5) and moderately symmetrical (I-S between 0.5 and 1.4). Patients with asymmetric patterns between the eyes were classified accordingly to the worst eye. PTA was defined as the ratio between flap thickness (FT) plus ablation depth (AD) and central corneal thickness (CCT; $[PTA=(FT + AD)/CCT]$). A logistic regression (LR) was calculated considering FT, AD and thickness data (CCT and thinnest point) for optimizing the accuracy in detecting ectasia risk

Results: Post-LASIK ectasia developed in xxx eyes from yyy patients (67.7% of total ectasia cases) with PTA lower than 40%. Considering the subgroups with normal topography, 16 eyes from 12 patients with very symmetrical curvature maps and 28 eyes from 19 patients with moderately symmetrical topography preoperatively had PTA lower than 40%. The logistic regression revealed that FT and thinnest point pachymetry were the most important risk factors for developing ectasia ($p<0.001$).

Conclusion: Eyes with very normal corneal topography may still develop ectasia with less than 40% of PTA. The impact from LASIK procedure on corneal structure is better represented by an enhanced function that considers higher weight on flap thickness. Further integration with age and preoperative tomographic variables should be considered for the enhanced screening for ectasia risk prior to corneal refractive surgery.

Keywords: Post-LASIK ectasia, preoperative screening

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
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63. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Aline Lutz de Araujo

Service: (BE) OCULAR BIOENGINEERING

CEP Number: 786.225

5. **ABSTRACT (REQUIRED):**

Title: Evaluation of a new refraction system for telemedicine

Author and Co-authors: Aline Lutz de Araujo, Paulo Schor

Purpose: Near Eye Tool for Refractive Assessment (NETRA) system is a set of newly developed ultra-portable devices to objective and subjectively measure refractive error. The purposes of this project are to test NETRA instruments in a teleophthalmological setting and to analyze the cost-effectiveness of glass prescription with the strategy.

Methods: Eighteen to 40-year-old patients enrolled to participate in a teleophthalmological study will have their objective and subjective refractions measured with the NETRA system and through ophthalmologist-performed autorrefraction and phoropter lens testing. Refraction results, patients' satisfaction, direct and indirect costs of both approaches will be recorded and compared.

Results: The project is about to be implemented. Broadly, the expected results are to provide data on self-applied refraction and subsequent remote lens prescription by the ophthalmologist. The main results relate to clinical performance and the economics of the strategy.

Conclusion: We propose a novel telemedicine approach to remotely provide glass prescription. The data collection is not running yet and we comment on the expected results.

Keywords: ocular refraction, visual acuity, telemedicine, technological innovations, cost-effectiveness

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Conclusion.

64. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Fabricio Rodrigues Andrade

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Reproducibility of Palpation (Digital) Tonometry among Ophthalmologists with Different Levels of Expertise

Author and Co-authors:

Fabricio de Andrade, Luciana Fernandez, Diego Torres, Aline Sousa, Carolina Gracitelli, Tiago Prata.

Purpose: We investigated the reproducibility of palpation (digital) tonometry among ophthalmologists with different levels of expertise.

Methods: A cross-sectional study was carried out. We enrolled glaucomatous patients under clinical treatment with a wide range of intraocular pressure (IOP) values. All patients underwent a complete ophthalmological examination. Applanation tonometry was used as gold-standard for determining each patient IOP value. Key exclusion criteria were any ocular surgery (besides uneventful phacoemulsification), ocular trauma and diseases that could alter ocular rigidity (such as rheumatoid arthritis). After inclusion, three different examiners (one resident, one glaucoma fellow and one glaucoma specialist) estimated each patient IOP by palpation tonometry in a masked fashion. After 30 minutes, patients were reexamined in a randomly order by the three examiners. Main outcome measures were: (1) comparison between IOP values estimated by palpation tonometry and applanation tonometry according to ophthalmologists' expertise; (2) intra and inter-observer reproducibility of palpation tonometry measurements.

Results: In progress.

Conclusion: In progress.

Keywords: glaucoma, palpation tonometry, intraocularpressure

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Conclusion.

65. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Leonardo Moraes de Souza

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Relationship between axial length and susceptibility to glaucomatous damage in eyes with open-angle glaucoma

Author and Co-authors: Leonardo Moraes de Souza, Michele Ushida, Fabio Kanadani, Carolina Gracitelli, Tiago Prata, Nikoly Tigani Fares, Renata Cavalcanti Portela, Vinicius Campos Bergamo

Purpose: We investigated the correlation between axial length and susceptibility to glaucomatous damage in eyes with open-angle glaucoma.

Methods: A cross-sectional study was carried out. We consecutively enrolled patients with open-angle glaucoma. Key exclusion criteria were ocular trauma, intraocular surgery (besides uneventful cataract surgery), and any other ocular comorbidity. All included patients underwent a complete ophthalmological examination. Demographic and ocular data were collected, including age, axial length, untreated intraocular pressure (IOP), central corneal thickness (CCT), and level of disease stage, based on structural (cup-to-disc ratio) and functional parameters (visual field index [VFI] and mean deviation index [MD]). We compared different ocular parameters between eyes with short and long axial length (median split). In addition, in order to investigate the possible influence of axial length on the IOP level necessary to lead to glaucomatous damage (a surrogate measurement of patients' susceptibility), we used multiple regression analysis to determine the association between axial length and untreated I

Results: In progress.

Conclusion: In progress.

Keywords: axial length, open-angle glaucoma, glaucomatous damage, myopia

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(TR) TRAUMA
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(US) OCULAR ULTRASOUND

Deadline: 10/2015

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Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

66. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Lilian França Machado

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Vision-related Quality of Life in Glaucomatous Patients in Brazilian Population.

Author and Co-authors: Machado Lilian, Fares Nikoly, Bergamo Vinicius, Souza Leonardo

Purpose: To assess the vision related quality of life (VRQOL) and the impact of potential influencing factors in Brazilian glaucoma patients.

Methods: A total of 20 glaucoma patients were included in the study. The VRQOL was evaluated using the National Eye Institute Visual Function Questionnaire (NEI VFQ-25). The correlations of VRQOL to the best-corrected visual acuity (BCVA) and the visual field (VF) loss were investigated. The potential impact factors to VRQOL of glaucoma patients were further analyzed by multiple regression analysis.

Results: In progress.

Conclusion: In progress.

Keywords: glaucoma; vision health-related quality of life (VRQOL); quality of life; visual field; NEI VFQ-25; and visual acuity.

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2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

67. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Luis Filipe Nakayama

Service: (GL) GLAUCOMA

CEP Number: 1255/2015

5. ABSTRACT (REQUIRED):

Title: Learning curve of digital palpation tonometry

Author and Co-authors: Luis F. Nakayama, Luiz A. S. Melo Jr.

Purpose: To describe the learning curve of digital palpation tonometry.

Methods: A prospective study was performed by three inexperienced examiners on digital palpation tonometry, but with experience on Goldmann applanation tonometry. Patients with no significant eyelid or corneal diseases were examined by Goldmann tonometry followed by digital palpation tonometry. The examiners were masked to the results of Goldmann tonometry before digital palpation tonometry. The results of both methods of tonometry were revealed to the examiners after performance of both methods of tonometry on each patient. The difference between the intraocular pressure measurements obtained by the two methods of tonometry on consecutive patients was used to analyze the learning curve.

Results: Research in progress. The results will be presented at Research Days.

Conclusion: Research in progress. The conclusion will be presented at Research Days.

Keywords: tonometry, digital palpation, learning curve, intraocular pressure

2015 Research Days Abstract Form

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

68. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Nikoly Tigani Fares

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Comparison between Vision-related Quality of Life in Glaucoma Patients with Ocular Surface Disease and with a Control Group

Author and Co-authors: Nikoly Tigani Fares, Renata Cavalcanti Portela Leonardo Moraes de Souza, Lilian França Machado, Carolina P B Gracitelli And Tiago Prata

Purpose: To examine the vision related quality of life (VRQOL) in those glaucoma patients with ocular surface disease (OSD) and compare the VRQOL with a control group without OSD.

Methods: A total of 20 glaucoma patients and 20 control subjects were enrolled in this study. A detailed ophthalmological examination was performed on each subject. Ocular surface disease was evaluated using tear break-up time (TBUT), corneal fluorescein staining, and biomicroscopy showing presence or absence of keratitis. VRQOL was evaluated using the National Eye Institute Visual Function Questionnaire (NEI VFQ-25). Socio-economic and clinical questionnaires were also administered to patients at the time of the NEI VFQ-25. The comparison of VRQOL between the two groups was assessed.

Results: In progress.

Conclusion: In progress.

Keywords: glaucoma; vision health-related quality of life (VRQOL); NEI VFQ-25; and ocular surface disease.

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

69. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: RENATA CAVALCANTI PORTELA

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Ocular Surface Disease Prevalence in Patients with Glaucoma versus Patients with Cataract.

Author and Co-authors: Renata Portela, Vinicius Bergamo, Lilian Machado, Leonardo Moraes, Carolina Gracitelli, Tiago Prata

Purpose: To assess the prevalence of ocular surface disease (OSD) in patients with glaucoma who used topical intraocular pressure-lowering therapies and to compare with a group of patients with cataract.

Methods: A total of 20 glaucoma patients and 20 subjects with cataract (control group) were enrolled in the study. Only glaucoma patients who were using at least 1 topical IOP-lowering medication were included. A detailed ophthalmological examination was performed on each subject. Ocular surface disease was evaluated using tear break-up time (TBUT), corneal fluorescein staining, and biomicroscopy showing presence or absence of keratitis. Socio-economic and clinical questionnaires were also administered to patients at the time of the NEI VFQ-25. The comparison of OSD between the two groups was assessed.

Results: In progress.

Conclusion: In progress.

Keywords: Glaucoma; ocular surface disease; number of medications; and side effects.

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Deadline: 10/2015

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Title
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Purpose, Methods, Results,
Conclusion.

70. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Vinicius Campos Bergamo

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Effect of Topical Corticosteroids in Ocular Surface Disease in Glaucoma Patients

Author and Co-authors: Bergamo VC; Portela RC; Fares NT; Machado LF; Prata TS; Gracitelli CPB

Purpose: To evaluate by clinical findings the ocular surface disease, in glaucoma patients, before and after treatment with topical corticosteroid.

Methods: A total of 20 glaucoma patients were enrolled in this study. Only glaucoma patients who were using at least 1 topical IOP-lowering medication were included. All patients were treated with loteprednol etabonate ophthalmic suspension 0.5% qid for 2 weeks. Baseline and follow-up visit included complete ophthalmological examination and ocular surface disease evaluation using tear break-up time (TBUT), corneal fluorescein staining, and biomicroscopy showing presence or absence of keratitis. The comparison of OSD before and after treatment with topical corticosteroid was assessed

Results: In progress.

Conclusion: In progress.

Keywords: Glaucoma; ocular surface disease; number of medications; and side effects.

