

Abstract 174

ASSESSMENT OF STRUCTURAL AND VOLUMETRIC CHOROIDAL AND RETINAL INDICES IN EYES WITH VOGT KOYANAGI HARADA DISEASE

Poster

Hassan M.^[1], Ormaechea M.S.^[2], Mahajan S.^[1], Uludag G.^[1], Schlaen A.^[2], Nguyen Q.D.^[1]

^[1]Byers Eye Institute, Stanford University ~ Palo Alto ~ United States of America, ^[2]Hospital Universitario Austral ~ Buenos Aires ~ Argentina

Purpose:

The ocular disease in Vogt Koyanagi Harada (VKH) is classically divided into four phases (Prodromal, Acute Uveitis, Chronic or Convalescent, and Recurrent). The purpose of this study was To compare retinal and choroidal indices among patients with active (acute and chronic recurrent) and inactive stages of VKH disease.

Methods:

Patients with VKH (2009-2017) were divided into: Group1=Active (acute/chronic recurrent VKH); Group2=Inactive. A third group composed of normal controls was also included in the study. SD-OCT scans were segmented into 1) Full Retina (FR); 2) Retinal Nerve Fiber Layer (RNFL); 3) Ganglion Cell Layer (GCL); 4) Inner Plexiform Layer (IPL); 5) Inner Nuclear Layer (INL); 6) Outer Plexiform Layer (OPL); 7) Outer Nuclear Layer (ONL); 8) Photoreceptor Layer (PRL); 9) Retinal Pigment Epithelium (RPE). Manual segmentation of the choroid was also performed. Mean thickness and volume for segmented layers were compared between two groups and controls.

Results:

Forty-two eyes (22 patients) with VKH disease were enrolled. 32 eyes were in Group 1, 10 eyes in Group 2, and 22 eyes in control group. A comparison of thickness and volume for segmented layers is shown in Figure. An increase in RPE and choroidal indices was noted in Group 1. Whereas, an increase in NFL and INL, and a decrease in PRL, and choroidal indices were noted in Group 2. A sub-analysis was performed where Group 1 was subdivided into acute and chronic recurrent groups. There was no difference between the two groups for both retinal and choroidal indices.

Conclusions:

VKH significantly affects retina and choroid. RPE thickening during active VKH points to active inflammatory damage with resultant RPE and PRL thinning in chronic VKH. Choroidal volume and thickness can serve as biomarkers for disease activity in VKH even in chronic recurrent phase where inflammation commonly manifests in anterior segment.

