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Volume 4, Number 1, January/February 2021

Editorial: Trabeculectomy Must Survive!
Kuldev Singh, MD, MPH, Mark B. Sherwood, FRCS, FRCOphth, Louis R. Pasquale, MD

In Memoriam: Stephen Michael Drance, OC, MD (1925–2020)
Balwantray Chauhan, PhD

Original Articles

Special Commentary: Using Clinical Decision Support Systems to Bring Predictive Models to the Glaucoma Clinic
Brian C. Stagg, MD, MS, Joshua D. Stein, MD, MS, Felipe A. Medeiros, MD, PhD,
Barbara Wirostko, MD, Alan Crandall, MD, M. Elizabeth Hartnett, MD,
Mollie Cummins, PhD, RN, Alan Morris, MD, Rachel Hess, MD, MS,
Kensaku Kawamoto, MD, PhD

Clinical decision support systems are computer-based tools designed to improve clinician decision making for individual patients. These tools could be used to present the results of glaucoma predictive models to clinicians as they make decisions.

The Effectiveness of Intracameral Moxifloxacin Endophthalmitis Prophylaxis for Trabeculectomy
William Mitchell, MBBS, MPH, Lisa Tom, MD, Indira Durai, MD, Sindhushree Rajagopal, MD,
Menaka Vimalanathan, MD, Venkatesh Rengaraj, MD, Kavitha Srinivasan, MD,
Nazlee Zebardast, MD, MSc

A retrospective clinical registry analysis of 57,986 eyes demonstrated a nearly 4-fold lower rate of acute postoperative endophthalmitis after the introduction of intracameral moxifloxacin prophylaxis for trabeculectomy and combined cataract and trabeculectomy surgery.

(Continued)

On the cover: “Encounter of the semicircles (Goldmann Tonometry)” by Celso de Souza Dias Júnior, MD (Hospital de Olhos de Sergipe, Aracaju, SE — Brazil). Equipment: iPhone XS mounted on a slit lamp.
Corneal Endothelial Cell Loss after Baerveldt Glaucoma Implant Surgery
Scott Hau, BSc, MSc, Catey Bunce, BSc, DSc, Keith Barton, MD, FRCPophth
Baerveldt glaucoma implants are associated with central corneal and peripheral endothelial cell loss over 5 years. Tube insertion site location in the drainage angle and the tube length position were associated with cell loss.

Corneal Parameters after Tube-Shunt Implantation through the Ciliary Sulcus
Adam J. Weiner, MD, Yotam Weiner, MD, Asher Weiner, MD
The authors recorded a nonstatistically significant decline in corneal endothelial cell density 24 months after tube shunt implantation through the ciliary sulcus, a smaller decline compared with that previously reported after anterior chamber tube-shunt implantation.

Impact of the Support, Educate, Empower Personalized Glaucoma Coaching Program Pilot Study on Eye Drop Instillation Technique and Self-Efficacy
Kevin J. Schneider, MA, Cecilia N. Hollenhorst, BA, Autumn N. Valicevic, MS, Leslie M. Niziol, MS, Michele Heisler, MD, MPA, David C. Musch, PhD, MPH, Stephen M. Cain, PhD, Paula-Anne Newman-Casey, MD, MS
Personalized motivational interviewing-based eye drop instillation coaching through the Support, Educate, Empower program demonstrated increased participant self-efficacy for eye drop installation and decreased frequency of bottle contamination.

Comparison of Peripapillary Capillary Density in Glaucoma Patients of African and European Descent
Sasan Moghimi, MD, Linda M. Zangwill, PhD, Huiyuan Hou, MD, PhD, Brandon Wong, MD, James Proudfoot, MSc, Rafaela C. Penteado, MD, Eren Ekici, MD, Christopher Bovd, PhD, Robert N. Weinreb, MD
The authors evaluated racial differences in capillary density measured by OCT angiography in patients with open-angle glaucoma. Diagnostic performance of capillary density was found to be race dependent.
Risk Factors for Glaucoma Drainage Device Failure and Complication in the Pediatric Population
Charles M. Medert, MD, Kara M. Caivuoto, MD, Elizabeth A. Vanner, PhD, Alana L. Grajewski, MD, Ta C. Chang, MD

Pediatric tube failures and complications are influenced by age at time of surgery as well as other factors, such as preoperative intraocular pressure, etiology of glaucoma, and concurrent procedures at the time of implantation.

The Use of eHealth Practices by United States Patients with Self-Reported Glaucoma
Brian C. Stagg, MD, MS, Divakar Gupta, MD, Joshua R. Ehrlich, MD, MPH, Paula Anne Newman-Casey, MD, MS, Joshua D. Stein, MD, MS, Kensaku Kawamoto, MD, PhD, Rachel Hess, MD, MS

In this nationally representative United States survey, 46.2% of those with glaucoma used eHealth in the 12 months before the survey compared with 52.5% of those without glaucoma. This relationship reversed after adjusting for confounders.

