

Correlation between pterygium and dry eye: diagnostics and risk factors not considered

Correlação entre pterígio e olho seco: diagnósticos e fatores de risco não considerados

Camila A. Martinez Cornejo¹ , Erick R. Moscoso Levano¹

1. School of Human Medicine, San Juan Bautista Private University, 108 street Luis Albilla, as Viñas Urbanization (ex Toche), Chincha, Ica, Peru.

Dear Editor,

In our article “Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors,” the assessment for the categorization of presumed pterygium in the participants was performed solely by the observation of a fibrovascular growth extending from the conjunctiva to the limbus and enveloping the cornea⁽¹⁾. In the presence of pathologies with similar characteristics (pinguecula, pseudopterygium, spinocellular carcinoma, and nodular scleritis), it is necessary to perform additional tests, such as slit-lamp examination, histopathology, and biopsy through optical coherence tomography, that allow differentiation between benign and malignant pathologies within the above-mentioned diagnoses⁽²⁾.

The omission of important risk factors in this study, such as exposure to ultraviolet radiation without adequate protection (UV filter)⁽²⁾, previous history of passive or active smoking⁽³⁾, the presence of environmental pollutants⁽⁴⁾, and the type of lenses in the case of ophthalmic frames, could affect the results⁽⁵⁾.

Studies have shown that prolonged exposure to solar radiation without the protection of lenses with UV filters is directly related to the development of the first⁽²⁾ and the second pathologies (pterygium and dry eye); the particles eliminated during tobacco and nicotine consumption produce inflammation of the ocular surface and affect the stability of the lipid layer of the tear film produced by the meibomian glands⁽³⁾, which could explain the high probability that smokers may develop or increase their probability of suffering from dry eye. Additionally, harmful agents, such as environmental pollutants, may affect at ocular level and increase the probability of suffering from these pathologies⁽⁴⁾. The use of ophthalmic frames with special lenses (blue-blocking) is relevant, since they protect the eye from blue light emitted by electronic devices, which are associated with these conditions when they are used for a long period⁽⁵⁾. This factor should be considered in people with visual acuity who wear glasses occasionally or permanently.

In conclusion, given the existence of different ocular pathologies with the same clinical pathological characteristics as pterygium, it is necessary to perform additional diagnostic procedures, as well as to include any other risk factors for both pathologies mentioned, because people are exposed to them daily.

REFERENCES

1. Adriano L, Persona EL, Persona IG, Pontelli RC, Rocha EM. Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors. *Arq Bras Oftalmol* [Internet]. 2021[cited 2022 Jan 21];85(2):136-43. Available from: SciELO - Brasil - Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors
2. Shahraki T, Arabi A, Feizi S. Pterygium: an update on pathophysiology, clinical features, and management. *Ther Adv Ophthalmol*.

Submitted for publication: June 29, 2022

Accepted for publication: July 30, 2022

Funding: This study received no specific financial support.

Corresponding author: Camila A. Martinez Cornejo.

E-mail: camila.martinez@upsjb.edu.pe


Disclosure of potential conflicts of interest: None of the authors have any potential conflicts of interest to disclose.

 This content is licensed under a Creative Commons Attribution 4.0 International License.

- 2021[cited 2021 Dec 21];13:25158414211020152. Available from: Pterygium: an update on pathophysiology, clinical features, and management - PMC (nih.gov)
3. Bhutia P, Sen S, Nath T, Shamshad MA. The effect of smoking on ocular surface and tear film based on clinical examination and optical coherence tomography. *Indian J Ophthalmol* [Internet]. 2021[cited 2021 Dec 24];69(7):1693-6. Available from: The effect of smoking on ocular surface and tear film based on clinical examination and optical coherence tomography - PMC (nih.gov)
 4. Messmer EM. The pathophysiology, diagnosis, and treatment of dry eye disease. *Dtsch Arztebl Int* [Internet]. 2015[cited 2022 Jan 21];112(5):71-81; quiz 82. Available from: The Pathophysiology, Diagnosis, and Treatment of Dry Eye Disease - PMC (nih.gov)
 5. Downie L, Keller P, Busija L, Lawrenson J, Hull C. Blue-light filtering spectacle lenses for visual performance, sleep, and macular health in adults. *Cochrane Database of Syst Rev* [Internet]. 2019 [cited 2022 Jun 10];2019(1):CD013244. Available from: /CT/Cochrane-CMS/TexRendering5/1114647.dvi (nih.gov)

Reply to Correlation between pterygium and dry eye: diagnostics and risk factors not considered

Resposta a correlação entre pterígio e olho seco: diagnósticos e fatores de risco não considerados

Leidiane Adriano¹, Etiene Lorriane de Souza Person¹, Isvander Gustavo de Souza Persona¹, Regina Celia Nucci Pontelli¹, Eduardo M. Rocha¹ 

1. Departamento de Oftalmologia, Otorrinolaringologia e Cirurgia de Cabeça e Pescoço, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brazil.

Dear Drs. Cornejo and Levano,

Thank you for the observations on our article by Adriano et al.⁽¹⁾, recently published in ABO.

Two major points were raised: one is related to the most accurate diagnosis of pterygium. The authors agree with your observation that a slit-lamp examination would improve the predictive value of our diagnosis. The term “presumed” was intended to alert the reader to this limitation, and the design of the study visiting the population in their homes was in part responsible for this limitation. The second point is related to more relevant risk factors to be correlated with the presence of pterygium in this population. Again, the authors agree with you about the relevance of the suggested factors; however, the intention was to explore other hypotheses,

and the scope was limited by the transversal design of the study.

Once again, thank you for your interest in our study and for calling attention to these limitations.

Sincerely,
Eduardo M. Rocha
Corresponding Author

REFERENCES

1. Adriano L, Persona EL, Persona IG, Pontelli RC, Rocha EM. Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors. *Arq Bras Oftalmol* [Internet]. 2021[cited 2022 Jan 21];85(2):136-43. Available from: SciELO - Brasil - Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors Correlation between the presumed pterygium with dry eye and with systemic and ocular risk factors