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

71. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Daniel Augusto Ghiraldini Vieira

Service: (GL) GLAUCOMA

CEP Number: 5722

5. ABSTRACT (REQUIRED):

Title: Fibrosis evaluation using hydrofobic materials

Author and Co-authors: Daniel A. G. Vieira, MD; Vespasiano Reboucas-Santos, MD; Sergio H. Teixeira, PhD; Ivan Maynard Tavares, PhD Paulo Schor, PhD

Purpose: evaluate hydrophobic coating to prevent tenon's capsule scarring in rabbit's eyes

Methods: it's a experimental study in vivo with rabbits (*Oryctolagus cunicullus*). Coated materials (glass, PMMA, silk yam) with a hydrophobic substance will be allocated under Tenon`s Capsule (study group, five eyes) and fibrosis formation will be evaluated and compared with eyes in a control group (not-coated materials, five eyes)

Results: in progress

Conclusion: in progress

Keywords: fibrosis; glaucoma;

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

72. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Leticia Sant' Ana Cardoso da Silva

Service: (GL) GLAUCOMA

CEP Number: 08491712.0.0000.5505

5. ABSTRACT (REQUIRED):

Title: Association between anticoagulant therapy and occurrence of optic disc hemorrhage in glaucomatous eyes under clinical treatment

Author and Co-authors: Leticia Sant' Ana C. da Silva, Michele Ushida, Flavio Lopes, Carolina Gracitelli, Tiago Prata

Purpose: We investigated the association between anticoagulant therapy and occurrence of optic disc hemorrhage (DH) in glaucomatous eyes under clinical treatment.

Methods: A case control study was carried out. We consecutively enrolled glaucomatous patients under clinical treatment presenting with and without DH. Glaucoma was defined as glaucomatous optic neuropathy and reproducible visual field defects. Disc photographs of all patients were evaluated for the presence of DH by two glaucoma specialists. Eyes with diabetic retinopathy, vascular occlusive disease, optic disc drusen, ocular trauma, recent history of posterior vitreous detachment or any ocular disease other than glaucoma were excluded. Glaucomatous eyes followed for at least two years (minimum of 1 disc photograph per year) that never had a DH detected were enrolled as controls. Demographic and ocular data were collected, including age, intraocular pressure (IOP), number of antiglaucoma medications, type of glaucoma, and level of disease stage (based on visual field [VFI] and mean deviation indices [MD]). We compared different ocular parameters between eyes with and without DH. In addition, w

Results: In progress

Conclusion: In progress

Keywords: anticoagulant, optic disc hemorrhage, glaucoma

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2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

73. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Marcos Paulo Suehiro Dantas

Service: (GL) GLAUCOMA

CEP Number: 834138

5. ABSTRACT (REQUIRED):

Title: Surgical outcomes of a small incision limbus-based revision for failed trabeculectomies

Author and Co-authors: Marcos Suehiro, Fabio Zantut, Syril Dorairaj, Flavio Lopes, Tiago S Prata

Purpose: To report the initial outcomes of a small incision limbus-based surgical approach for restoring failed trabeculectomies.

Methods: Noncomparative, interventional case series in which all glaucoma patients with a failed trabeculectomy and uncontrolled intraocular pressure (IOP) undergoing limbus-based revision between January 2013 and December 2014 were enrolled. It consists of a 15 minutes procedure in which initially a large subconjunctival area around the failed bleb is treated with mitomycin-C through a 3 mm incision. Then, the fibrotic tissue is excised (and the internal ostium reopened through needling whenever necessary), reestablishing the flow to this treated area. Preoperative and postoperative IOP, number of antiglaucoma medications, surgical complications, and any subsequent related events or procedures were recorded. Two criteria were defined for evaluation of postoperative success. Criterion 1 was defined as a IOP ≤ 6 mmHg and ≤ 18 mmHg and criterion 2 as a IOP ≤ 6 mmHg and ≤ 15 mmHg. Each criterion was classified as complete (without hypotensive medication) or qualified (with antihypertensive medication).

Results: Nineteen patients (19 eyes) with a mean age of 56.7 \pm 13.4 years were included in the study. Mean follow-up was 9.4 \pm 8.6 months and mean IOP was reduced from 20.9 \pm 8.4 (range, 12 - 44 mm Hg) to 11.6 \pm 3.6 mm Hg (range, 6 - 19 mm Hg) at the last follow-up visit ($P < 0.0001$). The mean number of antiglaucoma medications was reduced from 2.6 \pm 0.8 to 0.4 \pm 0.7 during the same period ($P < 0.0001$). At six months postoperatively, success rates ranged between 70% (for the stricter criterion) and 85% (for the less strict criterion). There were two cases of transient leakage and needling was required in 3 eyes.

Conclusion: Our initial results suggest limbus based revision as an effective alternative for restoring failed

trabeculectomies with minor postoperative complications.

Keywords: Trabeculectomy, limbus-based revision

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Deadline: 10/2015

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Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

74. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Alexandre Gomes Bortoloti de Azevedo

Service: (GL) GLAUCOMA

CEP Number: 5505

5. ABSTRACT (REQUIRED):

Title: OCT images for macular disturbs after anti-glaucomatous surgery

Author and Co-authors: Alexandre G.B. Azevedo; Ivan Maynard Tavares; Luiz Alberto Soares de Melo Jr.

Purpose: To evaluate clinical ou subclinical macular disturbs after anti-glaucomatous surgery through OCT technology

Methods: macular imaging using OCT before (one week before) and after (one week and one month after) anti glaucomatous surgery. Macular thickness , conformation , intraocular pressure (in each step of follow-up) , choroid thickness and visual acuity will be measured at each of the 3 visits (1 before and 2 after surgery) in both eyes .

Inclusion criteria includes Primary Glaucoma (open angle or angle closure) , and exclusion criteria includes previous intraocular surgery , previous macular disease , previous abnormal macular OCT findings , visual acuity of 20/200 or less , new surgical intervention during follow-up .

Results: the study is already approved by CEP (research ethics committee) and approved by plataforma Brasil (national research register) . Study is currently selecting patients and performing exams for the study. the Data Bank is not yet large enough to allow results divulgation .

Conclusion: in progress

Keywords: Glaucoma surgery . Macula . Choroid .

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Title
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Purpose, Methods, Results,
Conclusion.

75. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Danilo Andriatti Paulo

Service: (GL) GLAUCOMA

CEP Number: 1193/2015

5. ABSTRACT (REQUIRED):

Title: Test time and its reliability for the conventional perimetry examination.

Author and Co-authors: DANILO ANDRIATTI PAULO
LUIZ ALBERTO MELO S. JR.

Purpose: This is a retrospective and a observational study, in order to correlate the time of conventional perimetry exam and the reliability in its results.

Methods: A group of 100 eyes from 100 patients examined by 24-2 Swedish Interactive Thresholding Algorithm (SITA) full-threshold Humphrey visual field (HVF) (Carl Zeiss Meditec Inc., Dublin, CA), 24-2 SITA HVF, was analyzed, according to their medical records information, and the test time was compared to some other information provided by the conventional perimetry examination, such as the mean deviation (MD), fixation losses (FL), false positives (FP) and false negatives (FN) and the laterality of the eye. Also, the visual acuity, optic disc ratio, gender, age, race, previous experience in perimetry examination and previous diagnosis of glaucoma were considered. If both eyes met the selection criteria, an eye was only considered for analysis. For descriptive statistical analysis, numeric variables were reported by the average of the standard deviation. The categorical variables, absolute and relative frequencies, were reported to the reference analysis, being used the correlation tests between

Results: in progress

Conclusion: in progress

Keywords: perimetry, test time, glaucoma

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2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

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Deadline: 10/2015

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Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

76. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: felipe abdo jorge

Service: (GL) GLAUCOMA

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Image indicators for papillary and peripapillary retina changes in individuals with high myopia

Author and Co-authors: Felipe Abdo Jorge, Guilherme Bufarah, Adriano Bogar, Luiz Alberto Soares Melo Jr., Tiago Prata, Ivan Maynard Tavares.

Purpose: The objective of this study is to evaluate peripapillary retina and optic disc in patients with high myopia by optical coherence tomography spectral domain.

Methods: After agreeing to the terms of the study, patients underwent comprehensive eye exam that includes: visual acuity (with best correction) measured the axial length with the optical Biometer IOL Master (Carl Zeiss Meditec Inc., Dublin, California, USA), stereoscopic evaluation of the fundus under mydriasis and optical coherence tomography of the optic disc and nerve fiber layer.

Results: In progress

Conclusion: In progress

Keywords: high myopia, oct, optical coherence tomography

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2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

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Purpose, Methods, Results,
Conclusion.

77. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Felipe Taveira Daher

Service: (GL) GLAUCOMA | (RS) REFRACTIVE SURGERY

CEP Number: 1231/2015

5. ABSTRACT (REQUIRED):

Title: Intraocular pressure spikes within the first postoperative hours following standard trabeculectomy: incidence and associated factors

Author and Co-authors: Felipe Taveira Daher, Bernado Soares, Syril Dorairaj, Fabio Kanadani, Carolina Gracitelli, Tiago Prata

Purpose: We aimed to investigate the incidence of intraocular pressure (IOP) spikes within the first postoperative hours following standard trabeculectomy, and to determine possible associated factors.

Methods: A multicenter prospective interventional study was carried out. We enrolled consecutive patients undergoing standard trabeculectomy with mytomicin C. Key exclusion criteria were the presence of any other ocular disease (except from cataract) and ocular trauma. All included patients were examined within the first postoperative hours (between hours 1-2 and 4-6), at days 1 and 7. Demographic and ocular data were collected. Main outcomes measurements were IOP values at each time point and the frequency of IOP spikes (defined as IOP \geq 25 mmHg).

Results: A total of 32 patients were included (mean age 60.7 \pm 13.1 years). Mean preoperative IOP and number of antiglaucoma medications were 22.3 \pm 7.8 mmHg and 2.9 \pm 0.6, respectively. Although IOP was significantly reduced to 12.1 \pm 9.1 mmHg at hour 1-2 ($p < 0.01$) and to 11.5 \pm 7.2 mmHg at hour 4-6 ($p < 0.01$), IOP spikes were documented in 10% of the cases within the first postoperative hours (IOP range: 26 \pm 38 mmHg).

Conclusion: Our results suggest that although uncommon, IOP spikes may occur in the first postoperative hours following trabeculectomy. We believe that, in selected cases, such as those with advanced disease and fixation threat, first hours postoperative IOP should be measured, for potential IOP spikes identification and treatment, preventing undesirable outcomes.

Keywords: Trabeculectomy, glaucoma, intraocular pressure.

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Purpose, Methods, Results,
Conclusion.

78. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Mariana Pissante Wisneski

Service: (TR) TRAUMA

CEP Number: 35137414.3.0000.5505

5. ABSTRACT (REQUIRED):

Title: Epidemiological profile of children treated at the ocular emergency room of Hospital S^o Paulo from June 2014 to May 2015.

Author and Co-authors: Wisneski MP, Manso PG, Martins EN

Purpose: Determine the epidemiological profile of the population between 0 and 15 years old treated at the Hospital S^o Paulo's ocular emergency room from June 2014 to May 2015.

Methods: Patients younger than 15 years old who presented with any ocular complaint at the emergency room from June 2014 to May 2015 were included. Data regarding age, gender and diagnosis were collected.

Results: In progress.

Conclusion: In progress.

Keywords: Ocular emergency room, pediatrics

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Purpose, Methods, Results,
Conclusion.

79. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Mario Pincelli Netto

Service: (UV) UVEITIS

CEP Number: 23485713.8.0000.5505

5. ABSTRACT (REQUIRED):

Title: Comparison of intravitreal triamcinolone acetonide and bevacizumab for macular edema in non-infectious uveitis

Author and Co-authors: Mario Pincelli-Netto, Heloisa Nascimento, Cristina Muccioli, Eduardo A. Novais, Rubens Belfort Jr.

