

Corneal Topographic Changes in Patients with Vernal Keratoconjunctivitis

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Abstract

Aim: The study aimed to estimate the corneal topographic changes in patients with vernal keratoconjunctivitis. This is a case control study conducted in Khartoum state at Makkha Eye Complex and Al-Fisal Eye Center in the period from March to August 2015.

Material and Methods: The history of subjects was taken to be sure that the subjects have no history of systemic and ocular diseases. Vision and refraction were tested using (Topcon CP-5D, Japan) projected chart and (Topcon KR-800, Japan) Autorefractometer respectively. (Topcon SL-D7, Japan) slit lamp biomicroscope was used to examine the anterior segments of the eye for the presence of VKC and to detect the type of disease. (ATLAS 900 – ZEISS, Germany) corneal topographer was used to measure the following: anterior corneal curvature (K-reading), toric corneal measurement, corneal asphericity and central corneal irregularity. These measurements were taken for a two groups; VKC group (study group), and normal subjects (control group). A total number of 80 patients (160 eyes) were found to fulfill the criteria of selection by using of a special designed data form.

Results: A total of 55 males and 25 females of ages ranged from 6 to 19 years with a mean of (13.07 ± 3.19) years) were found eligible to be studied. Fifty three percent of subjects in the study group have a vision of less than 6/18, while the worst vision in control group was 6/18, $P < 0.001$. Around 80% of subjects with VKC had astigmatism compared to 20% in the control group.

Topographic analysis of anterior corneal surface show that Keratometric readings in VKC group was high and showed a significant difference with a mean of 52.03 ± 9.06 D and 50.33 ± 6.78