عنوان مقاله:

Prevalence of Keratoconus in Patients with Astigmatism more than Two Diopters: A Cross-Sectional Study

نویسندگان:

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خلاصه مقاله:

Background and aim: Keratoconus is defined as a non-inflammatory disorder which is prevalent among younger generations and leads to ocular morbidity and decreased quality of life. The present study was aimed at investigating the prevalence of keratoconus among patients with astigmatism of over 2 diopters and the association between its prevalence and some ocular parameters. Methods: In a cross-sectional study, 50 patients (100 eyes) with astigmatism > 2D who referred to the outpatient clinic of Ophthalmology Department in Hawler and Rizgary Teaching Hospital in Erbil in 2017-2018 were recruited. All of the patients underwent a complete ophthalmic examinationincluding refraction, visual acuity measurement, slit lamp biomicroscopy, and corneal topography with Galilei. The collected data were analyzed through thickness and elevation maps of Galilei and Statistical Package for the Social Sciences version 20.0. Results: The mean age of the patients was 25.27 years. The mean magnitude of astigmatism was found to be 4.015±1.83051D. Of the 100 studied eyes, 21% were found to have keratoconus. According to the results of corneal biomicroscopy, thinning of stroma was observed in 21 eye, followed by Vogt's striae and Fleischer ring in 8 and 6 eyes, respectively. The most frequent corneal patterns were symmetric bowtie (49%), asymmetric bowtie inferior steeping (15%), and asymmetric bowtie with skewed steepest radial axis (12%). No significant relationship was found between age and keratoconus occurrence. Also, keratoconus development was not significantly associated with right/left eye. However, corneal topography patterns and corneal biomicroscopy findings were significantly correlated with keratoconus occurrence. Conclusion: Keratoconus is relatively high among patients aged 15-40 years with astigmatism > 2D, which can reliably be predicted through thinning of stroma and symmetric bowtie pattern.

کلمات کلیدی:

keratoconus, subclinical keratoconus, astigmatism, corneal topography, corneal tomography,

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