

Narendra Nath Jena

Department of Emergency Medicine, Meenakshi Mission Hospital and
Research Centre, Madurai, Tamil Nadu, India

Benita Florence

Department of Emergency Medicine, DM Wayanad Institute of Medical
Sciences, Kerala, India

Ponniath Thirumalaikolundusubramanian

Department of Internal Medicine, Trichy SRM Medical College Hospital and
Research Center, Irungalur, Trichy, India

4 May 2019

<https://doi.org/10.1016/j.ajem.2019.05.029>

References

- [1] Kokulu K, Öner H, Özen C, Eroğlu SE, Altunok İ, Akça HŞ. Pharmacologic anisocoria due to nebulized ipratropium bromide: a diagnostic challenge. *Am J Emerg Med* 2019;1217.e3–4.
- [2] Senthilkumar S, Balamurugan N, Suresh P, Thirumalaikolundusubramanian P. Transient anisocoria: a pesky palpitation. *J Neurosci Rural Pract* 2011;2:210–1.
- [3] Senthilkumar S, Balamurugan N, Menezes RG, Thirumalaikolundusubramanian P. Bedside test for anisocoria: not a small matter. *Indian J Crit Care Med* 2014;18(7):480–1.
- [4] Nakatsuka AS, Beaver HA, Lee AG. Mydriasis due to Opcon-A: an indication to avoid pharmacologic testing for anisocoria. *Can J Ophthalmol* 2018;53(1):e6–7 Feb.
- [5] Moeller JJ, Maxner CE. The dilated pupil: an update. *Curr Neurol Neurosci Rep* 2007;7:417–22.

The authors reply: pilocarpine and a proper pupillary exam



Dear Editor,

We thank the authors for their reply to and interest in our article [1]. We would like to make mention of a few important points about anisocoria and the pilocarpine test while we agree with the comments of the authors.

First, the detailed patient history (drug use, trauma, etc.) should be learned before performing a pilocarpine test in the differential diagnosis of anisocoria. Then, the pupil examination of the patient should be performed in both dim and bright light [2]. Because in a patient with anisocoria, we first need to determine which pupil is abnormal. If anisocoria is more prominent in the dark, there is a pathology in the small pupil and the diseases affecting the sympathetic system are investigated. If anisocoria is more prominent in bright light, there is a pathology in the large pupil and the diseases affecting the parasympathetic system are investigated. The reaction to light, response to near focus, eyelid position, and eye movements should also be reviewed [3].

The pilocarpine test can be performed in the differential diagnosis only if anisocoria is more prominent in bright light. If anisocoria is more prominent in dim illumination, an apraclonidine test can be performed instead of a pilocarpine test. Therefore, performing a pilocarpine test without detailed eye examination may cause confusion in physicians [3,4].

Pilocarpine is a parasympathomimetic drug and causes constriction in the normal pupil. The pupil will dilate if there is a parasympatholytic drug, such as ipratropium bromide, contact with the eye before a pilocarpine test. If pilocarpine is instilled into this dilated pupil, no constriction occurs and this information is used in the differential diagnosis. As noted by the authors, performing a pilocarpine test in a patient with a history of topical sympathomimetic use and with mydriasis may further

complicate the diagnosis. Because sympathomimetic drugs affect the symptomatic system and cause mydriasis. Pilocarpine does not have a direct antagonist effect because it is not a sympatholytic drug, but it may cause miosis by muscarinic receptors. In such a patient, if the patient does not have any symptoms or signs other than anisocoria, and the neurological examination is also normal, it is best to follow the patient closely without any intervention. Because anisocoria occurring as a side effect of the drug will regress within hours [3,5].

A careful and systematic evaluation is required for patients with anisocoria to exclude the life-threatening potential causes. Following the algorithms related to anisocoria when evaluating these patients will prevent confusion during diagnosis. With these algorithms, we can also save patients from detailed and expensive diagnostic procedures.

Financial support

The authors declared that this study has received no financial support.

Declaration of Competing Interest

No conflict of interest was declared by the authors.

Kamil Kokulu, MD*

Serkan E. Eroğlu, MD

Department of Emergency Medicine, Ümraniye Training and Research
Hospital, University of Health Sciences, İstanbul, Turkey

*Corresponding author at: Ümraniye Training and Research Hospital,
Department of Emergency Medicine, Elmalikent Mahallesi Adem Yavuz
Cad. No:1 Ümraniye/İstanbul PK: 34764, İstanbul, Turkey.

E-mail address: drkokulu@gmail.com.

8 May 2019

<https://doi.org/10.1016/j.ajem.2019.05.030>

References

- [1] Kokulu K, Öner H, Özen C, Eroğlu SE, Altunok İ, Akça HŞ. Pharmacologic anisocoria due to nebulized ipratropium bromide: a diagnostic challenge. *Am J Emerg Med* 2019;37(6):1217.e3–4.
- [2] Polomsky M, Smereck J. Unilateral mydriasis due to hemorrhoidal ointment. *J Emerg Med* 2012;43:e11–5.
- [3] Gross JR, McClelland CM, Lee MS. An approach to anisocoria. *Curr Opin Ophthalmol* 2016;27(6):486–92.
- [4] Firestone D, Sloane C. Not your everyday anisocoria: angel's trumpet ocular toxicity. *J Emerg Med* 2007;33:21–4.
- [5] Nakatsuka AS, Beaver HA, Lee AG. Mydriasis due to Opcon-A: an indication to avoid pharmacologic testing for anisocoria. *Can J Ophthalmol* 2018;53(1):e6–7 Feb.

Inclined versus supine position for endotracheal intubation



With great interest, we read an article by Murphy et al., which showed that inclined positioning was associated with a higher rate of first pass success than supine positioning in prehospital endotracheal intubation. [1] Better visualization in inclined position was thought to be a rational mechanism. This study is very welcoming because the patient position is one of the modifiable conditions to achieve better success during intubation. However, some concerns seem to be further explained.

First, patients were categorized into three cohorts: supine, inclined, or unknown. The way the authors dealt the patient's position may be needed in case a patient position is changed after the fail of first try