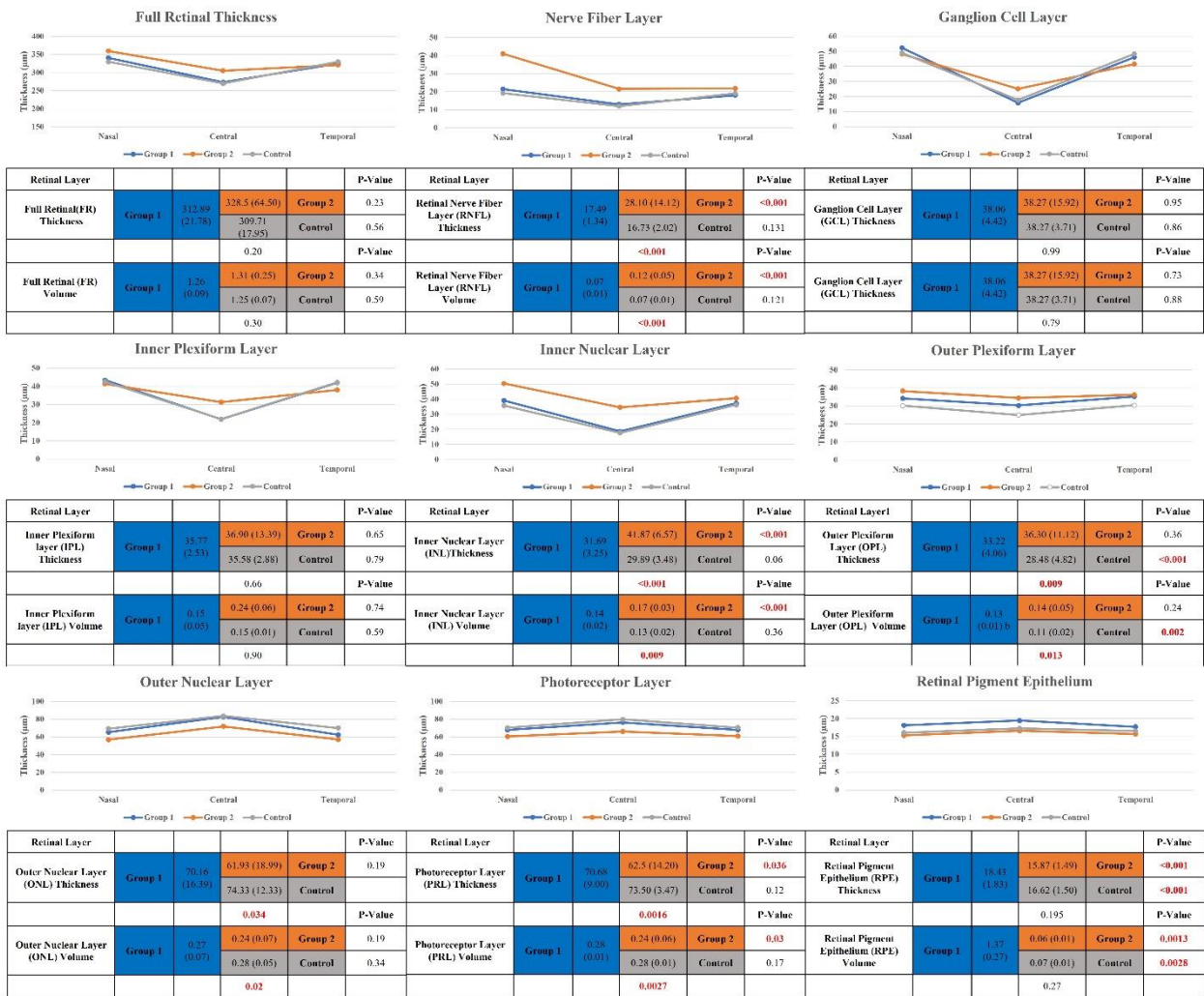
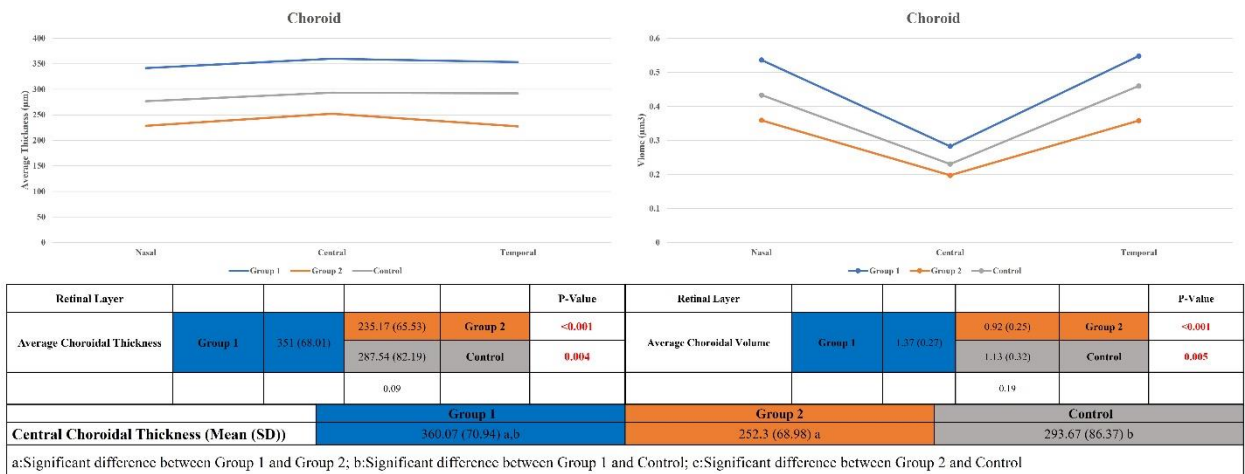


Figure 1. Comparison of retinal indices of various retinal layers in VKH patients with active disease (Group 1), inactive disease (Group 2), and controls.



a:Significant difference between Group 1 and Group 2; b:Significant difference between Group 1 and Control; c:Significant difference between Group 2 and Control

Figure 2. Comparison of choroidal indices in VKH patients with active disease (Group 1), inactive disease (Group 2), and controls.