Purpose: To evaluate the efficacy and safety of intravitreal use of triamcinolone acetonide(TAAC) compared to bevacizumab, in patients with chronic macular edema(CME) secondary to non-infectious uveitis.

Methods: Prospective interventional study. Patients with persistent CME secondary to non-infectious uveitis were randomly assigned to receive intravitreal bevacizumab(Group1) or TAAC(Group2).A follow-up exam with visual acuity(VA), intraocular pressure(IOP), anterior biomicroscopy, funduscopy, and central retinal thickness using spectral-domain optical coherence tomography was carried out monthly for at least four months after the first injection. Patients who failed to resolve CME were scheduled for retreatment after 30 days in group 1 and 60 days in group2. The Mann-Whitney test was used for continuous variables and the Fisher exact test for categorical variables.Random effects models were used to adjust p-values for the correlation between eyes, and p-values of<0.05 were considered statistically significant.

Results: Seventeen eyes from 13 patients were enrolled.Eleven patients(85%) were female.The mean age was 46.5±14(range 21-67).Seven patients(41%) received intravitreal bevacizumab(group1) and 10(59%) received TAAC(group2). Mean baseline LogMAR VA in group 1 was 0.78±0.56, which improved to 0.26±0.37 after 120 days. In group 2, the mean baseline LogMAR VA was 0.6±0.19, which improved to 0.54±0.62 after 120 days.There was no statistically significant difference in the VA between the two groups after treatment(p=0.437).The mean baseline IOP in group 1 was 14.26±3.4 and on the 120th day was 12.67±2.52.In group 2, the mean baseline IOP was 13.1±4.04 and on the 120th day was 14.6±5.82, with no statistically significant difference between the two groups(p=0.552). Lens opacity was seen in 2 eyes(28.6%) in group 1, whereas in group 2 only one eye(10%) developed it(p=0.537). Persistent CME was present in 4 eyes(57.14%) in group 1, and 4(40%) in group 2. This difference was not statistically significant(p=0.64).

Conclusion: No statistically significant differences between intravitreal TAAC and bevacizumab group was observed. Further analysis with a larger number of subjects is in progress.

Keywords: Macular edema, Uveitis, Bevacizumab, Triamcinolone

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

80. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Marina Lourenço De Conti

Service: (RE) RETINA AND VITREOUS | (EP) EPIDEMIOLOGY

CEP Number: 548903-15

5. ABSTRACT (REQUIRED):

Title: Multimodal support for primary care ophthalmology facilities

Author and Co-authors: Marina Conti, Elmar Torres Neto, Paulo Henrique Morales, Nacime Mansur, Caio Regatieri, Rubens Belfort Jr.

Purpose: The worldwide prevalence of diabetes continues to grow and diabetic retinopathy (DR) is the leading cause of legal blindness in industrialized countries. Routine DR screening and annual eye examination are a challenge to public health system. Innovative approaches are needed to allow earlier medical interventions and reduce the risk of vision loss in DM patients. This study aims to evaluate a health care strategy for diagnosis and treatment of primary health care users who have diabetes, hypertension or use of chloroquine compounds, by referring them to a single tertiary ophthalmological service, in a multimodal approach based on telecommunication.

Methods: Descriptive cross-sectional study. Medical records of patients from primary care units were reviewed, in the period of January, 2013 to December, 2013. The units referred patients with DM, high blood pressure, use of chloroquine and proven low vision to a single tertiary service, for fundus examination. A retina specialist made the diagnosis and management suggestion. Data were analyzed regarding the necessity of complementary action, underlying disease, sex, age, ophthalmic diagnosis and management suggestion.

Results: 9216 patients were selected and the mean age was 60.2 years old. 4960 patients were diabetic (53.81%), 7312 had blood hypertension (79.33%), 113 were chloroquine users (1.23%) and 570 had other comorbidities (6.18%). 1032 patients were referred to complementary ophthalmologic action. The most frequently prescribed treatments were cataract extraction (67.05%) and photocoagulation (23,64%). Among patients who were referred to treatment, cataract extraction was indicated in 7.50% of the cases, and photocoagulation, in 2.65%. When considering only diabetic patients, photocoagulation indication rate rises from 2.65% to 4.44%. In this subgroup, photocoagulation main indication was due to DR and maculopathy together, with 74,64% of the cases.

Conclusion: The referral mechanism addressed in this study shows up as a promising model for screening and assistance of special groups such as diabetics, optimizing the access to diagnosis, treatment and follow up to the population with RD, in a multimodal telecommunicative approach that helps meet their needs.

Keywords: primary care, diabetic retinopathy, services

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

81. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: FELIPE PEREIRA

Service: (RE) RETINA AND VITREOUS

CEP Number: 1300/2015

5. ABSTRACT (REQUIRED):

Title: Structural and functional evolution in diabetes mellitus: a choroidal analysis

Author and Co-authors: Felipe Pereira; Muller G. Urias; Eduardo B. Rodrigues

Purpose: Correlate the choroidal and retinal thickness using a new method for choroidal measure in patients with diabetes mellitus (DM) with no or mild retinopathy.

Methods: Patients underwent high-definition 6x6mm volume scanning using spectral-domain optical coherence tomography with and without frame enhancement software. The measure of retinal thickness was generated automatically by the software of the SD-OCT, for choroidal measures, automatic reference lines from retinal boundary were manually adjusted to choroid on each B-scan. A topographic map of each layer was automatically generated by built-in software according to the Early Treatment Diabetic Retinopathy Study (ETDRS) layout. A statistical analysis was conducted to verify association from clinical and ophthalmologic variables to measures from SD-OCT. Besides that, analysis was conducted to correlate retinal thickness from automated algorithm segmentation to choroidal thickness. Ethical approval was granted by UNIFESP Institutional Review Board by the number 1300/2015 and informed consent study was obtained from all patients.

Results: We expect to find normal parameters of retinal and choroidal thickness in all patients, good visual acuity and normal contrast sensibility as well. When comparing retinal and choroidal measures with the clinical and ophthalmological variables, we expect to find a correlation between them, and a significantly difference between controls and mild diabetic retinopathy patients.

Conclusion: We expect to conclude that our choroid measurement method is simple to perform and reproducible. We also expect that there is a strong correlation between the retinal and choroidal thickness, in addition to a clinically significant difference between healthy patients and patients with mild diabetic retinopathy.

Keywords: choroidal thickness; EDI-OCT; retinal layers; OCT-spectral-domain; mild diabetic retinopathy

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82. FIRST (PRESENTING) AUTHOR (REQUIRED): Must be the author listed first in abstract body.

Name: Jose Belucio-Neto

Service: (RE) RETINA AND VITREOUS

CEP Number: 0733/10

5. ABSTRACT (REQUIRED):

Title: Functional and anatomical outcomes in patients submitted to panretinal photocoagulation using 577nm multispot vs 532nm single-spot laser: a clinical trial

Author and Co-authors: Belucio-Neto J, Xavier CO, Dias JR, Passos RM, Maia M, Maia A

Purpose: To evaluate and compare patient tolerance, treatment parameters and anatomical/functional outcomes in patients with diabetic retinopathy (DR) who underwent panretinal photocoagulation (PRP) with 577nm multispot laser (Supra Scan? Quantel Medical) vs 532nm single-spot laser (PASCAL? Topcon).

Methods: Single-center, randomized clinical trial involving 48 patients with diabetic retinopathy who met criteria for PRP. Eyes with ocular comorbidities or previous intravitreal injection or vitrectomy were excluded. After recruitment best corrected visual acuity (BCVA), OCT and fluorescein angiography (FA) were performed. Patients were then submitted to panretinal photocoagulation (PRP), either using 577nm multispot laser with 20ms exposure time (group 1) or 532nm single-spot laser with 100ms exposure time (group 2). Exams were repeated 6 months after treatment. The main outcome was BCVA, and secondary outcomes included FA and OCT changes, laser parameters, number of sessions required for PRP and patient comfort.

Results: 13 patients were excluded and 2 have not yet completed treatment. Group 1 included 15 patients, who presented baseline mean BCVA of 0,5?0,3 and central retinal thickness (CRT) of 294,1?102,1?m; treatment was divided in 3,3?0,8 sessions, delivering 2739?616,1 spots. Patient discomfort during PRP was measured as a subjective scale ranging from 0 to 10; mean pain was 5,5?2,1 and photophobia was 5,8?2,8. After 6 months, mean BCVA was 0,5?0,2 and CRT was 243,7?59,9; OCT evidenced change in the hyaloid status in 57,1% of patients, and macular edema improved in 71,4%. Group 2 included 18 patients; baseline mean BCVA was 0,5?0,5 and CRT was 353,1?196,4?m; 1290,9?238,9 spots were produced in 4,1?0,8 sessions; mean pain was 6,1?2,1 and mean photophobia was 6,0 ?2,0. In the 6-month visit, mean BVCA was 0,7?0,6; OCT showed hyaloid status change in 37,5% of patients and macular edema improved in 50%.

Conclusion: 577nm multispot laser, compared to 532nm single-spot, requires a smaller number of sessions for completing PRP (using higher treatment density), is better tolerated by patients and seems to provide hyaloid status changes and improvements in macular edema more frequently.

Keywords: Diabetic retinopathy, photocoagulation, multispot

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83. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Marina Paes Leme Mothe Neder

Service: (RE) RETINA AND VITREOUS

CEP Number: 51440/2012

5. ABSTRACT (REQUIRED):

Title: Comparison between oct angiography and fluorescein angiography features in retinal artery occlusion

Author and Co-authors: NEDER, M.P.L.; DIAS, J.R.; NOVAIS, E., BELFORT, R Jr.

Purpose: To describe the retinal microvasculature of the eyes with nonarteritic retinal artery occlusion (RAO) based on optical coherence tomography angiography.

Methods: Cross-sectional, prospective, observational study. Patients with artery occlusion ? central, branch or cillioretinal ? were prospectively recruited to be imaged on spectral-domain OCTA (RTVue XR Avanti; Optovue, Inc, Fremont, California, USA) and FA (Spectralis HRA Heidelberg Engineering, Heidelberg, Germany) on the same day. Qualitative analysis of the morphology of the superficial and deep retinal capillary plexuses, and radial peripapillary capillaries was performed. Retinal vasculature images using optical coherence tomography angiography were correlated with fluorescein angiography images. Follow up exams were performed after 3 months. All patients were referred to a clinical evaluation for the investigation of systemic diseases.

Results: Ten patients with retinal artery occlusion were included in this study. OCT-A findings were similar to FA finding for the demonstration of retinal ischemia and neovascularization. Distinct differences in the distribution of zones of decreased vascular perfusion between the superficial and deep retinal capillary plexus corresponding to areas of delayed dye perfusion on fluorescein angiography were demonstrated using OCT angiogram. However, OCTA was not able to evaluate peripheral retina due to restrict scanning field.

Conclusion: OCT-A imaging can accurately discern retinal capillary plexuses at different levels in the eyes with retinal artery occlusion and may be sensitive for more precisely characterizing the extent of macular ischemia and monitoring vascular flow changes during the course of the disease. However, because this exam is restricted to the posterior pole, AF still remains the gold standard exam for peripheral retina imaging.

