

## A Clinical Study of Correlation between Pterygium and Dry Eye

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**Abstract :** To study whether there is any clinical correlation between pterygium and dry eye and to evaluate the status of tear film in patients with pterygium. Methods: 100 eyes with pterygium were compared with 100 control eyes without pterygium. Patients between 20 - 70 years were included in the study. Detailed history was taken and Schirmer's test and TBUT were performed on all to evaluate the status of dry eye. Schirmer's test  $\leq 10$  mm and TBUT  $\leq 10$  seconds was considered abnormal. Results: Maximum number (52) of patients affected with dry eye in both the groups were in the age group 31-40 years which statistically showed age as a significant factor of association for both pterygium and dry eye ( $P < 0.01$ ). Schirmer's test was slightly reduced in patients with pterygium ( $18.73 \pm 5.69$  mm). TBUT was significantly reduced in the case group ( $12.26 \pm 2.24$  sec). TBUT decreased maximally in 51-60 yrs age group ( $13.00 \pm 2.77$  sec) with pterygium showing a tear film instability. On comparison of pterygia and controls with normal and abnormal tear film, Odd's Ratio was 1.14 showing risk of dry eye in pterygia patients to be 1.14 times higher than controls. Conclusion: Whether tear dysfunction is a precursor to pterygium growth or pterygium causes tear dysfunction is still not clear. Research and clinical evidence, however, suggest that there is a relationship between the two. This study is, therefore, undertaken to investigate the correlation between pterygium and dry eye. The patients with pterygia were compared with normals to evaluate their status regarding dryness. A close relationship exists between ocular irritation symptoms and functional evidence of tear instability. Schirmer's test and TBUT should routinely be used in the outpatient department to diagnose dry eye in patients with pterygium and these patients should be promptly treated to prevent any sight threatening complications.

**Keywords :** dry eye, pterygium, Schirmer's test, tear break up time (TBUT)

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