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Program#/Poster#: 190/A486

Abstract Title: Repeatability and Accuracy on the Measurement of Retinal Nerve Fiber Layer (NFL) Thickness Using RTVue FD-OCT System

Presentation Start/End Time: Sunday, May 01, 2011, 8:30 AM -10:15 AM

Session Number: 108

Session Title: Retinal Imaging in Glaucoma /

Location: Hall B/C

Reviewing Code: 229 glaucoma: imaging - GL

Author Block: Yuanmu Deng1, Ben Jang1, Danny Leung1, Xingzhi Luo1, Rohit Varma2, David Huang3, Ou Tan3, Mike Sinai1. 1Optovue, Inc., Fremont, CA; 2Ophthalmology, USC, Doheny Eye Institute, Los Angeles, CA; 3Casey Eye Institute, Oregon Health & Science University, Portland, OR.

Keywords: 551 imaging methods (CT, FA, ICG, MRI, OCT, RTA, SLO, ultrasound); 607 nerve fiber layer; 549 imaging/image analysis: clinical

Abstract Body:
Purpose: To assess the repeatability and accuracy on the measurement of retinal Nerve Fiber Layer (NFL) thickness using the RTVue FD-OCT system (Optovue, Fremont, CA).
Methods: The study was conducted using the ONH scan protocol of the RTVue system. To evaluate repeatability, the Advanced Imaging for Glaucoma study (AIGS) dataset in the University of Southern California collected from 2006 to 2010 was used. Total 107 subjects with repeated ONH scans (37 normals and 70 perimetric glaucoma subjects) within the same visit were studied. One eye per subject was randomly selected and repeatability was assessed by the intraclass correlation coefficient (ICC). The measurements were obtained through a TSNIT graph sampled from the optic disc center with a diameter of 3.45mm divided into 8 sectors. To evaluate accuracy, the ONH scans acquired from both eyes of 29 normal subjects in Optovue normative database were studied. An experienced image processing expert manually delineated the NFL inner and outer boundaries. The manual drawings were further verfified by two other experts. Accuracy was assessed for NFL inner and outer boundaries and the NFL thickness by computing the average differences of the results obtained from the automatic algorithm and those from the manual drawings, respectively.
Results: The repeatabilities based on the ICC of the NFL thickness measurements for normal and (perimetric glaucoma) subjects are: temporal quadrant 0.94(0.90), superior quadrant 0.89(0.96), nasal quadrant 0.90(0.92), inferior quadrant 0.89(0.97), upper hemisphere 0.93(0.97), lower hemisphere 0.92(0.97), and Overall average 0.96(0.98). The accuracies for NFL inner, outer boundaries and NFL thickness are: 1.68µm±2.4 µm, 4.23µm±6.54 µm, and 2.55µm±6.84 µm, respectively.
Conclusions: The NFL thickness measurement with RTVue is highly repeatable for both normal and glaucomatous eyes. Accuracy is within 3 microns on average indicating close agreement with using human boundary drawing as reference standard.

CommercialRelationships: Yuanmu Deng, Optovue, Inc. (E); Ben Jang, Optovue, Inc. (E); Danny Leung, Optovue, Inc. (E); Xingzhi Luo, Optovue, Inc. (E); Rohit Varma, Optovue, Inc. (R); David Huang, Carl Zeiss Meditec, Inc. (P), Optovue, Inc. (F, I, C, P, R); Ou Tan, Optovue, Inc. (F); Mike Sinai, Optovue, Inc. (E)

Support: None

Program#/Poster#: 198/A494

Abstract Title: Glaucoma Detection Using Three Different RTVue Optical Coherence Tomography Scanning Protocols

Presentation Start/End Time: Sunday, May 01, 2011, 8:30 AM -10:15 AM

Session Number: 108

Session Title: Retinal Imaging in Glaucoma /

Location: Hall B/C

Reviewing Code: 229 glaucoma: imaging - GL

Author Block: Manuele Michelessi1, Francesco Oddone2, Marco Centofanti1,2, Lucia Tanga2, Gloria Roberti1, Alessandra Acquistapace1, Francesca Berardo2, Gianluca Manni1,2. 1Dipartimento di Biopatologia e Diagnostica per immagini,Università di Tor Vergata, Rome, Italy; 2Fondazione G.B.Bietti-IRCCS, Rome, Italy.