Keywords: optical coherence tomography angiography, RETINAL ARTERY OCCLUSION

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84. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Muller Gonçalves Urias

Service: (RE) RETINA AND VITREOUS | (NO) NEURO-OPHTHALMOLOGY

CEP Number: 1300/2015

5. ABSTRACT (REQUIRED):

Title: Structural and functional evolution in diabetes mellitus: analysis from retinal layers

Author and Co-authors: Muller G. Urias, Felipe Pereira, Eduardo B. Rodrigues

Purpose: To correlate measures from choroidal thickness with retinal layers in patients with diabetes mellitus (DM) with no or mild retinopathy.

Methods: Patients were recruited from Hospital S?o Paulo clinics, according to the Declaration of Helsinki, and divided into three groups: 1) Control; 2) with DM and no diabetic retinopathy (DR); 3) mild DR. They underwent clinical and ophthalmology exam. A spectral-domain optical coherence tomography (high-definition 6x6mm volume scan) was obtained according to the Early Treatment Diabetic Retinopathy Study (ETDRS) layout. For choroidal measures, automatic reference lines from retinal boundary were manually adjusted to choroid on each B-scan. Thus, a topographic map of choroidal thickness was generated by built-in software. A statistical analysis was conducted to verify association from clinical and ophthalmologic variables to measures from SD-OCT. Besides that, analysis was conducted to correlate retinal thickness from automated algorithm segmentation to choroidal thickness.

Results: We expect to verify changes in retinal thickness, specially in ganglion cell layer and retinal nerve fiber layer. We also expect to verify functional changes, such as reduction in contrast sensitivity. It's possible that we need to do a multiple regression analysis in order to exclude possible associations between age and glycemia in retinal thickness

Conclusion: Our study still in progress and expects to verify retinal changes before vascular changes.

Keywords: choroidal thickness; EDI-OCT; retinal layers; OCT-spectral-domain; mild diabetic retinopathy;

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

85. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Murilo Bertazzo Peres

Service: (RE) RETINA AND VITREOUS

CEP Number: 51440/2012

5. ABSTRACT (REQUIRED):

Title: Comparison between optical coherence tomography angiography and fluorescein angiography in diabetic macular edema.

Author and Co-authors: Murilo B Peres;Renata T Kato;Vinicius Kniggenndorf; Eduardo A Novais;Rubens Belfort Jr;Caio Regatieri

Purpose: To evaluate the optical coherence tomography angiography (OCTA) features in diabetic macular edema (DME) compared to fluorescein angiography (FA)

Methods: Patients with DME were prospectively recruited to be imaged on spectral-domain OCTA (RTVue XR Avanti; Optovue, Inc, Fremont, California, USA) and FA (Spectralis HRA Heidelberg Engineering, Heidelberg, Germany) at the same day. OCT angiograms were segmented into superficial and deep capillary plexus. Qualitative analysis of the foveal avascular zone (FAZ) and macular edema area between the two imaging modalities were carried out using Image Processing and Analysis in Java (Image J). The number of microaneurysms (MA) in the corresponding area between the OCTA and FA was also compared. MA counts were performed by two masked readers, and intraclass correlation coefficient (ICC) was performed using Stata 14 software (StataCorp.2013.College Station,TX:StataCorp LP). A paired student T-test was used to compare the number of MA count between the FA and the two vascular plexuses from OCTA.

Results: Fifteen eyes of 8 patients were included. The FAZ could be equally delineated in the FA as well as in the OCTA, with similar area measurements. The number of MA identified using FA was similar, compared to the OCT angiogram. A high ICC was present for the FA between the two readers (0.99/CI 0.98?0.99), however the ICC was low for the OCTA superficial (0.34/CI -0.21?0.78) and deep plexuses (0.14/CI -0.40?0.68). The mean MA count on the FA for reader 1 was 12.7?9.3, and for reader 2 was 12.6?9.2. Mean MA count on the superficial plexus for reader 1 was 12.5?7.2 and for reader 2 was 8.3?5.2, and for the deep plexus for reader 1 was 23.3?9.3 and for reader 2 was 17.9?6.6. There was a statistical significant difference for MA count between FA and deep plexus for reader 1 (P=0.02), which was not seen for reader 2 (P=0.17). There was no statistical difference noted between FA and superficial plexuses for reader 1 (P=0.95) or reader 2 (P=0.20).

Conclusion: OCTA is a noninvasive and fast acquisition imaging technique that can be useful to recognize MA and the FAZ as an option to traditional dye-based angiography.

Keywords: Optical coherence tomography angiography, diabetic macular edema, fluorescein angiography

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86. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: RENATA TIEMI KATO

Service: (RE) RETINA AND VITREOUS

CEP Number: 41581/2015

5. **ABSTRACT (REQUIRED):**

Title: Twelve-month follow-up of dexamethasone implants for macular edema from various diseases in vitrectomized and nonvitrectomized eyes: a pacoeres group study

Author and Co-authors: RENATA T. KATO, MD, EDUARDO A. NOVAIS, MD, JOAO RAFAEL DIAS, MD, EMMERSON BADARO, MD, PHD, MAURICIO MAIA, MD, PHD, MICHEL FARAH, MD, PHD

Purpose: To evaluate visual acuity (VA), central retinal thickness (CRT), and number of dexamethasone implants to treat macular edema (ME) from various diseases over 12 months in vitrectomized and nonvitrectomized eyes.

Methods: This multicenter retrospective cohort study included 112 patients with ME secondary to retinal diseases treated pro re nata (PRN) with a 0.7-mg intravitreal dexamethasone implant for 12 months. The best-corrected VA (BCVA), CRT, intraocular pressure (IOP), need for cataract surgery, safety data, and number of implants were recorded.

Results: Vitrectomized and nonvitrectomized eyes received means of three and one implant, respectively, over 12 months ($P < 0.001$). The mean baseline BCVA of all patients was 0.13, which improved significantly ($P < 0.001$) to 0.33 12 months after one ($P = 0.001$), two ($P = 0.041$), and three ($P < 0.001$) implants but not four implants ($P = 0.068$). The mean baseline CRT decreased significantly ($P < 0.001$) from 463 to 254 microns after 12 months with one ($P < 0.001$), two ($P = 0.002$), and three ($P = 0.001$) implants but not with four implants ($P = 0.114$). Increased IOP was the most common adverse event.

Conclusion: The dexamethasone implant administered PRN improved VA and decreased CRT in ME, with possible long-term clinically relevant benefits for treating ME from various etiologies. Vitrectomized eyes needed more implants compared with nonvitrectomized eyes.

Keywords: cystoid macular edema, dexamethasone implant, intravitreal injection

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87. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Verena Ribeiro Juncal

Service: (RE) RETINA AND VITREOUS

CEP Number: 3,83226145e+016

5. ABSTRACT (REQUIRED):

Title: Intravitreal Bevacizumab versus Bevacizumab + 577nm micropulse laser for diabetic macular edema: a clinical trial

Author and Co-authors: Verena Juncal, Camilla Xavier, Jose Bel?cio Neto, Renato Passos, Caio Regatieri, Nilva Moraes

Purpose: The purpose of this study is to compare the efficacy of intravitreal injections of Bevacizumab versus intravitreal injections of Bevacizumab associated with Yellow Diode Micropulse Laser in the treatment of diabetic macular edema (DME).

Methods: This is a single-center, randomized, clinical trial that included individuals with DME that were divided into two groups. In group 1, patients were treated with intravitreal injections of Bevacizumab using a pro-re-nata regimen. In group 2, patients were treated with monthly intravitreal injections of Bevacizumab plus Yellow Diode Micropulse Laser (Quantel Supra Scan 577 TMPhotocoagulator Laser@, Quantel, Paris, France) every three months in a pro-re-nata regimen as well. Patients had the following exams performed at baseline: ETDRS chart visual acuity test, optical coherence tomography (OCT), microperimetry and fluorescein angiogram. Patients were monitored every month, when they had their visual acuity tested and OCT performed. Every three months, microperimetry and fluorescein angiogram were repeated.

Results: Our preliminary results include 07 patients, in which 04 are in group 1 and 03 in group 2. Foveal thickness has been greatly reduced in group 2 when compared to group 1. Group 2 gained more letters of visual acuity than group 1 did. Preliminary results showed that Bevacizumab injections associated with Yellow Diode Micropulse Laser led to a decrease in the need for re-treatment compared with Bevacizumab injections alone.

Conclusion: The preliminary results are promising and might later lead to a viable way of improving DME prognosis.

Keywords: diabetic macular edema, bevacizumab, micropulse

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88. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Elmar Torres Neto

Service: (RE) RETINA AND VITREOUS

CEP Number: 51440

5. **ABSTRACT (REQUIRED):**

Title: Correlation between Choroidal Thickness and Ciliary Artery Blood Flow Velocity in Diabetic Subjects

Author and Co-authors: Elmar Torres Neto MD, Eduardo Amorim Novais MD, Vinicius F. Kiningendorf MD, Norma Allemann, MD PhD, Caio Vinicius Saito Regatieri, MD PhD, and Rubens Belfort, Jr., MD PhD

Purpose: To correlate the CT and the values with the peak systolic velocities (PSV) and the resistance index (RI) of the retrobulbar vessels, (i.e., the ophthalmic artery [OA], short posterior ciliary artery [SPCA], and central retinal artery [CRA]) in diabetic patients compared to normal patients.

Methods: The diabetic subjects were evaluated at the slit lamp for the presence of diabetic macular edema. The normal subjects were selected as control group.

The color Doppler examination was performed with patients in the supine position. Video cursors were placed along the captured flowmetry data to calculate the PSV and the RI. Measurements were recorded for the OA, SPCA and CRA. After ultrasonography, all patients underwent EDI SD-OCT (Spectralis OCT, Heidelberg Engineering, Heidelberg, Germany). Using the linear measurement tool, two independent observers measured the CT perpendicularly from the outer edge of the hyperreflective RPE to the inner sclera at 500- μ m intervals temporal and nasal to the fovea up to 1,000 mm.

Results: A total of forty-one eyes of 41 patients were evaluated, in the DME group, the mean RI measured by CD was lower in the SPCA (0.6214 \pm 0.07911) compared to the CRA (0.5833 \pm 0.06984) and to the OA (0.8029 \pm 0.05325). An inverse proportional relationship (P=0.082) was seen between the PSV of the CRA (mean, - 0.3929, \pm 0.1741) and the subfoveal mesurement, but not between the SPC and the ACCP (mean, 0.2017 \pm 0.064). The AO also showed the same pattern of the CRA (mean, -0.3984 \pm 0.1677) (P=0.079). The IR showed an opposite pattern of the SPV of their artery in all cases. In the control group an inverse proportional relationship (P=0.0496) was seen between the RI of the SPCA (mean, 0.6117 \pm 0.07911) and the subfoveal CT (319.9 \pm 83.79 μ m) but not between the RI and the OA (mean, 0.7019 \pm 0.07317) or the CRA (mean, 0.68893 \pm 0.08994).

Conclusion: An inverse proportional relationship was seen between the RI of the SPCA and the subfoveal CT in normal subjects however none relation was found in the diabetic ones.

