Anterior Segment Parameters During Unilateral Acute Primary Angle Closure

We read with interest the article by Lee et al.\(^1\) reporting on differences in anterior segment optical coherence tomography (AS-OCT) parameters between acute primary angle closure (APAC) and fellow eyes before medical or laser treatment for the acute attack. They found that factors significantly associated with the occurrence of APAC in univariate logistic regression analysis were less iris curvature (IC) and iris thickness 750 \(\mu\)m from the scleral spur (IT750), greater central corneal thickness (CCT), greater lens vault (LV), less anterior chamber area (ACA), and less anterior chamber depth (ACD). The authors concluded that greater LV was the most prominent feature of affected eyes compared to fellow eyes in APAC patients when assessed by AS-OCT. We congratulate and applaud their interesting and important work on this topic; however, we have several queries to communicate with the authors.

Pupil diameter affected anterior segment measurements significantly, especially iris parameters.\(^2\) Previous studies investigating AS-OCT parameters in primary angle closure adjusted pupil diameter in the multivariate model, as well as the other significant variable in the univariate analysis.\(^3,4\) Thus, if Lee et al.\(^1\) control the pupil diameter for the anterior segment measurements in APAC eyes and fellow eyes in their multivariate model, their study will be strengthened.

In fact, similar investigations were published before their current article was published. Sng et al.\(^5\) determined the ocular biometric parameters of the anterior segment during a unilateral APAC attack in both eyes before any therapeutic interventions. In contrary to the present study, they found that shallower ACD and smaller IC were the most important AS-OCT measurements associated with the occurrence of APAC, and no other anterior segment parameters were associated significantly with APAC, after including pupil diameter, ACD, and IC in the model. We suggest that the authors cite and discuss the discrepancy.

Moreover, longitudinal studies to establish the temporal relationship between the changes in anterior segment parameters and the occurrence of APAC still are needed. We believe that our remarks will contribute to more accurate elaboration of the results presented by Lee et al.\(^1\)

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References

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