Keywords: 549 imaging/image analysis: clinical; 607 nerve fiber layer; 626 optic nerve

Abstract Body:
Purpose: To evaluate and to compare diagnostic ability of optic nerve head(ONH), retinal nerve fiber layer(RNFL) and macular thickness measurements obtained with RTVue fourier domain optical coherence tomography(FD-OCT), to discriminate healthy from glaucomatous eyes.
Methods: 206 eyes from 126 normal subjects and 80 glaucomatous patients were enrolled. All patients underwent a full eye examination, standard achromatic perimetry (SAP) and were imaged with RTVue FD-OCT ,using three different scanning protocols (RNFL, ONH and ganglion cell complex(GCC) analysis). Glaucoma was defined on the basis of SITA-24-2 visual field loss (PSD and MD p<5% and Glaucoma Hemifield Test outside normal limits) on two consecutive visual fields. Areas under receiver operating characteristic curve(AUC) were calculated as measure of diagnostic accuracy and the Henley-McNeil method was used to compare the AUC's of best parameter of each scanning protocol. Sensitivity at ≥90% fixed specificity was also evaluated.
Results: The RNFL parameters with the largest AUC were average thickness(0,861) and inferior quadrant thickness(0,854).Inferior rim area(0,871) and rim volume(0,875) showed the best performance among ONH parameters. The GCC parameters with the higher AUC were inner average thickness(0,847) and inferior inner average thickness(0,82). No statistically significant differences were found between the AUCs of the best parameter of each scanning protocol. At a fixed specificity of 90%, RNFL inferior quadrant and ONH inferior rim area showed the highest sensitivity (67%).
Conclusions: RTVue ONH , RNFL and GCC parameters had similarly and good diagnostic ability to discriminate between healthy and glaucomatous eye. ONH inferior rim area and RNFL inferior quadrant thickness showed the best diagnostic performance.

CommercialRelationships: Manuele Michelessi, None; Francesco Oddone, None; Marco Centofanti, None; Lucia Tanga, None; Gloria Roberti, None; Alessandra Acquistapace, None; Francesca Berardo, None; Gianluca Manni, None

Support: None

Program#/Poster#: 202/A498

Abstract Title: Modeling Thickness Variation Of Ganglion Cell Complex And Nerve Fiber Layer Measured Using Fourier-domain Optical Coherence Tomography

Presentation Start/End Time: Sunday, May 01, 2011, 8:30 AM -10:15 AM

Session Number: 108

Session Title: Retinal Imaging in Glaucoma /

Location: Hall B/C

Reviewing Code: 231 glaucoma: laser therapy - GL

Author Block: Xinbo Zhang, Ou Tan, David Huang. Ophthalmology, Oregon Health & Science University, Portland, OR.

Keywords: 551 imaging methods (CT, FA, ICG, MRI, OCT, RTA, SLO, ultrasound); 530 ganglion cells; 607 nerve fiber layer

