UC San Diego

UC San Diego Previously Published Works

Title

Last Word on Viewpoint: The ongoing need for good physiological investigation: Obstructive sleep apnea in HIV patients as a paradigm

Permalink

https://escholarship.org/uc/item/7v98k6st

Journal

Journal of Applied Physiology, 118(2)

ISSN

8750-7587

Authors

Darquenne, Chantal Hicks, Charles B Malhotra, Atul

Publication Date

2015-01-15

DOI

10.1152/japplphysiol.00984.2014

Peer reviewed

Last Word on Viewpoint: The ongoing need for good physiological investigation: Obstructive sleep apnea in HIV patients as a paradigm

Chantal Darquenne,¹ Charles B. Hicks,² and Atul Malhotra³

¹Division of Physiology, University of California, San Diego, California; ²Division of Infectious Diseases, University of California, San Diego, California; and ³Division of Pulmonary, Critical Care and Sleep Medicine, University of California, San Diego, California

TO THE EDITOR: We appreciate the comments of our colleagues (see Ref. 6) and agree with many of the assertions made. We support the need for large-scale epidemiology and the value in confirming that HIV is indeed an important risk factor for OSA. We did not focus on diabetes or hypertension as suggested by the comments, because our goal was to discuss integrated respiratory physiology in OSA pathogenesis, but agree with the importance of various other diseases. We doubt the BMI variable in isolation will be as crucial as suggested, because even obese people have highly variable expression of OSA depending on upper airway neuromuscular function (3), arousal threshold, loop gain (ventilatory control instability), etc. (2, 4, 5). Although data on HIV-infected patients treated with newer antiretroviral therapy (ART) regimens do not clearly indicate a relationship between ART and OSA, the overall observed rates of OSA in HIV-infected persons are high. Further research is required to determine whether ART itself is an important risk factor or if other factors discussed in the Viewpoint (1) contribute to OSA risk in HIV patients. Thus we continue to recommend a comprehensive assessment of major pathophysiological variables and their interactions for a complete understanding of OSA to emerge.

DISCLOSURES

No conflicts of interest, financial or otherwise, are declared by the author(s).

Address for reprint requests and other correspondence: C. Darquenne, Univ. of California, San Diego, 9500 Gilman Dr. #0623A, La Jolla, CA 92093-0623 (e-mail: cdarquenne@ucsd.edu).

AUTHOR CONTRIBUTIONS

Author contributions: C.D., C.B.H., and A.M. conception and design of research; C.D., C.B.H., and A.M. drafted manuscript; C.D., C.B.H., and A.M. edited and revised manuscript; C.D., C.B.H., and A.M. approved final version of manuscript.

REFERENCES

- Darquenne C, Hicks CB, Malhotra A. The ongoing need for good physiological investigation: Obstructive sleep apnea in HIV patients as a paradigm. J Appl Physiol doi:10.1152/japplphysiol.00656.2014.
- Edwards BA, Eckert DJ, McSharry DG, Sands SA, Desai A, Kehlmann G, Bakker JP, Genta PR, Owens RL, White DP, Wellman A, Malhotra A. Clinical predictors of the respiratory arousal threshold in patients with obstructive sleep apnea. Am J Respir Crit Care Med, in press.
- Saboisky JP, Stashuk DW, Hamilton-Wright A, Carusona AL, Campana LM, Trinder J, Eckert DJ, Jordan AS, McSharry DG, White DP, Nandedkar S, David WS, Malhotra A. Neurogenic changes in the upper airway of patients with obstructive sleep apnea. *Am J Respir Crit Care Med* 185: 322–329, 2012.
- Sands SA, Eckert DJ, Jordan AS, Edwards BA, Owens RL, Butler JP, Schwab RJ, Loring SH, Malhotra A, White DP, Wellman A. Enhanced upper-airway muscle responsiveness is a distinct feature of overweight/ obese individuals without sleep apnea. Am J Respir Crit Care Med 190: 930–937, 2014.
- Terrill PI, Edwards BA, Nemati S, Butler JP, Owens RL, Eckert DJ, White DP, Malhotra A, Wellman A, Sands SA. Quantifying the ventilatory control contribution to sleep apnoea using polysomnography. Eur Respir J, in press.
- 6. Zuo L, Hemmelgarn BT, Jouett NP, Smith ML, Eugenín J, Beltrán-Castillo S, von Bernhardi R, Müller-Ribeiro FC, Fontes MA, Cysique LA, Gandevia SC, Fernandez Tellez H, Mekjavic IB, Perlitz V, Kerkhof PLM, de Munck J, Moret-Bonillo V, Nieman G, Gatto LA. Commentaries on Viewpoint: The ongoing need for good physiological investigation: Obstructive sleep apnea in HIV patients as a paradigm. *J Appl Physiol*; doi:10.1152/japplphysiol.00989.2014.