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## Comment on: Difference of uveal parameters between the acute primary angle closure eyes and the fellow eyes

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We read with interest the comment by Cheong et al. [1].

As the comment mentioned, in our study, the diurnal variations was an insurmountable confounding factor to the thickness of choroid and other parts of uvea. As we know, APAC attack usually happened at night, which was speculated be associated with dilating pupil as a result of dim lighting [2]. The attacks in our study were almost in the same situation. The examinations performing at the same timepoint was the most simple and effective way to reduce the confounding effect. Meanwhile, the previous studies about the diurnal variations of choroidal thickness (CT) found that the maximum at 0300 hours, and the minimum at 1800 hours, which meant the CT gradually expand after sunset until midnight [3]. We speculate the trend of choroid expanding might play a role in the angle closure.

Second, our research team has recently published several articles about the topographic variation of the choroid. We found that POAG/PACD eyes had a thicker anterior choroid than the controls. However, there was no significant difference in the posterior choroidal thickness among the groups. The anterior choroid might play a role in the pathogenesis of glaucoma [4]. Meanwhile we found that Valsalva manoeuvre did not affect the posterior choroid, but it did cause thickening of the anterior choroid and the ciliary body, both of which led to a larger anterior placement of the ciliary body and a narrowed anterior chamber. The anterior (but not the posterior) choroid could be related to IOP

elevation and a narrowed anterior chamber in primary angle closure diseases [5, 6]. The relationship between the anterior choroid and the blood pressure need further investigation.

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### Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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