

Teaching NeuroImages: Pupil-sparing oculomotor nerve palsy with posterior communicating artery aneurysm

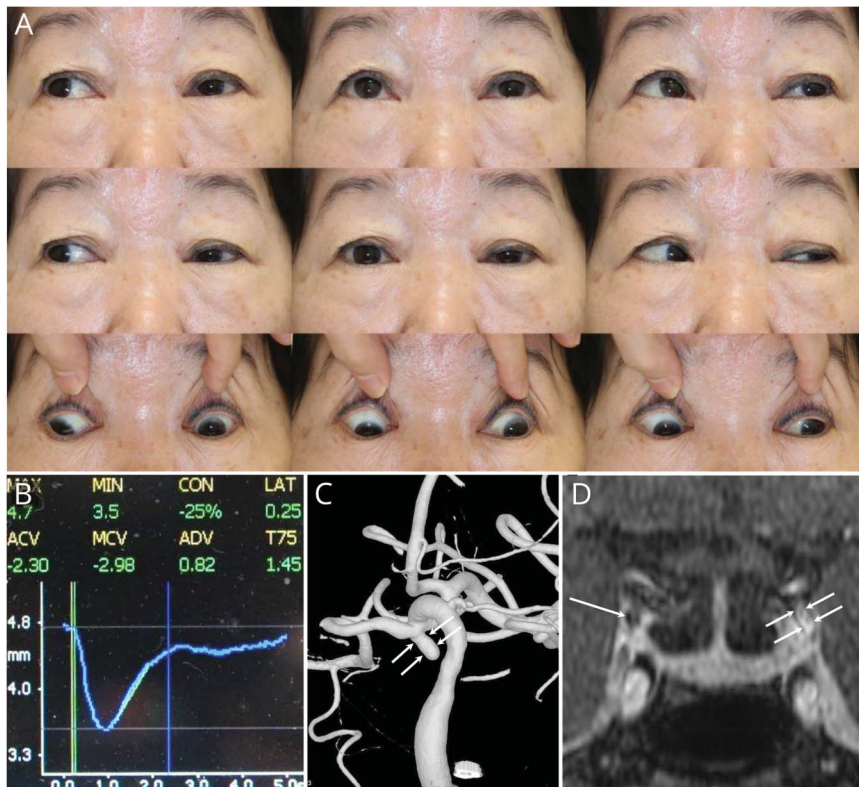
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Figure Ocular versions, pupillography, brain MRI, and cerebral angiography



(A) Ocular versions demonstrating limited adduction, elevation, and depression, and ptosis OS. (B) Pupillography showing a normal pupillary light response in the left eye. (C, D) Brain MRI and transfemoral cerebral angiography revealed left posterior communicating artery aneurysm (5 mm sized) with inferior projection (arrows) compressing the left oculomotor nerve traversing the left cavernous sinus.

A 66-year-old woman presented with ptosis and diplopia 2 weeks prior. She showed ptosis and limited adduction, elevation, and depression in the left eye (figure, A). Her pupils were isocoric and reactive (figure, B). Transfemoral left internal carotid angiography (figure, C) revealed a 5-mm elongated aneurysm with inferior projection (arrows) at the posterior communicating artery origin. Contrast-enhanced thin-section T1-weighted coronal image (figure, D) showed the aneurysm (short arrows) compressing the left oculomotor nerve at the cavernous sinus. The right

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oculomotor nerve traversing in the cavernous sinus was normally well identified as a round low signal (long arrow). This case violates the “rule of the pupil” proven with pupillography.^{1,2}

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Appendix Authors

Name	Location	Contribution
Hee Kyung Yang, MD	Seoul National University	Designed and conceptualized study, major role in the acquisition of data, analyzed the data, drafted the manuscript for intellectual content

Appendix (continued)

Name	Location	Contribution
Jae Hyoung Kim, MD	Seoul National University	Interpreted the data, revised the manuscript for intellectual content
Jeong-Min Hwang, MD	Seoul National University	Designed and conceptualized study, analyzed the data, revised the manuscript for intellectual content

References

1. Trobe JD. Third nerve palsy and the pupil: footnotes to the rule. *Arch Ophthalmol* 1988;106:601–602.
2. Kim HM, Yang HK, Hwang JM. Quantitative analysis of pupillometry in isolated third nerve palsy. *PLoS One* 2018;13:e0208259.

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