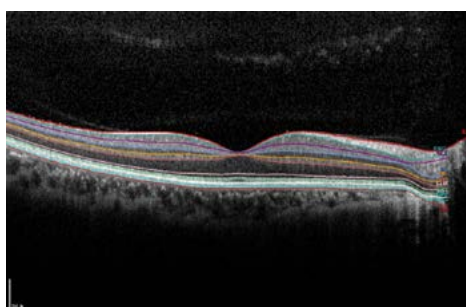**conferenceseries.com**

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Comparison of segmentation of parafoveal retinal layers in diabetic patients with and without diabetic retinopathy using spectral domain optical coherence tomography

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This study evaluated the correlation between the thickness of the individual retinal layers in the perifoveal area of diabetes mellitus (DM) patients and the presence of diabetic mellitus retinopathy (DMR). This observational cross-sectional study enrolled a total of 70 eyes and eyes were divided into two groups: Diabetic patients diagnosed with diabetic mellitus retinopathy (DMR) and diabetic patients non-diagnosed DMR. All participants underwent full ophthalmic examinations and spectral domain optical coherence tomography (SD-OCT) was used to examine the thickness of each individual retinal layer in perifoveal area using segmentation technology in SD-OCT and we compared those parameters among above groups. In the results, the mean thickness of retinal nerve fiber layer (RNFL) in patients with DMR group was significantly lower than those in DM but no DMR group (10.91±1.81 in group with DMR vs. 12.04±1.69 in group without DMR; p=0.015). Photoreceptor thickness in DMR was significantly lower than that in no DMR (69.40±3.93 in group with DMR vs. 72.04±3.67 in group without DMR; p=0.009). Results were presented as mean thickness±standard deviation (μm). These findings in our study demonstrated that decrease in nerve fiber layer and photoreceptors layer was significantly associated with development of DMR. Using SD-OCT segmentation method, changes of these layers in diabetic patients could be used as an early detector of progression of DMR from patients with no visible sign of DMR in funduscopy.

Image

Figure 1: Comparison of segmentation of retina layer represented by new segmentation analysis of the spectralis optical coherence tomography (OCT).

Biography

Jin Hyung Kim has completed his MD and is a Certified Ophthalmology Specialist from Yonsei University College of Medicine. He has published more than 5 papers in reputed journals and has been serving as a member of Department of Ophthalmology, Yonsei University College of Medicine.

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Notes:

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