Abstract Body:
Purpose: To model the between-visit variation and with-visit variation and age related thinning in the overall average thickness of ganglion cell complex (GCC) and nerve fiber layer (NFL) measured using Fourier-Domain optical coherence tomography (FD-OCT); and to establish criteria for detection of glaucoma progression by serial measurement of GCC and NFL thickness during follow-up visits.
Methods: We analyzed the data from participants enrolled at the Doheny/USC site of the multi-center longitudinal Advanced Imaging for Glaucoma Study (www.AIGStudy.net). An FD-OCT system (RTVue) was used to map GCC and NFL thickness 3 times on each study visit. The overall average thickness was first adjusted based on the OCT signal strength index (0.05 µm per SSI for GCC and 0.11 µm per SSI for NFL). Next, the natural logarithm of thickness measured from each OCT scan on the normal (N) patient was analyzed in a mixed effect model. The model included age as the fixed effect to account for age related thinning and subject, eye, between-visit and with-in visit variation as the random effects. If the GCC or NFL thickness of a patient is confirmed to decrease beyond a threshold set by the normal eyes, the patient is considered progressed. In this study the threshold was set as 1% cut-off from the distribution of the GCC or NFL thickness after ajusting for age related thinning effect.
Results: The analysis included 65 eyes (33 participants) from normal group; 47 eyes (36 participants) from glaucoma suspect or pre-perimetric glaucomatous (GSPPG) group; and 88 eyes (57 participants) from perimetric glaucoma (PG) group. Each eye was measured on 1 to 6 visits (average 2.7). The one percentile level cut-off for glaucoma progression based on GCC thickness loss was given by the formula: 7.6% + 0.31%*TIME, where TIME is the number of the years between the follow-up and baseline tests. (Example: the patient is considered progressed if the GCC thickness decreased by 7.6% + 0.31%*10 = 10.7% over 10 years.) The criterion for NFL was 9.4% + 0.08%*TIME. The progression must be confirmed by 3 consecutive measurements in the GSPPG and PG group. 8 eyes in the GSPPG and PG group had confirmed progression using GCC or NFL loss criteria over average follow-up of 18 months.
Conclusions: The study developed criteria to detect glaucoma progression based on serial FD-OCT measurements of GCC and NFL thickness that takes consideration of normal aging and normal variation. The criteria may be used in combination of visual field test to enhance glaucoma diagnosis. Long term follow-up data will be needed to improve the criteria.

CommercialRelationships: Xinbo Zhang, None; Ou Tan, Receive grant support from Optovue Inc (F); David Huang, Receive grant support from Optovue Inc (F), Receive travel support from Optovue (R)

Support: NIH Grant R01 EY013516

Program#/Poster#: 3654/D761

Abstract Title: Pattern of Ganglion Cells and Nerve Fiber Layer Loss in Non-Arteritic Ischemic Optic Neuropathy determined by Fourier Domain Optical Coherence Tomography

Presentation Start/End Time: Tuesday, May 03, 2011, 3:45 PM - 5:30 PM

Session Number: 374

Session Title: Imaging of the Healthy and Diseased Retina II

Location: Hall B/C

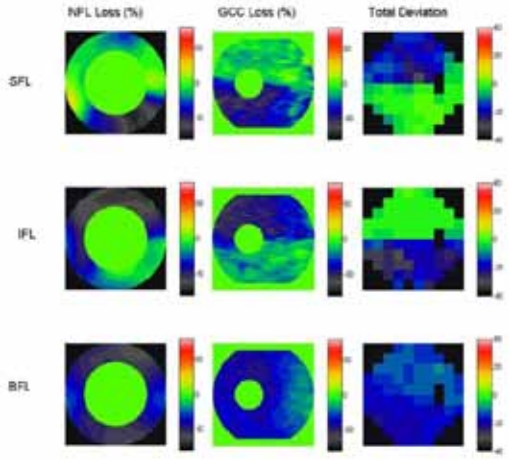
Reviewing Code: 323 optical coherence tomography - MOI

Author Block: Divya Aggarwal1, Ou Tan2, David Huang2, Alfredo A. Sadun1. 1Neuro-Ophthal, Keck-USC Sch of Med, Doheny Eye Institute, Los Angeles, CA; 2Ophthalmology, Oregon Health and Science University, Portland, OR.

Keywords: 549 imaging/image analysis: clinical; 607 nerve fiber layer; 626 optic nerve

Abstract Body:
Purpose: Non-arteritic ischemic optic neuropathy (NAION) involves specific zones of ischemic injury. This study aimed to analyze the pattern of ganglion cell and nerve fiber layer (NFL) loss by optical coherence tomography (OCT).
Methods: .Patients diagnosed with NAION from 2007 to 2009 were categorized into three groups- 'superior field loss (SFL)', 'inferior field loss (IFL)', and 'bihemispheric loss (BFL)'. They were scanned on RTVue Fourier-domain OCT six months after presentation. Macular GCC and peripapillary NFL thickness maps were computed from OCT scans. Normal reference data was obtained from the Advance Image for Glaucoma Study (www.AIGStudy.net). The correlation between the superior-inferior difference (SID) of GCC or NFL loss and SID of VF was calculated using linear regression.
Results: Twenty five NAION eyes with valid VF and OCT measurements were analyzed for NFL and GCC thickness in both hemispheres (table). The SID of VF loss significantly correlated to the SID of NFL (R2=0.68) and GCC loss (R2=0.58). The average NFL deviation map of SFL cases showed infratemporal NFL loss while the IFL cases showed three quadrants of NFL loss from superotemporal to inferonasal quadrants (fig).
Conclusions: Altitudinal VF loss in NAION corresponds to characteristic patterns of NFL and GCC loss in the opposite hemisphere. IFL cases generally showed larger damage areas than SFL cases on OCT. Recognizing these patterns may aid in the diagnosis and evaluation of NAION with OCT.

