

2nd GLOBAL OPHTHALMOLOGY SUMMIT 2019

March 27-28, 2019 | Amsterdam, Netherlands

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ACCEPTED ABSTRACT

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MACULAR AND RETINAL NERVE FIBER LAYER ANALYSIS BY OPTICAL COHERENCE TOMOGRAPHY IN NORMAL CHILDREN

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This study aims to evaluate macular and peripapillary retinal nerve fiber layer measurements in normal children and their correlation with age, gender, laterality, refraction and axial length

Methods: This was an observational cross sectional study among 100 eyes of 50 child (25 boys, 25 girls) aged between 6 and 17 years. After detailed eye examination and axial length measurements, the children were scanned using swept source optical coherence tomography (3D DRI OCT Triton [plus], Topcon Corporation, Tokyo, Japan) to measure macular thickness, macular volume, peripapillary RNFL thickness and optic disc parameters.

Results: Both eyes of fifty child were included in the study. Mean age was 10.96 ± 2.75 years, average spherical equivalent refraction (SE) was 0.78 ± 1.65 (-4.50 to +5.00) diopters and average axial length was 22.87 ± 0.90 (20.99 to 24.67) mm. Average macular thickness was 276.41 ± 17.8 μm , central macular thickness was 225.26 ± 20.79 μm , mean macular volume was 7.84 ± 0.48 mm^3 and mean peripapillary RNFL thickness was 111.26 ± 20.46 μm . Axial length showed positive correlation with age unlike negative correlation with spherical equivalent. It also showed negative correlation with mean average RNFL thickness. Most of the parafoveal region quadrants correlated positively with age unlike RNFL measurements that correlated negatively. Central macular thickness values were significantly higher in males ($p=0.001$) but there was no difference between male and female as regard RNFL thickness. Spherical equivalent didn't show significant effect on studied parameters. Concerning the side of the eye, it had no statistically significant difference between both eyes but good correlation.

Conclusion: Normative paediatric SS-OCT data might facilitate use of SS-OCT for assessing childhood ophthalmic diseases. This study provides a paediatric normative database of SS-OCT peripapillary RNFL and macular data.



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EFFICACY AND SAFETY OF SIMVASTATIN IN UVEITIS ASSOCIATED WITH HLAB27 AND/OR RHEUMATIC DISEASES: A RANDOMIZED, OPEN-LABEL STUDY

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Introduction: Statins have been shown to reduce ocular inflammation in animal models and to prevent development of uveitis in observational studies. There have been no experimental human studies evaluating statins efficacy and safety in uveitis.

Aim: To investigate the efficacy and safety of simvastatin in patients with uveitis associated with HLAB27 and/or rheumatic diseases.

Methods: For this single-center, open-label, randomized study, we enrolled patients with acute uveitis, associated with HLAB27/rheumatic diseases. The patients were randomized to receive 40 mg simvastatin per day for 2 months with the local anti-inflammatory treatment or to local anti-inflammatory therapy alone. The studied outcomes were: visual acuity (letters score) conjunctival injection (grades 1-5) and anterior chamber reaction (grades 1-5), the frequency of visual field impairment and posterior synechia. Generalized estimating equations were used to model the relationship between simvastatin use by time interaction and changes in the outcome measures.

Results: Forty five patients were enrolled in the study. Twenty two (49%) of them were positive for HLA-B27 without extraocular manifestations, 18 (40%) had concomitant seronegative spondyloarthritis, 4 (9%) had juvenile idiopathic arthritis and 1 (2%) was diagnosed with Behcet's disease. Twenty nine (64%) patients had intermediate uveitis, 13 (29%) anterior uveitis and 3 (7%) panuveitis. Twenty two patients were randomly assigned to receive simvastatin with local treatment and 23 to local treatment alone. Simvastatin was associated with significant improvement in visual acuity, conjunctival injection, and anterior chamber reaction. In patients treated with simvastatin the rates of posterior synechia and visual field impairment were less than in control group (Table). The treatment was well tolerated, only mild side effects were observed.

Conclusions: Our findings suggest that statins may have therapeutic potential in uveitis. These results should be confirmed in a double blind, randomized, controlled study.



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MACULAR THICKNESS AND ITS RELATION WITH AGE AND GENDER IN HEALTHY EYES IN A SAMPLE OF IRAQI POPULATION USING CIRRUS-HD OPTICAL COHERENCE TOMOGRAPHY

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Optical coherence tomography (OCT) has been introduced as a useful imaging method by providing high-resolution and cross sectional information about various pathological conditions of macula and has gained increased importance in the diagnosis, management and monitoring of patients with various retinal disorders.

Purpose of the study: To provide a normative data for macular thickness in healthy Iraqi eyes using Zeiss cirrus HD-OCT and to determine the effects of age and gender on their measurements.

Materials and methods: Two hundred healthy adult volunteers (≥ 20 years) underwent macular cube scanning using Zeiss cirrus-HD OCT. Macular thickness from all 9 regions of the early treatment Diabetic Retinopathy Study map was documented for each subject. Variations in macular thickness by age and gender were determined.

Results: The mean age of volunteers was 37 ± 10.4 (range 21-67) years. The mean of central foveal thickness was 254.6 ± 17.3 Mm, the mean macular thickness was 279.0 ± 10.7 Mm and the macular volume was 10.0 ± 0.4 mm³. Females were found to have a significantly thinner macula ($P < 0.001$) than males in all 9 ETDRS regions except outer inferior quadrant. Central foveal thickness was found to have very weak correlation with age which was not statistically significant. All other macular regions, mean macular thickness and volume showed statistically significant nonlinear reduction with age (p value < 0.001).

Conclusion: This is a normative data for macular thickness in healthy Iraqi eyes using Zeiss cirrus HD-OCT. This will serve as a baseline for diagnosing and treating macular pathologies in Iraqi eyes.



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CENTRAL CORNEAL THICKNESS OF IRAQI POPULATION IN RELATION TO AGE, GENDER, REFRACTIVE ERRORS, AND CORNEAL CURVATURE: A HOSPITAL-BASED CROSS-SECTIONAL STUDY

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Objective: The aim of this study is to determine the mean CCT among a normal Iraqi population and to correlate between CCT and age, gender, refraction and corneal curvature.

Patients and methods: This cross-sectional study was carried out at Ibn Al-Haitham Teaching Eye Hospital. A total of 418 eyes from 209 healthy individuals with an age range from 20 to 75 years were studied. CCT was measured by ultrasound pachymeter. Refraction was measured using an auto-refractor and confirmed by trial lenses and retinoscopy to calculate the spherical equivalent. Corneal curvature was measured using an auto-refracto-keratometer to calculate the average corneal curvature (AVK).

Results: The mean CCT was $543.95 \pm 32.58 \mu\text{m}$ with a range from 422 to 636 μm . CCT was not affected by gender. CCT significantly negatively correlated with age and AVK. CCT significantly positively correlated with the spherical equivalence.

Conclusion and recommendation: Among an Iraqi population, CCT significantly decreased with age. Myopics had significantly thinner corneas. There was weak but significant negative correlation between CCT and corneal curvature. We recommend further studies about the relationship between central corneal thickness and other ocular parameters in Iraqi population such as the axial length.



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