

2nd International Conference and Expo on **OPTOMETRY AND VISION SCIENCE**

September 11-12, 2017 | Paris, France

Mesopic visual function is not equally impaired in type 2 diabetics without retinopathy

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Early retinal neurosensory dysfunction occurs before any apparent retinal vascular changes in type 2 diabetes.(1,2) It has been reported that diabetics without retinopathy show a decrease in mesopic letter contrast sensitivity(2) and in low contrast visual acuity..(3-5) The information however is lacking about whether different visual tests would show equal mesopic visual dysfunction or not.

Purpose: The purpose of this study therefore is to assess mesopic visual function in type 2 diabetics without retinopathy, with well controlled glucose level, and compare it with healthy controls using three visual tests. **Methods:** This cross-sectional study included thirty-four normal controls and thirty type 2 diabetics without retinopathy, with age and sex matched and well controlled glucose level. Three visual function tests were assessed under mesopic luminance conditions (high and low contrast visual acuity, contrast sensitivity using sinusoidal gratings at low spatial frequencies of 0.5, 1, and 2 cycles per degree, and disk halo size).

Results: Type 2 diabetics showed a worse high and low contrast visual acuity and a larger disk halo size compared to healthy subjects, but did not show any change in contrast sensitivity at low spatial frequencies. **Conclusions:** Type 2 diabetics without retinopathy do not show equal mesopic visual dysfunction for the three visual function tests. This presentation will further examine the visual tests' differences aiming to see which test can be used as a screening tool for diabetics to detect early visual changes before the onset of retinopathy.



Biography

Shroug M. Aldaham has recently graduated from Complutense University of Madrid (UCM), Spain with a PhD degree in Optics, Optometry and Vision. She has a BSc (Hons) in Optometry from King Saud University (KSU), Riyadh, Saudi Arabia, and a Master of Science in Vision Science from the University of Waterloo, Ontario, Canada. She has joined the Optometry department at KSU as a demonstrator (an academic position that prepares for professorship) before joining the Master program in Canada. After her masters she returned to Riyadh and later joined the PhD program at UCM. Both of her Masters and PhD studies were Saudi government-funded research grants. She has a research experience in pediatric vision screening and visual function testing in diabetics and has published in international optometric and vision research meetings. Her research interests are pediatric and diabetic visual function.

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