	Area averaged	SFL	IFL	BFL
GCC (μ)	Superior	79.3±11.8	50.6±8.3	58.1±12.0
	Inferior	61.7±11.3	77.2±7.4	61.2±10.6
NFL (μ)	Superior	87.6±15.7	35.1±6.6	44.2±12.0
	Inferior	56.0±19.0	73.2±10.7	44.3±9.4
VF TD (dB)	Superior	-16.7±6.5	-2.0±2.1	-14.9±6.5
	Inferior	-2.2±2.8	-22.7±8.2	-2.0±9.5



CommercialRelationships: Divya Aggarwal, None; Ou Tan, Optovue Inc. (F); David Huang, Carl Zeiss Meditech inc. (P), Optovue Inc. (F, I, C, R); Alfredo A. Sadun, None

Support: NIH R01 EY013516; Research to Prevent Blindness

Program#/Poster#: 5096/A585

Abstract Title: Effect Of Postural Change On Optic Disc Topographic Measurements Obtained By Ivue Optical Coherence Tomography

Presentation Start/End Time: Wednesday, May 04, 2011, 3:45 PM - 5:30 PM

Session Number: 479

Session Title: Structure Function Associations in Glaucoma /

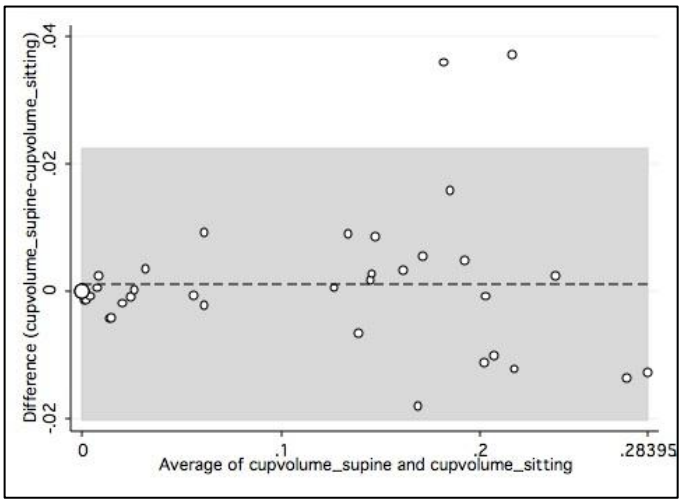
Location: Hall B/C

Reviewing Code: 229 glaucoma: imaging - GL

Author Block: Kaweh Mansouri, Ali Tafreshi, Robert N. Weinreb, Mauro T. Leite, John H. Liu. Glaucoma, Hamilton Glaucoma Center, University of California, San Diego, La Jolla, CA.