Keywords: Choroidal thickness, Enhanced depth image, Optical coherence tomography, Diabetic, Doppler flowmetry

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89. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Paula Delegregio Borba

Service: (RE) RETINA AND VITREOUS

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Optical Coherence Tomography and En Face Retinal Findings in Membranoproliferative Glomerulonephritis Type 2 - Case Series and Literature Review

Author and Co-authors: Borba, P D, Dias, J R. Novais, E A, Kirsztajn, G M Romano A, Belfort, R Jr

Purpose: Membranoproliferative glomerulonephritis type 2 (MPGN II) is a complement-mediated condition related to electron dense deposits in the glomerule basal membrane that usually affects youngsters between 5-15 years old . More commonly at the second decade of life, patients may present with drusen-like deposits that do not impair visual acuity. Patients may develop choroidal neovascularization and serous choroidal detachments in 10% of the cases.

Methods: Four eyes of 2 patients with MPGN Type 2 were scanned using a high-speed 840-nm-wavelength spectral-domain optical coherence tomography (OCT) instrument . Split-spectrum amplitude-decorrelation angiography algorithm was used to detect blood flow. Fluorescein angiography and spectral-domain optical coherence tomography images were obtained in all eyes and the ability to visualize the presence of drusen-like deposits in the Bruch membrane or choroidal neovascularization.

Results: Both evaluated patients had no visual complaints and no ocular past history and best corrected visual acuity of 20-20 in both eyes, unremarkable anterior biomicroscopy and RPE mobilization and macular drusen-like deposits.

There were no signs of choroidal neovascularization at the fluorescein angiogram.

En face OCT revealed hyporeflective dots with hyperreflective ring at the level of the RPE that corresponds to the cross-sectional OCT imaging that reveals a drusen-like deposits underneath the RPE and a market dilated choroidal image.

Conclusion: The ocular findings present in Membranoproliferative Glomerulonephritis Type 2 place this condition among the differential diagnosis of choroidal neovascularization. Since the visual impairment, though rare, may affect young individuals, eye examinations are essential to promptly diagnose potentially visually threatening complications, such as choroidal neovascularization and serous chorioretinopathy.

The newer optical coherence tomography instrument may be useful in defining the precise location when using En face OCT.

Keywords: retina glomerulonephritis kidney vitreous drusen-like deposits

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Title
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Purpose, Methods, Results,
Conclusion.

90. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Vinicius Ferreira Kniggendorf

Service: (RE) RETINA AND VITREOUS

CEP Number: 51440

5. ABSTRACT (REQUIRED):

Title: Choroidal Thickness in Normal Subjects and Patients with Diabetic Macular Edema, Neovascular Age Macular Degeneration and High Myopic in a Brazilian Population

Author and Co-authors: Vinicius Kniggendorf, Cesar Gomes Almeida, Eduardo Novais, Caio V. Regatieri

Purpose: To evaluate the choroidal thickness (CT) using spectral-domain optical coherence tomography (SD-OCT) in normal Brazilian subjects and compare to patients with diabetic macular edema (DME), neovascular age related macular degeneration (AMD) and high myopia.

Methods: A retrospective analysis in OCT images of 181 Brazilian subjects. A total of 74 eyes were included in Group Normal, 50 eyes in Group Neovascular Age-Related Macular Degeneration, 44 eyes in Group Diabetic Macular Edema and 13 eyes in Group High Myopia. CT was measured from the posterior edge of the retinal pigment epithelium to the choroid/sclera junction at the fovea and 500 μ m intervals temporal and nasal to the fovea. All measurements were performed by two independent observers and averaged for the purpose of the analysis.

Results: Seventy-four eyes from 74 patients with a mean age of 51.4 years where analyzed in Group Normal with a mean nasal, subfoveal and temporal choroidal thickness measurements were 301.30 \pm 12.86 μ m, 311.61 \pm 12.62 μ m and 309.28 \pm 12.28 μ m respectively. All groups with disease demonstrated a statistically significant choroidal thinning when compared with matched-aged normal eyes. The mean reduction compared to normal in Group AMD was 60.65 μ m nasally, 59.77 μ m temporally and 56.59 μ m at subfoveal position. In Group DME, the subfoveal reduction was 51.10 μ m, 63.03 μ m and 46.30 μ m, nasally and temporally. Group High Myopia presented the most evident CT reduction compared to normal eyes, with a mean reduction of 159.9 nasal, 159.98 subfoveal and 154.65 at temporal.

Conclusion: The present study is the first to evaluate choroidal thickness in Brazilian subjects, with intense miscegenation, and demonstrated a statistically significant decrease in choroidal thickness in all groups with chorioretinal disease. Choroidal abnormality may play an important role in visual prognosis in these diseases.

Keywords: Choroidal thickness, Diabetic macular edema, Macular Degeneration, Myopia, Optical coherence tomography

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91. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: RICARDO MIGUEL JAPIASSU

Service: (RE) RETINA AND VITREOUS | (CA) CATARACT

CEP Number: 003345-8

5. **ABSTRACT (REQUIRED):**

Title: Combined femtosecond laser assisted cataract surgery and small gauge pars plana vitrectomy

Author and Co-authors: Japiassu RM, Magalhães Jr O, Badaró E, Alezzandrini A, Maia M

Purpose: Report 19 patients that underwent femtosecond laser-assisted cataract extraction in combination with sutureless 23 or 25-gauge vitrectomy and report the advantages of this combined technique in challenging cases.

Methods: Retrospective review of charts from 19 cases with co-existing retinal pathologies and cataract underwent combined femtosecond laser-assisted cataract extraction and sutureless 23 or 25-gauge vitreoretinal surgery, by 2 surgeons.

Informed written consent was obtained for all subjects and protocol was approved by Ethics Committee of Federal University of Sao Paulo.

The patients were initially placed under the femtosecond laser by local anesthesia. The capsulotomy diameter was set between 4.5 and 5.5 mm. Peri-bulbar anesthesia was performed and 4-port transconjunctival angled pars plana incisions were performed. Phacoemulsification was completed through a clear corneal incision and was followed by insertion of a foldable IOL. A complete vitrectomy including vitreous base shaving was performed. The patients were followed for 1 month, 3 months, 6 months and 1 year. All the patients underwent complete ophthalmic examination in all these landmarks, including best corrected visual acuity, I

Results: The mean age was 60,2 years. The mean pre-op best corrected visual acuity (BCVA) was 20/80, and the mean post-op BCVA was 20/40. In most of cases, the capsulorhexis guided by femtosecond technology was helpful for the surgeon, with no posterior capsule rupture in any cases. Additionally, neither leakage through the incision nor IOL decentration during vitrectomy were observed. The mean preoperative central foveal thickness by OCT was 293 micra, and the mean postoperative OCT was 253 micra. None of the cases needed corneal sutures at the end of surgery.

Conclusion: Combined pars plana vitrectomy and phacoemulsification guided by femtosecond technology offers advantages to the IOL implantaion at the bag in a more controlled fashion as well as resulting in stability of corneal incision. The relatively small number of cases and retrospective design requires prospective studies to confirm these findings.

Keywords: cataract, vitreoretinal disease, femtosecond, vitrectomy

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(US) OCULAR ULTRASOUND

Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

92. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Cassia Pereira Leite

Service: (RE) RETINA AND VITREOUS

CEP Number: 965899

5. ABSTRACT (REQUIRED):

Title: Comparison between two different kinds of Silicone Oil used in retinal detachment surgery

Author and Co-authors: Cassia Leite, Muller Urias, Eduardo Rodrigues, Acacio Lima, Mauricio Maia, Michel Farah

Purpose: To compare and evaluate the outcomes of patients with retinal detachment submitted to posterior vitrectomy with two different kinds of silicone oil.

Methods: A retrospective study was performed with patients from Hospital S^o Paulo through a review of medical records. The study included patients with retinal detachment submitted to posterior vitrectomy. Exclusion criteria involved previous surgeries. Patients were divided into two groups: between July 2009 to June 2010 (group A, silicone oil 5000cs, Ophthalmos), and between July 2010 to June 2011 (group B, silicone oil 5000cs, Ophthalmos modified). One hundred patients from each group were randomly selected by software before medical record analysis. Data collected involved the possible detachment etiology, location of retinal tear(if applied), best corrected vision acuity(BCVA) and intra ocular pressure (IOP), both before surgery, one month and six months after surgery. Also, were verify emulsification and redetachment rate of each group.

Results: Study still ongoing. We expect a lower rate of emulsification and lower IOP in group B (due to changes which gives a higher stabilization to SO). A preliminary study was conducted with 51 patients from Hospital S^o Paulo (UNIFESP) with posterior vitrectomy in January 2015 due to retinal detachment. Mean age was 49 years old and 59% were male patients. In this preliminary study, 61% of patients had prior retinal detachment. On the first month postoperative, 12%(n=3) had intraocular pressure over than 40 mmHg. From patients with fundoscopy described in medical record (n=23), 26% had redetachment.

Conclusion: Redetachment and increased IOP are the most frequent complications in postoperative of retinal detachment surgery. We expect to compare and verify associations between chemical structures from silicone oils and outcomes of vitreoretinal surgery With results of this study, we intend to compare differences between silicone oils in a prospective project.

Keywords: silicone oil, retinal detachment, vitrectomy

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2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

(RS) REFRACTIVE SURGERY

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Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

93. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Fabio Kenji Matsumoto

Service: (RS) REFRACTIVE SURGERY

CEP Number: 17218013.1.0000.5505

5. ABSTRACT (REQUIRED):

Title: Correlation of ocular measurements in individuals submitted to phakic intraocular lens implantation

Author and Co-authors: Fábio Kenji Matsumoto, MD; Ibraim Viana Vieira, MD; Adriano Bogar, MD; João Crispim Ribeiro Flávio Hirai, MD, PhD, Eliane Mayumi Nakano MD, PhD

Purpose: To evaluate the correlation between ocular measurements and final vault value in individuals submitted to V4B phakic intraocular lens (pIOL) implantation

Methods: This is a case series of 27 patients submitted to ICL surgery. Ocular variables such as white-to-white (WTW), angle-to-angle (ATA), and sulcus-to-sulcus (STS) measurements were measured for each patient and correlated with vault values at 7 and 30 days after surgery, stratified by lens size. We have used OPD-SCAN III version 1.08.01, Nidek.Co Ltd and Eye Suite i4.1.0.0 HAAG-Streit Internacional for IOL Master to gauge those measurements. Spearman correlation coefficient was used for the analysis

Results: 52 eyes were evaluated. Mean age (sd) was 30.9 (6.2) years. Correlations for lens size 12 were: -0.449 (STS); -0.110 (ATA); and 0.404 (WTW). Correlations for lens size 12.5 were: -0.492 (STS); -0.284 (ATA); and -0.014. We are still following these patients 1 and 2 years after surgery and collecting data for this study. And also, we are increasing sample number and some results are in progress.

Conclusion: moderate correlation was observed for sulcus-to-sulcus measurements and vault at both time periods. Poor correlations were observed for other variables

Keywords: Implantable contact lens, vault, white-to-white, sulcus-to-sulcus, angle-to-angle

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

94. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Mariah Mendes Rufino Uehara

Service: (RS) REFRACTIVE SURGERY

CEP Number: 0886/09

5. **ABSTRACT (REQUIRED):**

Title: Assesment of Intrastromal Corneal Ring Segment Arc 340° position with anterior optical coherence tomographyAssesment of Intrastromal Corneal Ring Segment Arc 340° position with anterior optical coherence tomography

Author and Co-authors: Uehara, MMR, Santos, RT, Hirai, Flavio, Miranda, D, Nakano, EM, Francesconi, C, Nose, W.

