

PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 39034

Title: Unexpected complication during extracorporeal membrane oxygenation support:
Ventilator associated systemic air embolism

Reviewer's code: 03289764

Reviewer's country: Japan

Science editor: Fang-Fang Ji

Date sent for review: 2018-04-25

Date reviewed: 2018-04-28

Review time: 3 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Systemic air embolism caused by broncho-venous fistula has been reported in cases with lung trauma. The reviewer read first time a paper stating air embolism from BVF caused by barotrauma of the lung. As the authors mentioned, there is no information on how



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high the airway pressure is is possibly dangerous. In this particular case, PEEP was 6 and PS was 20, and these numbers are within usual range. Once occurs, systemic air embolism is often lethal, and there is no effective treatment available. In this sense, prevention of this miserable complication seems to be key. The authors should mention on this.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 39034

Title: Unexpected complication during extracorporeal membrane oxygenation support:
Ventilator associated systemic air embolism

Reviewer's code: 03011567

Reviewer's country: United Kingdom

Science editor: Fang-Fang Ji

Date sent for review: 2018-04-02

Date reviewed: 2018-04-29

Review time: 27 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
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		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Drs Ryu and Park report a very interesting case of suspected cerebral and coronary air embolus through a presumed broncho-venous fistula during VA ECMO support. The article is well written and the authors hypothesis is supported through exclusion of

other possible causes of gas embolism during ECMO support. The paper is concise and I have no major critique points in terms of Introduction, the Case Report and the Discussion of the paper. Relevant literature has been referenced and the unique nature of the pathology in the context of ECMO support has been underscored. I wonder if other such cases have gone unnoticed on quite a few occasions; hence clearly this report enhances our knowledgebase in relation to possible complications to watch out for. Minor revision suggestions: Title: Please rephrase to "An unexpected complication during ECMO support: Ventilator associated systemic Air Embolism" Case report: Page 5 under ventilator settings: The FiO₂ should be reading 0.8 as it is a fraction not percentage. Given the patient received PCV a pressure control level above PEEP should be quoted, not as the authors state "pressure support of 20cm H₂O". please change to inspiratory pressure above PEEP of I guess it was 20, hence a total or peak pressure of 26. Same page 5: The ECG does not only show acute inferior wall infarction but also anteroseptal tombstone ST elevation, so I presume this ought to be changed to acute inferior and anteroseptal wall ischaemia. Could the authors explain if a CT of the aorta and the chest was performed as well? It may have identified, coronary and aortic air. Discussion 2nd sentence, change to: "Several sources of air emboli are known." Discussion 2nd paragraph 2nd sentence change to: "Systemic air embolism can result from the interface between the alveoli and pulmonary veins..." Finally I would like to ask the authors how they explain the fact that the air embolus appeared to occur at the time ECLS flow had been reduced hence negative drainage pressure should have been significantly lower at 1 versus 3.5L. Maybe this should be mentioned as an unusual fact, when the contributing factor of -ve venous pressure is discussed.

INITIAL REVIEW OF THE MANUSCRIPT

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- [Y] No

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- ☐ Plagiarism
- [Y] No