Keywords: 624 optic disc

Abstract Body:
Purpose: To evaluate changes in optic disc topographic parameters assessed by a portable Spectral Domain optical coherence tomography (SDOCT) (iVue, Optovue Inc., CA) between the sitting and supine body positions.
Methods: In this cross-sectional observational study, 40 eyes of 20 subjects (10 healthy young adults [ages 20-27] and 10 older healthy adults [ages 50-66]) were included. All subjects were evaluated in morning hours during a single session. The SDOCT examination protocol consisted of ten scans of each eye in the supine and sitting body positions. Optic disc parameters evaluated in this study were disc area, cup area, rim area and cup volume. The relationship between changes in topographic parameters and change in body position was investigated using generalized estimating equations to adjust for multiple measurements per individual. The agreement between measurements in sitting and supine position was evaluated by plotting the difference between measurements against their mean.
Results: Average age was 22.9 ± 2.6 years in the young and 53.9 ± 4.9 years in the older adult group. In young subjects, optic nerve head volume measurements were 0.51 ± 0.20 µm2 (supine) vs. 0.53 ± 0.19 µm2 (sitting) (p=0.79) and 0.46 ± 0.18 µm2 (supine) vs. 0.45 ± 0.17 µm2 (sitting) (p=0.80) in older healthy adults. Postural change did not have a significant effect on measurements of cup volume in young subjects [0.12 ± 0.14 µm2 (supine) vs. 0.12 ± 0.13 µm2 (sitting) (p=0.98)] or in older adults [0.14 ± 0.10 µm2 vs. 0.14 ± 0.11µm2 (p=0.90)]. There was, however, a tendency for higher posture-dependent changes in eyes with larger cup-volumes (Fig.1; Bland-Altman plot for postural change in cupvolume). In both groups, no statistically significant changes occurred in other parameters such as disc area, cup area, rim area, rim volume, average and maximum cup depth.
Conclusions: In healthy young and adult subjects, posture-dependent changes of optic disc topography were not observed.



CommercialRelationships: Kaweh Mansouri, Sensimed AG, Switzerland (C); Ali Tafreshi, None; Robert N. Weinreb, Alcon, Allergan, Carl Zeiss Meditec, Optovue, Pfizer, Merck (C), Carl Zeiss Meditec, Heidelberg Engineering GmbH, Novartis, Optovue., Topcon Medical Systems. (F); Mauro T. Leite, None; John H. Liu, None

Support: None

Program#/Poster#: 2974

Abstract Title: **Standardizing Retinal Nerve Fiber Layer (RNFL) Thickness Measurements Across Time Domain and Spectral Domain Optical Coherence Tomography (TD- and SD-OCT) Devices While Accounting for Scan Location**

Presentation Start/End Time: Tuesday, May 04, 2010, 2:00 PM - 2:15 PM

Session Number: 345

Session Title: Clinical Science in Glaucoma Imaging

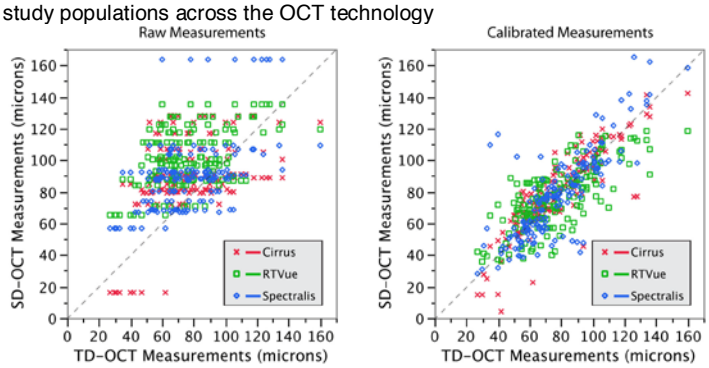
Location: Grand D

Reviewing Code: 231 glaucoma: imaging – GL

Author Block: *H. Ishikawa[1,2], J.S. Kim[1,2], G. Wollstein[1], R.A. Bilonick[1], L. Kagemann[1], P. Brennen[1], J.S. Schuman[1,2].* [1]UPMC Eye Center, Eye and Ear Institute, Ophthalmology and Visual Science Research Center, Department of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; [2]Department of Bioengineering, Swanson School of Engineering, University of Pittsburgh, Pittsburgh, PA.

Keywords: 549 imaging/image analysis: clinical, 607 nerve fiber layer, 551 imaging methods (CT, FA, ICG, MRI, OCT, RTA, SLO, ultrasound)