Purpose: To examine the position of implanted Keraring 340 ? (Mediphacos, Belo Horizonte, Brazil) segments by high-resolution anterior segment optical coherence tomography (Visante, AS-OCT).

Methods: This prospective study intended to enroll 40 eyes with central keratoconus with the following inclusion criteria: steep meridian until 62 D and thinnest point pachymetry > 400µm. Patients were randomly distributed in two groups: Group A: rings implanted in a stromal tunnel; Group B: rings implanted in a stromal pocket. Eyes were evaluated by AS-OCT after 1, 3, 6 and 12 months of surgery. Distance from the apex of the triangular cross-section of the ring segment to the anterior corneal surface and distances from two basal corners to the posterior corneal surface were measured.

Results: Up to date, 19 eyes of 19 patients, were enrolled for the study, only one with extrusion of the ring. There are 12 patients with 12 months of follow up and 7 patients with 6 months of follow up. Nine patients were submitted the tunnel technique and 10 patients, pocket technique.

Conclusion: The data is on statistical analysis.

Keywords: Keratoconus, Keraring, Intrastromal corneal ring, Optical coherence tomography

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Title
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Purpose, Methods, Results,
Conclusion.

95. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Mikael Kwang Chul Chun

Service: (RS) REFRACTIVE SURGERY

CEP Number: 0886/09

5. ABSTRACT (REQUIRED):

Title: Aberrometry changes in Eyes with Central Keratoconus Implanted with Intrastromal Corneal Ring Segment Arc 340°

Author and Co-authors: Mikael Chun, Rodrigo Teixeira Santos, Flavio Hirai, Danielle Miranda, Eliane Mayumi Nakano, Claudia Francesconi, Walton Nose.

Purpose: To evaluate the changes in aberrometry in eyes submitted implantation of Keraring 340 ? (Mediphacos, Belo Horizonte, Brazil) in central keratoconus patients.

Methods: This prospective study intended to enroll 40 eyes with central keratoconus with the following inclusion criteria: steep meridian until 62 D and thinnest point pachymetry > 400µm. Patients were randomly distributed in two groups: Group A: rings implanted in a stromal tunnel; Group B: rings implanted in a stromal pocket. Eyes were evaluated by OPD-Scan (Nidek, Japan) after 1, 3, 6 and 12 months of surgery. The point spread function, modulation transfer function (MTF), convolved acuity chart and root-mean-square (RMS) values for higher order aberrations (HOA) were analyzed.

Results: Up to date, 19 eyes of 19 patients, were enrolled for the study, only one with extrusion of the ring. There are 12 patients with 12 months of follow up and 7 patients with 6 months of follow up. Nine patients were submitted the tunnel technique and 10 patients, pocket technique.

Conclusion: The data is on statistical analysis.

Keywords: keratoconus, Intrastromal Corneal Ring Segment Arc 340°

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

96. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Eduardo Bicalho Mariotoni

Service: (RS) REFRACTIVE SURGERY | (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0886/09

5. **ABSTRACT (REQUIRED):**

Title: Biometry changes in Eyes with Central Keratoconus Implanted with Intrastromal Corneal Ring Segment Arc 340?

Author and Co-authors: Rodrigo Teixeira Santos, Flavio Hirai, Danielle Miranda, Eliane Mayumi Nakano, Claudia Francesconi, Walton Nos?

Purpose: To analyze and compare biometric parameters (axial length anterior chamber depth) of patients with central keratoconus before and after intrastromal corneal ring segment (ICRS) arc 340 ? implantation.

Methods: This prospective study intended to enroll 40 eyes with central keratoconus with the following inclusion criteria: steep meridian until 60 D and thinnest point pachymetry > 400µm. Patients were randomly distributed in two groups: Group A: rings implanted in a stromal tunnel; Group B: rings implanted in a stromal pocket. The biometry was performed by optical means (IOL? and Lenstar?) e ultra-sound. Patients were evaluated preoperatively, and after 7 days and 1, 3, 6 and 12 months of surgery.

Results: Up to date, 19 eyes of 19 patients, were enrolled for the study, only one with extrusion of the ring. There are 12 patients with 12 months of follow up and 7 patients with 6 months of follow up. Nine patients were submitted the tunnel technique and 10 patients, pocket technique.

Conclusion: In a previous analysis, the 340 arc intrastromal corneal ring showed sings of reduction of both axial length and anterior chamber depth in eyes with central keratoconus. But the number of patients enrolled and evaluated post-operatively was still small for statistical analysis, being expected better conclusions as the study progresses and more patients are enrolled and operated. The data is on updating and statistical analysis.

Keywords: central keratoconus, intrastromal corneal ring, biommetry, axial legth, anterior chamber depth

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FORMAT:

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

97. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

Name: Bruno Rebello de Godoy

Service: (CA) CATARACT

CEP Number: 0

5. ABSTRACT (REQUIRED):

Title: Toric intraocular lens stability after phacoemulsification

Author and Co-authors: Toric intraocular lens stability after phacoemulsification

Purpose: to investigate Intra ocular lens (IOL) stability in individuals submitted to cataract surgery and toric intraocular lens implantation

Methods: report of a series of cases submitted to phacoemulsification and implantation of toric intraocular lens. Visual outcomes such as visual acuity, IOL axis rotation, and specular microscopy were evaluated. Pre- and 90-day postoperative variables were compared used the Fisher test. All analyses were done with Stata v.13 and p-values less than 0.05 were considered statistically significant

Results: 13 individuals (61.5% male) with mean (sd) age 72.73 (7.05) years were submitted to cataract surgery in both eyes by a single surgeon. Pre- and postoperative mean (sd) best corrected visual acuity were 0.581 (0.275) LogMAR (20/80) and 0.05 (0.03) LogMAR (20/25), respectively ($p < 0.001$). Regarding the IOL rotation, 82.14% rotated less than 10 degrees after 90 days. Mean (sd) pre- and postoperative endothelial cell density were 2405 (289) and 1696 (397) cells/mm², respectively ($p < 0.001$)

Conclusion: the IOL showed stability in its axis 90 days after surgery and the visual acuity improved significantly in this study population. In addition, significant decrease in endothelial cell density was observed in these individuals although no clinical signs of corneal edema was observed in the last follow-up visit

Keywords: cataract, IOL, phacoemulsification, toric iol stability

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FORMAT:

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

Poster guidelines:

98. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Cristiane Okazaki

Service: (CA) CATARACT | (EP) EPIDEMIOLOGY

CEP Number: 09098112.5.0000.5505

5. **ABSTRACT (REQUIRED):**

Title: Quality management in clinical and surgical eyecare for cataract surgery

Author and Co-authors: Okazaki C, Hirai, FE

Purpose: To develop and analyze quality indicators for clinical and surgical eyecare of the Cataract Service of the Department of Ophthalmology and Visual Sciences, Federal University of São Paulo.

Methods: This study comprised of two phases: First, initial meeting with medical and surgical staff responsible for awareness of the project and coordination of visits and data collection. Second, identification, creation and evaluation of healthcare quality indicators in four major areas: reception, scheduling, medical records, medical care (clinical and surgical) and medical supplies. These indicators were developed and data collected and analyzed.

Results: All medical staff received orientation regarding the project and its importance for quality control. The major indicators developed by the quality management group were: time to first visit (time between initial diagnosis and first visit in our service); time to surgical day (time between first visit and surgery); time waiting for surgery (time waiting for surgery during surgical day); time fasting (time between fasting onset and surgery); surgical time; difficulties to purchase post-op medication, loss of productivity (for patient and carer or companion).

Conclusion: Medical indicators are important for quality control. All staff should be aware of the importance of adequate data collection for quality management. Indicators could also be part of a control panel that would help managers in the decision making process to improve medical assistance.

Keywords: healthcare management, indicators, cataract

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Deadline: 10/2015

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

99. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Aline Couto Carneiro

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0000/0000

5. **ABSTRACT (REQUIRED):**

Title: Keratitis Paecilomyces spp in ophthalmic patients

Author and Co-authors: Couto A, Yu MCZ, Freitas D

Purpose: The corneal fungal infection of the species Paecilomyces spp presents an unfavorable prognosis for the poor response to medical treatment. Sometimes it is recommended the topical ocular use of more than one antifungal association, except in the treatment of fungal keratitis. Most cases of keratitis Paecilomyces ssp, which does not respond to medical therapy, requires keratoplasty, injection or enucleation, compromising, even more, the prognosis long-term viability of the eye. The risk factors of the infection are diverse. Consequently, given the difficulty of treatment, prevention, early diagnosis and rapid introduction of appropriate therapy are mandatory.

Methods: Descriptive retrospective study of number of infection cases in Brazil and review and comparison with literature. Review of medical records as demographic characteristics of patients, risk factors, time between onset and diagnosis, method, including antifungal susceptibility, clinical and surgical treatment, healing time, complications, better final visual acuity. 21 patients with were selected and submitted to microbiological culture of corneal scraping between the 1995-2015. Patients with the age range of 18-95 years, the External Disease Ocular Sector of the Department of Ophthalmology and Visual Sciences at the Escola Pauista de Medicina of the Hospital S?o Paulo. Based on examination of the record above, the patient files have been asked and will be reviewed to assess risk factors and clinical outcome of the treatment. Additional analyzes will be carried out later with laboratory samples of existing cultures to identify the subtype Paecilomyces ssp based on the interpretation of a

Results: It is expected that this study will highlight the risk factors associated with keratitis Paecilomyces ssp; present what was the best clinical empirical treatment based monotherapy or combination of medicines in patients of External Diseases Ocular Sector, and correlation between the treatment and the clinical outcome based on the fungus subtype identified by antifungal susceptibility

Conclusion: Based on the analysis of antifungigramas, which it is expected to complete the best clinical treatment: association drops or antifungals monotherapy

Keywords: Keratitis, Paecilomyces, Corneal Perforation

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

100. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Felipe Marques de Carvalho Taguchi

Service: (CO) CORNEA AND EXTERNAL DISEASE | (LA) LABORATORY

CEP Number: 1852/07

5. ABSTRACT (REQUIRED):

Title: Molecular diagnosis of Acanthamoeba keratitis applied to personalized medicine in ophthalmology and visual sciences

Author and Co-authors: Felipe Marques de Carvalho Taguchi, Denise de Freitas, Annette Silva Foronda, Linda Christian Carrijo-Carvalho, Fabio Ramos de Souza Carvalho

Purpose: To evaluate the occurrence of the protozoan in corneal tissue by culture-independent technique, to proceed with molecular characterization of the etiological agent of amoebic keratitis, to implement standardized molecular technologies to laboratory diagnosis of Acanthamoeba keratitis (AK) and to promote the establishment of personalized medicine and precision therapy in ocular external diseases.

Methods: Genomic DNA was isolated using commercial extraction and purification kits. The amount of DNA extracted was spectrophotometrically measured and concentration of each sample was adjusted to 50 ng/?L. PCR was performed using a genus-specific primer set designed from a partial fragment of 18S rDNA gene, which has been used to distinguish Acanthamoeba genotypes. Nucleotide sequences of both DNA strands were obtained by using the same primers as those used for PCR reactions. The nucleotide sequences were compared to the GenBank data library. Phylogenetic analyses were conducted and comparative dendrograms were constructed with the neighbor-joining (NJ) method.