Improving Visual Field Trend Analysis with OCT and Deeply Regularized Latent-Space Linear Regression
Linchuan Xu, PhD, Ryo Asaoka, MD, PhD, Hiroshi Murata, MD, Taichi Kitwaki, PhD, Yuhui Zheng, MSc, Masato Matsuda, Yuni Fujino, Masaki Tanito, MD, PhD, Kazuhiko Mori, MD, PhD, Yoko Ikeda, MD, PhD, Takashi Kanamoto, MD, PhD, Kenji Yamanishi, PhD

Using the deeply regularized latent-space linear regression model, OCT measurements can improve visual field trend analyses in glaucoma patients.

Agreement of Intraocular Pressure Measurement of Icare ic200 with Goldmann Applanation Tonometer in Adult Eyes with Normal Cornea
Swathi Vallabh Badakere, MD, Raghava Chary, DOT, Nidhal S. Choudhuri, DNB, Harsha L. Rao, MD, DNB, Chandrasekhar Garudachari, MD, Sirisha Senthil, MD, FRCS

The agreement between intraocular pressure (IOP) measurement by the Icare ic200 and Goldmann Applanation Tonometer in adult eyes was good (mean difference 2 mmHg) when IOP was ≤21 mmHg.
Laminar and Prelaminar Tissue Characteristics of Glaucomatous Eyes Using Enhanced Depth Imaging OCT
Shahin Yazdani, MD, Afsaneh Naderi Beni, MD, Mohammad Pakravan, MD

Reduced lamina cribrosa and prelaminar tissue thicknesses are more obvious in pseudoexfoliation glaucoma than in primary open-angle glaucoma and primary angle-closure glaucoma.

Estimating Global Visual Field Indices in Glaucoma by Combining Macula and Optic Disc OCT Scans Using 3-Dimensional Convolutional Neural Networks
Hsin-Hao Yu, PhD, Stefan R. Maetschke, PhD, Bhavna J. Antony, PhD, Hiroshi Ishikawa, MD, Gadi Wollstein, MD, Joel S. Schuman, MD, Rahil Garnavi, PhD

Global indices of visual field could be estimated from OCT scans using deep neural networks. Combining macular and optic nerve head scans was more effective in advanced glaucoma.

Report

A Comparison of Short-Term Intraocular Pressure Fluctuation with Office-Based and Home Tonometry
Andrew J. Tatham, MD, MBA, Su L. Young, MBChB, Etienne Chew, MBChB, Lyndsay Brown, MSc

Correspondence (available at www.ophthalmologyglaucoma.org/current) e1
Re: Koh et al.: Treatment outcomes using the PAUL glaucoma implant to control intraocular pressure in eyes with refractory glaucoma (Ophthalmology Glaucoma. 2020;3:350–359)
Raquel Esteves Marques, MD, Filipa Jorge Teixeira, MD, André Diogo Barata, MD, Luís Abegão Pinto, MD, PhD

Reply
Victor Koh, MMed, MSc, Paul Chew, FRCSEd, Giacinto Triolo, MD, Kin Sheng Lim, MD, FRCOphth, Keith Barton, MD, FRCS (Engl)
Jingyi Ma, BMSc, Irfan N. Kherani, MD, FRCSC, Iqbal Ike K. Ahmed, MD, FRCSC, Matthew B. Schlenker, MD, FRCSC

Reply
Darana Yuen, MD, Qayim Kaba, Eric Tam, MD, Sohel Somani, MD

Esther Arranz-Marquez, MD, PhD, Miguel A. Teus, MD, PhD

Pictures & Perspectives

Optic Disc Microvasculature Dropout in Congenital Glaucoma Detected by OCT Angiography
Prithvi Ramtohul, MD, Danièle Denis, MD, PhD

Tetracoria
Jyoti Shakrawal, MD, Karthikeyan Mahalingam, MD

Descemet’s Tear: Sine Qua Non of Acute Hydrops in Primary Congenital Glaucoma
Sagarika Snehi, DNB, Gaurav Gupta, MS, Sushmita Kaushik, MS

In-the-Bag Intraocular Lens Subluxation in a Patient with Exfoliation Glaucoma
Ana M. Rubin Pantini, MD, Wallace L.M. Alward, MD, Douglas Brice Critser, CRA, OCT-C

Blood in Schlemm’s Canal from a Carotid-Cavernous Fistula
Andrew K. Smith, MD, Igor I. Bussel, MD, Sanja G. Cypen, MD