Abstract Body: **Purpose:** To standardize the RNFL thickness measurements among TD- and various SD-OCT devices by establishing calibration equations while accounting for variable TD-OCT scan location using a scan location matching (SLM) algorithm.
Methods: Eighteen eyes (11 healthy and 7 glaucoma) had nine circumpapillary TD-OCT (Stratus OCT; Carl Zeiss Meditec, Inc., Dublin, CA (CZMI)) scans (one centered and 8 intentionally off-centered). In addition, one 3D cube scan centered at the optic nerve head was obtained for each eye using 3 SD-OCT devices: Cirrus HD-OCT (CZMI), RTVue (Optovue, Fremont, CA), and Spectralis (Heidelberg Engineering, Heidelberg, Germany). Matched scan location for each TD-OCT scan (centered and off-centered) was detected on each of the 3 corresponding SD-OCT cube data using the SLM algorithm. RNFL thickness measurement calibration equations from TD- to SD-OCTs were computed separately.
Results: Before calibration, the global mean RNFL thickness measurements of Cirrus, RTVue, and Spectralis were significantly higher than TD-OCT circle scan (16.6, 30.7, and 16.4% increase, respectively; p0.06) (Figure).
Conclusions: Calibration equations standardized RNFL thickness measurements so that they are directly comparable among TD- and various SD-OCT devices. This may allow us to longitudinally study populations across the OCT technology



generations.

CommercialRelationships: **H. Ishikawa**, Bioptigen, Inc., P; **J.S. Kim**, None; **G. Wollstein**, Carl Zeiss Meditec, Inc., F; Optovue, F; Bioptigen, Inc., P; **R.A. Bilonick**, None; **L. Kagemann**, None; **P. Brennen**, None; **J.S. Schuman**, Carl Zeiss Meditec, Inc., P; Bioptigen, Inc., P; Pfizer, R; Heidelberg Engineering, R; Carl Zeiss Meditec, Inc., R.

Support: NIH R01-EY013178-8, P30-EY008098, R01-EY013516; Eye and Ear Foundation (Pittsburgh, PA); Research to Prevent Blindness.

Program#/Poster#:	4907/A330
Abstract Title:	**Relation Between Structural Measurements by Spectral Domain Optical Coherence Tomography (RTVue-100) and Functional Parameters in Glaucoma Patients**
Presentation Start/End Time:	Wednesday, May 05, 2010, 3:45 PM - 5:30 PM
Session Number:	476
Session Title:	Structure Function Associations in Glaucoma
Location:	Hall B/C
Reviewing Code:	237 glaucoma: structure/function relationships - GL
Author Block:	*L. Tanga[1], F. Oddone[1], G. Manni[1,2], S. Lotito[2], L. Tranchina[2], G. Roberti[2], M. Michelessi[2], P. Fogagnolo[1], M. Centofanti[1,2].* [1]Fondazione GB Bietti-IRCCS, Rome, Italy; [2]Dipartimento di Biopatologia e Diagnostica per Immagini, Università di Roma Tor Vergata, Rome, Italy.
Keywords:	607 nerve fiber layer, 754 visual fields, 530 ganglion cells
Abstract Body:	**Purpose:** to evaluate relationship between structural measurements of Retinal Nerve Fiber Layer thickness (RNFL) and Retinal Ganglion Cells layer thickness (GCC) measured by spectral domain optical coherence tomography (RTVue-100) and functional parameters measured by standard automated perimetry (SAP), Short wavelength automated perimetry (SWAP) and frequency-doubling technology (FDT) in glaucoma patients **Methods:** thirty glaucomatous patients underwent a complete ophthalmological examination, RNFL and GCC assessment by RTVue-100 (Optovue Inc. Fremont CA), visual field testing by SAP, SWAP and FDT matrix in randomized order and repeated two times. SWAP and SAP were performed using the SITA program of Humphrey Field Analyzer (Carl Zeiss Meditec, Dublin, CA) over the central 24 degrees of the retina. FDT matrix was performed using the 24-2 full-threshold program of Humphrey FDT (Carl Zeiss Meditec, Dublin, CA). We included in the analysis the second repetition of visual field. All tests were reliable (false positive <15%; fixation losses and false-negative responses <25%). Linear regression analysis was used to analyse data **Results:** We found strong relationship between FDT matrix mean deviation (MD) and RNFL average (R^2:0.77; p<0.0001) and good relation between FDT matrix pattern standard deviation (PSD) (R^2: 0.63; p= 0.0002), FDT matrix mean retinal sensitivity(MS)(R^2=0.65;p=0.0002) and RNFL average. Similar results were found for sector analysis in FDT matrix MS and RNFL sectors. It was found weak relation between SAP MD(R^2:0.32; p=0.008), SAP PSD (R^2:0.41, p=0.0025), SAP MS (R^2:0.25; p= 0.02), SWAP MD (R^2 :0.31; p=0.01) , SWAP PSD (R^2:0.46; p=0.001) and RNFL average. SWAP PSD and GCC (R^2:0.23; p=0.03) was weakly related. No relation between GCC and other functional parameters was found. **Conclusions:** Our study suggests that structural measurements of RNFL in RTVue-100 are related with FDT matrix functional parameters in glaucoma patients.
CommercialRelationships:	**L. Tanga**, None; **F. Oddone**, None; **G. Manni**, None; **S. Lotito**, None; **L. Tranchina**, None; **G. Roberti**, None; **M. Michelessi**, None; **P. Fogagnolo**, None; **M. Centofanti**, None.
Support:	None

