

An Open Letter to the Editor of the NEJM

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Prolog

Recently, an article appeared in the NEJM that contained numerous misstatements of fact and outdated and erroneous nomenclature (1). We submitted a Letter to the Editor pointing these out, adhering to the 175-word and three-author limits imposed by the NEJM. Shortly thereafter, we were informed that, “Because of the limited availability of space” they would not be able to print our letter. The following email was sent to the NEJM:

“It is unfortunate that you have chosen to allow an article, published in the NEJM, that is so wrong in so many ways to stand uncorrected. Perhaps the NEJM should consider providing (as other Journals do) an electronic forum where "space" would not trump good science.”

In the interests of correcting the errors introduced into the literature by a paper published in such a prestigious Journal, we are herein publishing our Letter, based on the original version (unpruned to save space and including all four original authors). We do hope that the NEJM takes our advice and, as many other Journals have already done, provides a digital forum where science can be properly discussed, unencumbered by space limitations. Until that time, perhaps

the small amount of space required for the link to this Letter (provided below) could be found in the next issue of the NEJM; we are sure the NEJM readers would be appreciative.

TO THE EDITOR: We read with great interest the article “Horizontal Pendular Nystagmus in a Patient with Ocular Albinism” in the “Images in Clinical Medicine” section (1). We wish to point out a patently incorrect statement made at the conclusion, i.e., “When there is macular involvement, the eye constantly searches for a clear image, causing the pendular nystagmus.”

The past 45 years of Infantile Nystagmus Syndrome (INS, aka Congenital Nystagmus, CN (2)) research demonstrated that: 1) nystagmus waveforms of ocular albinism patients are no different from those without an associated visual deficit (3-9); 2) INS is *not* caused by visual deficits but by a high-gain instability in the smooth-pursuit subsystem (10-12); 3) INS is present during fixation attempt with closed eyes or in darkness (i.e., no “clear image” to search); 4) INS has been documented *at birth* in some patients, long before they began to attempt fixation; and 5) the amplitude of INS oscillation can be modulated by attention, stress, and importance of visual tasks (13-15).

Therefore, it is incorrect and misleading to state that INS was caused by “searching eye movements” in their ocular albinism subject. The simplistic presumption of two types of INS, one “sensory” and one “motor” is not only erroneous but also was never intended by David Cogan, to whom it has been attributed (10). It has explicitly been refuted in ocular albinism (16). Finally, pendular nystagmus is not “characterized by rapid saccades,” the hallmark of jerk nystagmus, which the video clearly shows, despite the paper’s title and the patient’s albinism.

REFERENCES

1. Teitel AD, Rubin J. Horizontal pendular nystagmus in a patient with ocular albinism. *N Engl J MED* 2008; 359(5):e5.
2. CEMAS_Working_Group. *A National Eye Institute Sponsored Workshop and Publication on The Classification of Eye Movement Abnormalities and Strabismus (CEMAS). In The National Eye Institute Publications (www.nei.nih.gov)*. 2001, National Institutes of Health, National Eye Institute: Bethesda, MD.

