

## ESPS PEER-REVIEW REPORT

**Name of journal:** World Journal of Critical Care Medicine

**ESPS manuscript NO:** 22031

**Title:** Respiratory mechanics in brain injury: A review

**Reviewer's code:** 00502757

**Reviewer's country:** Brazil

**Science editor:** Shui Qiu

**Date sent for review:** 2015-08-10 17:49

**Date reviewed:** 2015-08-25 01:16

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

## COMMENTS TO AUTHORS

Major comments In the present manuscript, the authors demonstrate the relevance of monitoring and adjusting the ventilatory settings in patients with brain damage to prevent or reduce lung injury. They also show some possible mechanisms regarding the brain-lung axis, which is a very relevant but still understudied issue. Minor comments 1. Line 217 - I suggest to include some references related to protein S100 and Caspase 1. 2. Line 272 and 320 - I understand that a few years ago, patients were ventilated with a strategy to target low levels of PCO<sub>2</sub> in order to "preserve brain integrity". However, this strategy is no longer used. I suggest a further discussion concerning this topic. 3. Line 313 - I agree with the sentence: "Ventilation/perfusion (V/Q) mismatch and shunt, the main pathophysiological mechanisms of hypoxemia [60] ensuing from airway closure and atelectasis that are commonly developed in dependent lung zones with sedation and anesthesia, even in healthy adults [61][51], might explain oxygenation impairment." However, sedation and anesthesia may not be a specifically explanation for the brain injured patients' hypoxemia. Therefore, I suggest removing this sentence. 4. I suggest including the following references in your review: ? ME Quilez, G Fuster, J Villar, C Flores, O Martí-Sistac, L Blanch, J López-Aguilar. Injurious mechanical ventilation affects



## BAISHIDENG PUBLISHING GROUP INC

8226 Regency Drive, Pleasanton, CA 94588, USA

Telephone: +1-925-223-8242

Fax: +1-925-223-8243

E-mail: [bpgoffice@wjgnet.com](mailto:bpgoffice@wjgnet.com)

<http://www.wjgnet.com>

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neuronal activation in ventilated rats. Critical Care 2011, 15:R124. ? A González-López, I López-Alonso, A Aguirre, L Amado-Rodríguez, E Batalla-Solís, A Astudillo, C Tomás-Zapico, A Fueyo, CC Santos, K Talbot, GM Albaiceta. Mechanical Ventilation Triggers Hippocampal Apoptosis by Vagal and Dopaminergic Pathways. Am J Respir Crit Care Med Vol 188, Iss. 6, pp 693–702, Sep 15, 2013.