Program#/Poster#: 4895/A318

Abstract Title: Comparison of Optic Disc Topographic Measurements Using Fourier-Domain Optical Coherence Tomography and Confocal Scanning Laser Ophthalmoscopy in Glaucoma Patients and Normal Subjects

Presentation Start/End Time: Wednesday, May 05, 2010, 3:45 PM - 5:30 PM

Session Number: 476

Session Title: Structure Function Associations in Glaucoma

Location: Hall B/C

Reviewing Code: 237 glaucoma: structure/function relationships - GL

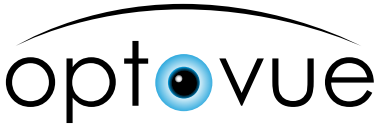
Author Block: A. Schulze, J. Lamparter, N. Pfeiffer, E.M. Hoffmann. Universitaets-Augenklinik, Johannes Gutenberg-Universitaet Mainz, Mainz, Germany.

Keywords: 549 imaging/image analysis: clinical, 551 imaging methods (CT, FA, ICG, MRI, OCT, RTA, SLO, ultrasound), 465 clinical (human) or epidemiologic studies: systems/equipment/techniques

Abstract Body: Purpose: Imaging systems are useful tools for diagnosis and progression analysis of glaucoma. The next generation of optical coherence tomography (OCT) called Fourier-Domain OCT with higher resolution and detailed imaging of the optic nerve head and the retinal nerve fiber layer (RNFL) is available. The aim of this study was to compare the established scanning laser ophthalmoscope (HRT3) with the Fourier-Domain OCT (RTVue-100).
Methods: One hundred eyes of 100 early glaucoma patients and 60 eyes of 60 healthy age matched controls were included. Early glaucoma was defined as a visual field typical for glaucoma with a mean deviation [MD] of≤ 9 dB and/or pattern standard deviation [PSD] ≤ 8% and/or corrected loss variance [CLV]≤ 64 dB² and a typical optic nerve head damage. Healthy controls had at least one normal reliable result on standard automated perimetry (SAP) and a normal optic nerve head. The area and the volume of the disc, cup and rim, the cup-disc-ratio, and the average of the RNFL were measured. A correlation of optic disc topographic parameters and RFNL was analysed using the Spearman-Rho-test. For discrimination between glaucoma and normal subjects receiver operating characteristic (ROC) curves were used.
Results: The highest correlation between the instruments was shown with the parameters cup area (0.873), cup volume (0.848), disc area (0.748), and cup-disc-ratio (0.722). Discrimination between glaucoma patients and healthy subjects was better using the RTVue-100. The largest area under the ROC-curve (AUROC) for RTVue-100 was achieved with rim volume (0.819), rim area (0.816) and RNFL average (0.814). The largest AUROCs for HRT3 were cup-disc-ratio (0.738), cup area (0.702), rim area (0.675), and cup volume (0.649).
Conclusion: We found a good correlation between optic disc topographic measurements by RTVue-100 and HRT3. Diagnostic precision was better with the RTVue-100 compared to the HRT3. The Fourier-Domain-OCT is a useful tool for glaucoma diagnosis. Further studies will evaluate its usefulness in progression analysis.

CommercialRelationships: A. Schulze, None; J. Lamparter, None; N. Pfeiffer, None; E.M. Hoffmann, None.

Support: None



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