

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
PIBIC Last Name - Farias First Name - Charles Middle - Costa

Service (sector) Cornea and External DiseaseN° CEP

Optical Aberrations in Eyes with Vernal Keratoconjunctivitis (VKC)

Farias CC, Santos MS, Gomes JAP, Chalita MR, Belfort Jr R, Hofling-Lima AL.

Purpose: To compare optical aberrations in eyes of patients with VKC versus normal controls and to describe the characteristics of optical aberrations in eyes with VKC.

Methods: This is a comparative observational case series. Wave front analysis of high order and total optical aberrations was performed with a Hartman – Shack aberrometer in 25 patients (50 eyes) with VKC and 25 normal controls (50 eyes).

Results: The VKC group showed significantly greater mean values than the control group for the following aberrations: defocus Z02 ($0.55 \pm 2.11\mu\text{m}$ versus $-0.33 \pm 0.89\mu\text{m}$; $p = 0.001$), astigmatism Z-2 2 ($-0.18 \pm 0.72\mu\text{m}$ versus $-0.01 \pm 0.19\mu\text{m}$; $p = 0.024$) and astigmatism Z+24 ($-0.83 \pm 1.11\mu\text{m}$ versus $-0.43 \pm 0.58\mu\text{m}$; $p = 0.037$). The Root Mean Square (RMS) total aberrations ($2.00 \pm 1.90\mu\text{m}$ versus $1.03 \pm 0.91\mu\text{m}$; $p = 0.001$) and the RMS high order aberrations ($0.51 \pm 0.45\mu\text{m}$ versus $0.22 \pm 0.15\mu\text{m}$; $p = 0.001$) were significantly greater in the VKC than in the control group. Considering the pupil diameter, we observed that the mean RMS total aberrations and RMS high order aberrations values obtained with 4.5 mm diameter (scotopic pupil) were smaller than those with 6.5 mm diameter (photopic pupil), regardless the group ($p = 0.001$).

Conclusion: Patients with VKC have more total and high order optical aberrations than do healthy controls.