Correlation between Tear Matrix Metalloproteinases and the Schirmer's Test

We read with interest the article by VanDerMeid et al. The authors found that tear proteins such as MMP-9 correlate with Schirmer test values. However, they did not mention whether the correlation remains after adjustment for the effect of age, a determination that is critical for the interpretation of these data. An analysis of the authors' data in their Table 1 shows that the age of the participants correlated inversely with the Schirmer values in the left eye ($r = -0.415; P = 0.025$), but not in the right.

It has been reported that age correlates with MMP-9 concentration (Markoulli M, et al. IOVS 2010;51:ARVO E-Abstract 4186) in tears collected before sleep ($r = 0.46; P = 0.022$). This finding suggests that the association reported between MMPs such as MMP-9 and the Schirmer test results is confounded by age.

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References


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