

# Superior oblique myokymia

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## Superior oblique myokymia

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### Authors' contributions

Study concept and design: Adamec, Habek. Acquisition of data: Adamec, Habek. Analysis and interpretation of data: Adamec, Habek. Drafting of the manuscript: Adamec. Critical revision of the manuscript for important intellectual content: Adamec, Habek. Administrative, technical, and material support: Adamec, Habek.

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Commons licence will apply to this article are set out in our licence referred to above.

A 33-year-old previously healthy male presented with a feeling of his right eyeball fluttering and oscillopsia lasting days. The patient did not have headache, vertigo or gait problems. Neurologic examination revealed a clockwise torsional nystagmus of the right eye with no nystagmus of the left eye (Videos 1 and 2). There was no other eye movement or other cranial nerves abnormalities. The rest of the neurological examination was normal. Brain MRI including three-dimensional constructive interference in steady state (CISS) sequence and time of flight angiography (TOF) was performed yielding normal results. The diagnosis of idiopathic right superior oblique myokymia (SOM) was made. Two weeks after the initial presentation the nystagmus spontaneously resolved.

SOM is an uncommon monocular disorder with the main clinical manifestation of torsional nystagmus and oscillopsia due to high-frequency bursts of contraction of the superior oblique muscle.<sup>1</sup> Although the etiology of this disorder is unknown, it is believed that ephaptic transmission is the main contributor.<sup>2</sup> Causes may include neurovascular compression of the trochlear nerve by superior cerebellar artery, brainstem tumor or trauma, but the etiology may also be idiopathic.<sup>2</sup> Several therapies have been tried with varied success, including  $\beta$ -blockers, carbamazepine, and surgery.<sup>2</sup>

In conclusion, in a patient with isolated unilateral, torsional, nystagmoid movements of the eye, SOM is the most likely diagnosis. Because, SOM is a very rare disorder, effort should be made to search for additional symptoms and signs that will further guide the diagnostic and therapeutic approach.

## References

1. Brazis PW, Miller NR, Henderer JD, Lee AG. The natural history and results of treatment of superior oblique myokymia. *Arch Ophthalmol.*1994;112:1063–1067.
2. Zhang M, Gilbert A, Hunter DG. Superior oblique myokymia. *Surv Ophthalmol* 2017, doi: 10.1016/j.survophthal.2017.10.005.

## Videos

Video 1. Notice the torsional clockwise nystagmus of the right eye in primary gaze position with no nystagmus of the left eye.

Video 2. Close-up of the right eye nystagmus.

## Figures

Figure 1. Still frame of online supplementary video 1. Arrow indicates the direction and amplitude of the globe movement.

Figure 2. Still frame of online supplementary video 2. Arrow indicates the direction and amplitude of the globe movement.





