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[Close Window](#)**Program#/Poster#:** 3308/B322**Abstract Title:** **The Correlations Between Retinal Nerve Fiber Layer Defect and Peripapillary Atrophy****Presentation Start/End Time:** Tuesday, May 08, 2007, 3:00 PM - 4:45 PM**Location:** Hall B/C**Reviewing Code:** 196 glaucoma:opticdiscandRNFLimaging - GL**Author Block:** *B.Cho*<sup>1A</sup>, *S.Kim*<sup>2</sup>, *H.-J.Kong*<sup>2</sup>, *J.-M.Seo*<sup>1A</sup>, *H.Kim*<sup>1B</sup>, *H.Chung*<sup>1A</sup>, *J.Hwang*<sup>3</sup>, *K.Park*<sup>1A</sup>.  
<sup>A</sup>Department of Ophthalmology, <sup>B</sup>Department of Biomedical Engineering, <sup>1</sup>Seoul National University College of Medicine, Seoul, Republic of Korea; <sup>2</sup>Department of Biomedical Engineering, Graduate School of Seoul National University, Seoul, Republic of Korea; <sup>3</sup>Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul, Republic of Korea.**Keywords:** 603 nerve fiber layer,546 imaging/image analysis: clinical,545 image processing**Purpose:** In order to investigate a correlation between retinal nerve fiber layer (RNFL) defect and peripapillary atrophy (PPA) in patients with RNFL defect**Methods:** The width and the azimuth of RNFL defect and PPA were measured manually in the digital RNFL photographs of 80 patients with a single localized RNFL defect by one examiner. The location of the point of maximum radial extent of PPA was measured. The border of the cup and disk of optic nerve head, and PPA were determined semi-automatically. The area of cup, disk, and PPA, and major/minor axis length of cup and disc were calculated automatically on the basis of the center of mass and Eigen-value/vector. The correlation among these parameters was analyzed.**Results:** Forty-seven patients with both RNFL defect and PPA were younger ( $p=0.036$ ), and had a wider ( $p=0.028$ ) and more inferiorly located RNFL defect, compared to the 33 patients with RNFL defect only. There was a linear correlation between the azimuth of RNFL defect and the axis of PPA, and the RNFL defect was about 30 degrees inferiorly located to PPA. The width of RNFL defect was correlated to the PPA area/disc area ratio, and was also correlated to the cup/disc ratio with a marginal significance. However, it was not correlated to the PPA ( $p=0.476$ ).**Conclusions:** PPA was a risk factor for younger patients and larger RNFL defect. There was a significant angular correlation between RNFL defect and the axis of PPA, and a marginally significant correlation between RNFL defect and the PPA area to disc area ratio.**Commercial Relationship:** **B. Cho**, None; **S. Kim**, None; **H. Kong**, None; **J. Seo**, None; **H. Kim**, None; **H. Chung**, None; **J. Hwang**, None; **K. Park**, None.**Support:** KOSEF Grant R01-2005-000-10875-0

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