3. Dell'Osso LF, Flynn JT, Daroff RB. Hereditary congenital nystagmus: An intrafamilial study. *Arch Ophthalmol* 1974; 92:366-74.
4. Dell'Osso LF, Daroff RB. Congenital nystagmus waveforms and foveation strategy. *Doc Ophthalmol* 1975; 39:155-82.
5. Guyer DR, Lessell S. Periodic alternating nystagmus associated with albinism. *J Clin Neuro ophthalmol* 1986; 6:82-5.
6. Bedell HE, Abplanalp PL, McGuire CA. Oculomotor responses to target displacements by patients with congenital idiopathic nystagmus and nystagmus associated with albinism. *Clin Vision Sci* 1987; 2:21-31.
7. Cheong PYY, King RA, Bateman JB. Oculocutaneous albinism: variable expressivity of nystagmus in a sibship. *J Pediatr Ophthalmol Strab* 1992; 29:185-8.
8. Abadi RV, Pascal E. Periodic alternating nystagmus in humans with albinism. *Invest Ophthalmol Vis Sci* 1994; 35:4080-6.
9. Wang ZI, Dell'Osso LF. Being "slow to see" is a dynamic visual function consequence of infantile nystagmus syndrome: Model predictions and patient data identify stimulus timing as its cause. *Vision Res* 2007; 47(11):1550-60.
10. Dell'Osso LF, Hertle RW, Daroff RB. "Sensory" and "motor" nystagmus: erroneous and misleading terminology based on misinterpretation of David Cogan's observations. *Arch Ophthalmol* 2007; 125:1559-61.
11. Jacobs JB, Dell'Osso LF. Congenital nystagmus: hypothesis for its genesis and complex waveforms within a behavioral ocular motor system model. *JOV* 2004; 4(7):604-25.
12. Wang ZI. *A unifying hypothesis for the multiple waveforms of infantile nystagmus and their idiosyncratic variation with gaze angle and therapy. (Ph.D. Dissertation). In: Biomedical Engineering. 2008, Case Western Reserve University: Cleveland. p. 1-359.*
13. Cham KM, Anderson AJ, Abel LA. Task-induced stress and motivation decrease foveation-period durations in infantile nystagmus syndrome. *Invest Ophthalmol Vis Sci* 2008; 49(7):2977-84.
14. Tkalcevic LA, Abel LA. Effects of stimulus size and luminance on oscillopsia in congenital nystagmus. *Vision Res* 2003; 43:2697-705.
15. Wiggins D, Woodhouse JM, Margrain TH, Harris CM, Erichsen JT. Infantile nystagmus adapts to visual demand. *Invest Ophthalmol Vis Sci* 2007; 48(5):2089-94.
16. Salati R, Magni R, Musolino M, Nucci P, Polenghi F. Electronystagmographic investigation in X-linked ocular albinism. *Ophthalmic Genetics* 1997; 18:209-15.

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Author Response and Correspondence

In keeping with tradition and in the interest of fairness, the authors of the paper in question are invited to respond if they choose to avail themselves of this less-restrictive, electronic forum for an unfettered discussion of science.

Dear Dr. Dell'Osso,

Thanks for your letter. We would not presume (as a rheumatologist and medical student at the time of image submission) to have substantial knowledge in this area. The clinical image section of NEJM is aimed at the practitioner who, as we did, encounters unusual physical findings. We discussed with ophthalmologists at our institution (who may well not be experts in the area) and reported their interpretation of the patient's findings. We certainly appreciate your comments.

Thanks,

Ariel

Dear Dr. Teitel,

It is unfortunate that you and your coauthor were put in that position. The fault, and my real problem with publication of the paper in the NEJM, is the failure of the NEJM to have it properly reviewed by someone who is an expert in the field. The propagation of misinformation in a respected Journal, and their refusal to allow it to be corrected, is anathema to both good science and a reputable scientific Journal (especially one that claims to be the best). Incidentally, the NEJM even refused to provide a link to our Letter in their next issue; that substantially diminishes their claim that it was a lack of "space" and not its content that precluded publishing our Letter.

I am sorry that you, as the authors, are now associated with that paper. It is also too bad that the ophthalmologists at your institution still believe, and presumably are still teaching their residents, such nonsense. Several years ago I was invited to present a lecture on INS to the ophthalmology residents at Columbia; perhaps the faculty and residents of the New York Medical College need to bring their knowledge of this subject up to date also.

Would you like me to either post your response below or add an addendum to the Letter on our web site explaining the facts below? It is certainly not my intention to point the finger at you, given the circumstances. Let me know your preference.

LF Dell'Osso, PhD

Hello Dr. Dell'Osso,

You can either post the letter or an addendum-however you prefer. I'm sure the residents would be happy to hear a lecture from you-our problem is funding-lack thereof.

Thanks,

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