CORRESPONDENCE

Comment on paper: Cyclooxygenase-2 expression in primary and recurrent pterygium

Dear Editor,

We read with interest the recent article on cyclooxygenase-2 (COX-2) expression in pterygium by Adiguzel et al (1). Although we agree with the authors on general comments, some points should be clarified in this study.

The authors reported a different primary pterygium staining result from our previous study (2). They attributed the inconsistency to the different scoring systems of staining. In addition, the following factors should also be considered: different demographics in terms of race or gender; different pterygium characteristics in severity (atrophic, intermediate, and fleshy) and area (leading edges, head, or body); and different immunohistochemistry methodology in antibodies and cutoff level. Those factor scan result in different results. We discussed the same issue in our previous report in p53 expression in pterygium (3).

Their staining result in control group (normal conjunctiva) is also different from ours. In addition to those factors, the location of conjunctiva may be another important factor that results in the difference. They chose the superior conjunctiva, while we used the medial and superior conjunctiva, and limbus. Which part of conjunctiva is most suitable to be the control group in pterygium study remains controversial. Superior conjunctiva is free from ultraviolet exposure and medial conjunctiva is in the same location as pterygium. Hence, some researchers preferred medial conjunctiva but some used superior conjunctiva; in addition, because limbal epithelium is regarded as the origin of pterygium (4), we used both superior and medial conjunctiva and limbus as control group to reduce the possibility of bias. The normal control group in the pterygium study should include the three parts.

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Y.-P. TSUI[1], Y.-Y. TSAI[1], C.-C. CHIANG[1,2], Y.-W. CHENG[3]

[1]Department of Ophthalmology, China Medical University Hospital
[2]Institute of Medical and Molecular Toxicology, Chung Shan Medical University
[3]Institute of Medine, Chung Shan Medical University,Taichung - Taiwan

REFERENCES

1. Adiguzel U, Karabacak T, Sari A, Oz O, Cinel L. Cyclooxygenase-2 expression in primary and recurrent pterygium. Eur J Ophthalmol 2007; 17: 879-84.
2. Chiang CC, Cheng YW, Lin CL, Lee H, Tsai FJ, Tseng-SH, Tsai YY. Cyclooxygenase 2 expression in pterygium. Mol Vis 2007; 13: 635-8.
3. Tsai, YY, Chang KC, Lin CL, et al. p53 Expression in Pterygium by immunohistochemical analysis: a series-report of 127 cases and review of the literature. Cornea 2005; 24: 583-6.
4. Dushku N, John MK, Schultz GS, Reid TW. Pterygia pathogenesis: corneal invasion by matrix metalloproteinase expressing altered limbal epithelial basal cells. Arch Ophthalmol 2001; 119: 695-706.

Author reply

In our study, we reported the expression of COX-2 in primary and recurrent pterygium tissues (1). Primary pterygium tissues were divided in two groups accordingto the recurrence in follow-up time. The results of our study showed lower staining rates than the results of Chiang et al (2). We suggested that the underestimated positive staining results of primary pterygium tissues are due to the different scoring system.

In the letter by Tsui et al, they mentioned that many factors should also be considered, including the race, gender, different pterygium characteristics in severity and area, different immunohistochemistry methodology in antibodies, and cutoff level. We agree with Tsui et al that many factors can affect the staining results and also expression of COX-2. But Chiang et al reported that they accepted the staining of at least 1% of cells as positive staining. In the literature, most approved scoring systems include the extent and intensity of COX-2 staining in cancer studies. It is suitable to accept the low and weak stained specimens as negative because of the induction of COX-2 expression by many factors and by ultraviolet radiation. In our study, the scoring system of staining included the extent and intensity which was reported by

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