Results: Molecular diagnosis of AK was applied in ten patients. Nucleotide sequencing analyses of the 18S rDNA gene demonstrated the predominance of T4 genotype, which seems to be related intrinsically to the differential pattern of virulence and severity of infection. The purity of the total genomic DNA extracted from corneal tissues is directly associated with the successful implementation of a standardized protocol of molecular diagnosis. Qualitative improvements need to be implemented to extraction and purification processes of genomic DNA to allow the collection of biological samples in a minimally invasive manner and to enhance detection of the parasite in the infectious site.

Conclusion: We were able to demonstrate the functional role of molecular diagnostic technology applied to Acanthamoeba keratitis and the importance of this procedure in the early resolution of the eye infection. The personalized medicine associated with precision therapy are presented as current trends in improving the quality of eye care services to the community.

Keywords: Acanthamoeba, molecular diagnosis, keratitis, personalized medicine

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Deadline: 10/2015

FORMAT:

Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

101. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Isabel Moreira Borelli

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 4022001

5. ABSTRACT (REQUIRED):

Title: A case report: Peripheral hypertrophic subepithelial corneal degeneration

Author and Co-authors: BORELI IM, FREITAS D

Purpose: To describe the clinical features, clinical course, and response to therapy of an atypical peripheral corneal opacification associated with abnormal limbal vasculature and pseudopterygium. First described in 2013 as a Salzmann's nodular degeneration variant, Peripheral hypertrophic subepithelial corneal degeneration (PHSCD) and underlying causes of the corneal lesions currently are not understood.

Methods: A 28-year-old woman, ophthalmologist, was referred for the evaluation of corneal lesions in both eyes for 5 years. No symptoms, except that his father, also an ophthalmologist, says that the lesions were increasing in number and size. She was treated with mild corticosteroids, without improving or inhibiting the disease. The patient started wearing contact lenses for myopia 9 years ago; family history and past medical history were unremarkable. Best corrected visual acuity 20/20 in both eyes. Anterior biomicroscopy with similar findings of bilateral, fairly symmetric, peripheral hypertrophic, subepithelial corneal opacification and growth of fibrovascular tissue over the nasal limbus towards the corneal center. Immunology tests and serologies both normal

Results: In progress

Conclusion: In progress

Keywords: peripheral hypertrophic subepithelial corneal degeneration, pseudopterygium, Salzmann's nodular degeneration

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

102. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Veronica Haysa Yamada

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 842.170

5. ABSTRACT (REQUIRED):

Title: Knowledge on corneal transplantation among medical students at UNIFESP

Author and Co-authors: Yamada, VH; Ikebe, CH; Adn, CBD; Sato, EH; Hirai, FE

Purpose: Evaluation of the knowledge on corneal transplantation among medical students in UNIFESP

Methods: Cross-sectional study. Students of the fourth, fifth and sixth years of medical school answered a questionnaire. Information such as type of organs for donations, their intention to donate eyes, sources of information, contraindications for harvesting corneas, technical details of the procedure, reasons for donating and not donating eyes by people as perceived by them were collected.

Results: 222 students answered the questionnaire, 73 of the fourth year, 59 of the fifth year and 90 of the sixth year. Mean age was 23 years-old and 60.7% were male. Only 10 students answered correctly all the organs/tissues that can be transplanted, being 3 from the fourth year, 3 from the fifth and 4 from the sixth year. Only 40 students knew all the ocular diseases that contra-indicate transplantation. Fifty three students knew the systemic conditions that contra-indicate transplantation. The majority (99.1%) support donation and 94% would donate their own corneas. 92.3% would encourage corneal donation. The most cited sources of information were given during regular classes (88.2%), doctors (52.0%) and television (51.1%). About half (51.1%) of the students believe that the only structure removed in corneal donation is the cornea and half of the students believe that only cornea can be used in transplantation. The most cited reasons for donating were good final surgical results (47.9%), solidarity (29.1%), and noble act (9.4%). The most cited reasons for not donating were lack of knowledge (47%), family objection (21.5%) and health problems (10%).

Conclusion: Overall, students of UNIFESP are favorable to corneal donation. There is a lack of knowledge, not only about technical details of the process of harvesting corneas and the conditions that contra indicate transplantation. In addition, a better notion regarding organs or tissues that be transplanted is necessary. More information during medical graduation could improve the level of knowledge on corneal transplantation.

Keywords: corneal transplantation, knowledge, medical students

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

103. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Fabio Iglesias Marujo

Service: (CO) CORNEA AND EXTERNAL DISEASE | (LA) LABORATORY

CEP Number: 4444020215

5. ABSTRACT (REQUIRED):

Title: Cytotoxicity of cationic polyhexamethylene biguanide to corneal keratocytes.

Author and Co-authors: Fabio Iglesias Marujo, Denise de Freitas, Linda Christian Carrijo-Carvalho, Fabio Ramos de Souza Carvalho

Purpose: Acanthamoeba keratitis is a complex ocular infection which still lacks a well established treatment. Cationic polyhexamethylene biguanide (PHMB) is one of the main drugs used based on its antimicrobial effects. There are, however, few studies related to its toxicity to keratocytes. For this reason, the purposes of this study were: 1.to assess concentration-dependent rates of in vitro cytotoxicity caused by the instillation of PHMB in corneal keratocytes; 2.to analyse the metabolic response from keratocytes after contact with PHMB; 3.to quantify the percentage of keratocyte metabolic inhibition caused by minimal concentrations of PHMB.

Methods: A 96-well microplate containing commercially available certified standard cell lines of corneal keratocytes were used in order to expose the cells to preservative-free PHMB eyedrops in different concentrations. The cytotoxic effect was measured by fluorometry. Experimental assays were conducted in triplicate.

Results: Compared to the control wells, containing only keratocytes and culture medium, the highest concentration of PHMB tested showed a decrease of 27% in cell viability, compared to a decrease of 18% after reducing the concentration by half. If used in minimal concentrations, however, PHMB had a stimulating effect and increased the cellular activity in 12%. Our findings show that PHMB, even concentrations 8 times lower than the used on clinical practice is toxic to keratocytes in vitro. Cytotoxicity seems to be dosage-dependent, but minimal concentrations of the drug seemed to have a beneficial effect.

Conclusion: There has to be a reevaluation of dosage for PHMB treatment that considers not only the effect it has on pathogens, but also the damage it may induce to the ocular tissues.

Keywords: cornea, PHMB, biguanide, Acanthamoeba, keratocytes

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Purpose, Methods, Results,
Conclusion.

104. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Roizenblatt Marina

Service: (CO) CORNEA AND EXTERNAL DISEASE | (LA) LABORATORY

CEP Number: 559063

5. ABSTRACT (REQUIRED):

Title: Reverse translational research and precision medicine in ophthalmology and visual science applied to the treatment of Acanthamoeba keratitis

Author and Co-authors: Marina Roizenblatt, Denise de Freitas, Annette Silva Foronda, Linda Christian Carrijo-Carvalho, Fabio Ramos de Souza Carvalho

Purpose: The reverse translational research aims to investigate in the lab bench a question from the clinical routine. Following these concept, the precision medicine investigates predictors of efficacy in the therapeutic field. In this context, Acanthamoeba keratitis (AK) is an important model of study, since there is no standard treatment for this condition. With regard to specific drugs, the therapy includes antimicrobial compounds as biguanides and diamidines associated or not to steroids. Considering the toxicity of the main agents used in the management of AK, this study aims to quantify the cellular metabolism of Human Corneal Epithelial Cells (HCECs) when exposed to therapeutic schemes commonly used in AK in an experimental model that reproduces the corneal microenvironment.

Methods: A concentration of 2×10^5 cells/mL of HCECs were seeded into well plates in the appropriate culture medium and treated with the addition of corticosteroid (dexamethasone or prednisolone in the concentration 0.1% and of 1%, respectively) or polyhexamethylene biguanide (PHMB) in the concentration of 0.02% or 0.04%, alone or associated with one of the corticosteroids. All the drugs were manipulated without preservative. Metabolism were quantified by fluorescence with the aid of PrestoBlue? reagent at the 6 hour period and the cells were analyzed following 3 hours of incubation without the chemical compounds.

Results: The metabolic rate of recovering after withdraw increased in the PHMB 0.02% plus pednisolone, comparing 6 hours and the recovery period ($p < 0.001$, both). After 6 hours of incubation, media supplemented with prednisolone or dexamethasone showed to be less toxic than PHMB 0.02% or 0.04% alone or in association with the corticosteroids ($p < 0.001$, all).

Conclusion: Considering HCEC culture, PHMB alone or in association with corticosteroids presented higher toxicity than corticosteroids alone. We found a tendency to metabolic recovery of HCECs after withdraw of the biguanides and/or corticosteroids from the culture medium.

Keywords: Acanthamoeba, keratitis, PHMB, corticosteroids, precision medicine

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Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

105. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Nathalia Mayumi Thomaz de Aquino

Service: (CO) CORNEA AND EXTERNAL DISEASE |

CEP Number: 20512013.6.0000.5505

5. ABSTRACT (REQUIRED):

Title: Application of epidemiologic models to determine associated factors to corneal quality in eye banks.

Author and Co-authors: Nathalia Mayumi T. Aquino, Consuelo B. D. Adan, Elcio Sato, Flavio E. Hirai

Purpose: To develop a methodology using epidemiological models to identify factors related to graft quality in eye banks.

Methods: A case-control study was conducted to determine factors related to primary corneal failure in the state of S?o Paulo between January 2010 and December 2013. Primary graft failure cases were defined as irreversible corneal edema in the immediate postoperative period, unresponsive to topical therapy. Controls were randomly selected from corneal transplants performed within a week after or prior to the cases. Donor?s data were evaluated. Statistical analysis between groups was performed and odds ratio was calculated to determine factors related to primary failure.

Results: 38 cases of primary corneal failure were reported to the S?o Paulo?s Transplant Center, leading to a selecting of 152 controls. The cases age ranged from 16 years to 79 years 0 average of 46.1 years (sd = 16.5 years) and among controls from 4 years to 79 years-average of 19.8 (16.5) years (p = 0.493). There were more men in both groups. Time between death and enucleation was 4.6 (3.7) hours for cases and 3.5 (5.8) hours for control, p = 0.255. Time between enucleation and preservation was 5.7 (3.5) hours for cases and 4.6 (5.1) hours for control, p = 0.238. Regarding endothelial cell counting, the number was 2518.3 (259.4) cells / mm² in cases, and 2627.0 (346.1) cells / mm² in controls (p=0.084). The main cause of death in both groups was cardiovascular disease (50.0% in cases and 49.3% in controls). External causes of death were found in 18.4% of cases and 45.4% of controls. Other causes, such as cancer, accounted for 31.6% of deaths among cases and 5.3% among controls.

Conclusion: The use of a case-control design was useful to determine associated factors for primary graft failure. This methodology could be applied as a tool for quality control in eye banks. In this study, primary graft failure is multifactorial and reflects directly the tissue and its processing quality. Factors such as age, gender and time for grafting were not associated to failure. Causes of death might play a role in cornea quality leading to higher rates or failure and might be a factor to be considered when selecting corneas for transplantation.

Keywords: keratoplasty; corneal graft; graft failure; Eye banking

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Title
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Purpose, Methods, Results,
Conclusion.

106. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Rafael Freire Kobayashi

Service: (CO) CORNEA AND EXTERNAL DISEASE | (RS) REFRACTIVE SURGERY

CEP Number: 804592

5. **ABSTRACT (REQUIRED):**

Title: Scheimpflug imaging of school Children

Author and Co-authors: Rafael F. Kobayashi, Maria Flavia Ribeiro, Mariana P. Wisneski, Denise de Freitas, Renato Ambrosio

Purpose: To evaluate the reliability and quality of Scheimpflug imaging in school Children

Methods: 322 scholar children were evaluated at the department of Ophthalmology and Visual Sciences during the project Vis?o do Futuro. Examinations included static refraction, visual acuity and corneal tomography measured by the Pentacam Scheimpflug imaging system. Data from the Pentacam analysed included the Belin/Ambrosio enhanced ectasia display (BAD), index of highest decentration (IHD) and the QS (quality of the exam).

Results: In progress

Conclusion: In progress

Keywords: Corneal tomography Scheimpflug children

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Conclusion.

107. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Albert Wilson Santos Machado silva

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 1179/07

5. ABSTRACT (REQUIRED):

Title: Anterior Segment Optical Coherence Tomography Findings in Boston Type I Keratoprosthesis

Author and Co-authors: Albert Wilson Santos Machado Silva, Luzia Diegues Silva, Luciene Barbosa de Sousa, Norma Allemann, Lauro Augusto de Oliveira.

Purpose: To report the findings of imaging patients with type 1 Boston Keratoprosthesis (KPro) using anterior segment optical coherence tomography (AS-OCT).

Methods: We performed a retrospective study of patients implanted with Boston Type 1 KPro. A total of 10 eyes of 10 patients were included. Subjects underwent AS-OCT imaging at a single time point. Main points assessed included retroprosthetic membrane, thinning of the cornea carrier graft (melting), and anterior chamber angle.

Results: Preoperative diagnoses for KPro surgery included chemical burn (50%), failed corneal transplant (40%), and Stevens Johnson syndrome (10%). Mean postoperative period until the acquisition of AS-OCT images was 36.4 months (range, 12-72 months). Pseudophakic KPro was implanted in 70% of the eyes, while 30% had aphakic devices implanted. Thinning of the cornea carrier graft (melting) was observed in 50% of the eyes. Retroprosthetic membrane was observed in 40% of the eyes (4/10), and all of them presented corneal melting. Sixty per cent of the eyes presented narrow or closed angle. Other less common findings were epithelial lip over the KPro front plate.

Conclusion: Postoperative ophthalmologic examination and detailed visualization of subtle changes of Kpro patients by slit lamp may be difficult and challenging. AS-OCT is a useful noninvasive imaging technique that provides the ability to monitoring the anatomic stability of an implanted KPro and may also help to monitor for complications.

Keywords: Anterior Segment Optical Coherence Tomography, type 1 Boston Keratoprosthesis, Retroprosthetic membrane, melting

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108. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Eduardo Gayger Muller

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 1292/2015

5. ABSTRACT (REQUIRED):

Title: Qualitative and Comparative analysis of donated corneas preserved in Optisol-GS® vs Eusol-C®

Author and Co-authors: Eduardo G. Muller, Consuelo B. Adan, Elcio H. Sato, Flavio Hirai, Fabio Ramos de Souza Carvalho, Denise Freitas.

Purpose: To compare qualitative and quantitative characteristics of donated corneas from patients with causa mortis sepsis, each one preserved either in Optisol-GS? or Eusol-C?, during the fourteen days of preservation.

Methods: We will perform an analysis of optical quality corneas donated from patients diagnosed with sepsis (which would be discarded according to our brazilian Eye Banking Legislation). Inclusion criteria: (1) Patients between 2 and 80 years-old with diagnosis of sepsis; (2) Family member able to consent to the donation for research purpose; (3) Corneas considered to have optical quality in analysis with the slit lamp along with endothelial cell count > 2000 cells/mm?. Exclusion criteria: (1) Intraocular surgery history; (2) Pathologic or serologic exclusion criteria according to the brazilian law (except causa mortis sepsis), including patients with HIV or hepatitis; (3) Corneas with endothelial cell count < 2000 cells/mm? in the first day of preservation will not be preserved. Each cornea of the same patient will be preserved either in Optisol-GS? (12 corneas) or in Eusol-C? (12 corneas), being the Eye Banking Technicians and Ophthalmologists blinded for the preservation media description. T

Results: In progress.

Conclusion: In progress.

Keywords: Corneal preservation methods; Eye Banking;

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109. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
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Name: Iana Fernandes Lavigne

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0617/15

5. **ABSTRACT (REQUIRED):**

Title: Discarded corneas due to positive donor's serologic test in the Hospital São Paulo Eye Bank

Author and Co-authors: Iana Fernandes Lavigne, Consuelo Bueno Diniz Adan, Flavio Eduardo Hirai, Luciene Barbosa de Sousa

Purpose: To investigate discarded corneas due to positive serologic tests in donors from the Hospital São Paulo Eye Bank during a 12 month period

Methods: Retrospective study of records from cornea donors between August 2014 and July 2015. Information such as serologic test results (Hepatitis B, C, and HIV), source of corneal tissue, donor's gender and age were tested for correlation

Results: In progress

Conclusion: In progress

Keywords: Eye banks; Cornea/microbiology; Corneal transplantation; Serology; Hepatitis C/diagnosis; Tissue donors

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Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

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(US) OCULAR ULTRASOUND

Deadline: 10/2015

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Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

110. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

Name: Mauro Sergio de Oliveira Silva

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 1296/2015

5. ABSTRACT (REQUIRED):

Title: Retrospective study of corneal post-transplant for Acanthamoeba infection

Author and Co-authors: Mauro Sergio de Oliveira Silva, Denise de Freitas, Flavio Eduardo Hirai

Purpose: This study aims to draw a clinical, surgical and demographic profile of patients undergoing corneal transplant for Acanthamoeba infection in the public medical service in S?o Paulo / SP, during a 9-year period

Methods: Retrospective analysis of patients undergoing corneal transplant for Acanthamoeba infection (based on information from Hospital S?o Paulo medical records and eye bank files), during a 9-year period. Several parameters evaluated demographic characteristics of patients (age, gender, user or not contact lenses), timing and type of transplantation; graft survival time; complications and laboratory confirmation of post-transplant protozoan.

Results: In progress

Conclusion: In progress

Keywords: post-transplant; Acanthamoeba; graft survival;

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Deadline: 10/2015

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Purpose, Methods, Results,
Conclusion.

111. FIRST (PRESENTING) AUTHOR (REQUIRED):
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Name: Natalia Silva de Mesquita Parente

Service: (CO) CORNEA AND EXTERNAL DISEASE | (CA) CATARACT

CEP Number: 5201019

5. ABSTRACT (REQUIRED):

Title: Toxic Anterior Segment Syndrome with ocular complications secondary cataract surgery

Author and Co-authors: Natalia Silva de Mesquita Parente, Ricardo Menon Nose, Nicolas Cesario Pereira, Aline Moriyama, Denise de Freitas

Purpose: Analyze the outcome of each patient and the main corneal and intraocular complications found in a number of cases of twenty patients who underwent uncomplicated cataract surgery in August 2014 and developed Toxic Anterior Segment Syndrome (TASS).

Methods: A descriptive, retrospective study will be conducted in twenty eyes of 20 patients who were diagnosed with TASS. They all underwent uncomplicated phacoemulsification and intraocular lens implantation of posterior chamber. The surgeries were performed by the same surgeon in August 2014 (the same day) and TASS was noted on the first postoperative day.

After two months the patients were admitted to the cornea sector and External Diseases Eye UNIFESP-EPM for monitoring Toxic Anterior Segment Syndrome with corneal and intraocular involvement (bullous keratopathy, neurotrophic ulcers, band keratopathy) and patients were submitted to appropriate clinical and surgical therapy.

Results: In progress

Conclusion: In progress

Keywords: cataract, toxic anterior segment syndrome, TASS, keratoplasty, glaucoma, neurotrophic ulcer

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112. FIRST (PRESENTING) AUTHOR (REQUIRED):
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Name: Jose Arthur Pinto Milhomens Filho

Service: (CO) CORNEA AND EXTERNAL DISEASE

CEP Number: 0872/09

5. ABSTRACT (REQUIRED):

Title: Goblet cells density after use of topical immunomodulator in the treatment of patients with dry eye disease

Author and Co-authors: Jose Arthur Pinto Milhomens Filho, Rossen M. Hazarbassanov, Nicolle Queiroz-Hazarbassanov, Jose A.P. Gomes

Purpose: To evaluate a goblet cells density on the treatment of aqueous deficient dry eye (ADDE) and evaporative dry eye (EDE) with an immunomodulating topical medication containing 0.05% ciclosporine A (CsA).

Methods: Clinical double-blind, efficacy and safety pilot study. All patients received CsA 0.05% bid for 3 months and were submitted to the following tests during first visit (T0) and follow-up after three months (T3): impression cytology (IC) of superior and temporal conjunctiva followed by H-PAS staining, which were analyzed for cellularity, cell-to-cell coesivity, nucleus to cytoplasm ratio, chromatin pattern, goblet cell counts, keratinisation and inflammatory cells thus rendering a total cytological score.

Results: For ADDE patients it was observed worsening in IC total score for temporal region samples (Wilcoxon, $p < 0.05$), however there was an overall improvement in IC total score for EDE patients between T0 and T3 (Wilcoxon, $p < 0.05$). Results regarding goblet cells density will be presented on the poster session.

Conclusion: In the EDE group our findings suggest that CsA attenuates ocular surface inflammation as evidenced by decreasing IC total scores. In contrast, the finding of increased IC total scores in ADDE suggests an adverse effect of CsA in these patients.

Keywords: goblet cells density; impression cytology.

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Title
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Purpose, Methods, Results,
Conclusion.

113. **FIRST (PRESENTING) AUTHOR (REQUIRED):**
Must be the author listed first in abstract body.

Name: Daniel Diniz Gama

Service: (LV) LOW VISION

CEP Number: 0

5. **ABSTRACT (REQUIRED):**

Title: Evaluation of a self-test system for on-line visual acuity measurements

Author and Co-authors: Dr. Daniel Diniz, Dr. Leonardo Moraes. Orientador: Dr. Paulo Schor

Purpose: Introduction:

Visual acuity (VA) tests are one of the most widely performed procedures to estimate the overall vision performance of an individual. In this study, we compared the results of a new self-testing on-line system for VA measurements against the gold standard procedures in clinic using a LogMAR chart. The self-test system uses a regular computer monitor to display optotypes connected to the patient's cellphone to control the test. By sliding his finger on the cellphone screen in the same direction of the presented letter E on the monitor, the patient records the perceived orientation of the letter multiple times. In the end, the system computes the corrected answers and outputs a visual acuity.

Objective:

To expand and facilitate people's access to a vision screening procedures; Technological development and modernization.

Methods: About 50 patients, between twelve to 75-years-old, will participate in the study. Monocular and binocular acuities are being measured with the self-testing system and the gold standard method. The difference in the visual acuities is correlated with age, education, eye diseases and smartphone usage frequency to determine efficacy of the device in distinct user groups

Results: Initial results show that the visual acuities obtained with the new system were very similar to the clinical procedure, with a slight tendency to overestimate in one line compared to the LogMar chart. A throughout statistical analysis will be performed when the study is finished.

Conclusion: There's no conclusion yet.

Keywords: Visual acuity, logmar, snellen, chart, smartphone, computer, test

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