Reviewer Assessment

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Acute heart failure due to giant left atrium: remote ECLS implantation for interhospital transfer and bridging to decision

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Reviewers' Comments to Original Submission

Reviewer 1: anonymous

Sept 25, 2018

Reviewer Recommendation Term:	Accept with Minor Revision
Overall Reviewer Manuscript Rating:	70
Custom Review Questions	**Response**
Is the subject area appropriate for you?	4
Does the title clearly reflect the paper's content?	4
Does the abstract clearly reflect the paper's content?	4
Do the keywords clearly reflect the paper's content?	5 - High/Yes
Does the introduction present the problem clearly?	4
Are the results/conclusions justified?	3
How comprehensive and up-to-date is the subject matter presented?	3
How adequate is the data presentation?	2
Are units and terminology used correctly?	4
Is the number of cases adequate?	N/A
Are the experimental methods/clinical studies adequate?	N/A
Is the length appropriate in relation to the content?	4
Does the reader get new insights from the article?	3
Please rate the practical significance.	2
Please rate the accuracy of methods.	N/A
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	3
Please rate the appropriateness of the references.	4
Please evaluate the writing style and use of language.	4
Please judge the overall scientific quality of the manuscript.	3
Are you willing to review the revision of this manuscript?	Yes

Comments to Authors:

The submitted Case report describes an interesting situation of remote ECLS implantation resulting in a fast initial recovery of cardiac function and weaning from ECLS in a patient with giant left atrium.
However, the following facts remain unclear and should be completed:
Section “Case report”:
- How long was the time of amateur and professional CPR out of hospital?
- What was the initial ECG-rhythm observed on CPR?
- Is there any data of echocardiographic parameters (ejection fraction, valve function) and/or coronary status prior to the cardiac arrest, e.g. in the setting of follow up examination after re-do mitral-valve repair?
- Is there any data of echocardiographic parameters (ejection fraction, valve function) after ROSC in refractory cardiogenic shock?
- How where the parameters of ECLS therapy (Flow, MAP, Pulsatility)?
- Was there any remaining atrial sludge in echocardiography at the time of referral to the community hospital and how was the INR?
Section “Conclusion”
- It is well known that ECLS implantation can be a successful tool for bridge to decision. Due to this rare case of giant left atrium and ECLS implantation: What is your specified conclusion for ECLS weaning and further therapy in this group of patients?

Reviewer 2: anonymous

Nov 05, 2018

Reviewer Recommendation Term:	Accept with Minor Revision
Overall Reviewer Manuscript Rating:	50

Custom Review Questions	**Response**
Is the subject area appropriate for you?	5 - High/Yes
Does the title clearly reflect the paper’s content?	4
Does the abstract clearly reflect the paper’s content?	4
Do the keywords clearly reflect the paper’s content?	5 - High/Yes
Does the introduction present the problem clearly?	5 - High/Yes
Are the results/conclusions justified?	5 - High/Yes
How comprehensive and up-to-date is the subject matter presented?	4
How adequate is the data presentation?	4
Are units and terminology used correctly?	5 - High/Yes
Is the number of cases adequate?	N/A
Are the experimental methods/clinical studies adequate?	N/A
Is the length appropriate in relation to the content?	4
Does the reader get new insights from the article?	3
Please rate the practical significance.	3
Please rate the accuracy of methods.	4
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	4
Please rate the appropriateness of the references.	3
Please evaluate the writing style and use of language.	4
Please judge the overall scientific quality of the manuscript.	3
Are you willing to review the revision of this manuscript?	Yes

Comments to Authors:

Interresting, well written case report reflecting the current use of ECLS; however, the pathology is unusual and rare and therefore interresting to read; the standards of ECLS are mentioned and discussed, a more detailed technical information on the ECLS setup and components might add valuable additional information, especially considering the air transportation on ECLS.

Authors' Response to Reviewer Comments

Nov 19, 2018

1. The total duration of CPR was 60 - 65 minutes.
2. The initial rhythm upon ROSC was not documented. Upon arrival at the community hospital, the patient was in atrial fibrillation.
3. The patient had not complied with his follow-up schedule after valve surgery. He had not seen a cardiologist after valve replacement, i.e. for 5 years.
4. The ejection fraction documented at the community hospital was 10%. Fluoroscopy showed normal motion of the mitral valve leaflets.
5. The ECLS system was started at a speed of 2800 RPM (approx. 4 L), and these settings were left unchanged for approx. 24 hours. This was followed for approx. 24 hours at a reduced speed of 1900–2200 RPM, before the pump speed was finally reduced to 1500 rpm (1.3 L) for a few hours before explantation. Pressure upon arrival at our ICU was 95/65 mmHg (MAP 70 mmHg). After a few hours, pulsatility increased, and MAP was kept between 66 and 80 mmHg throughout the entire period on ECLS. This was interrupted by short MAP increases to up to 100 mmHg in the course of catecholamine dose adjustments.
6. By the time when the patient was referred back to the community hospital, the amount of sludge in the left atrium had decreased significantly but echocardiography still a certain measure of smoke in the left atrium. The patient's INR at the time of retransfer was 1.7, but he was on i.v. unfractionated heparin (PTT 59.9 seconds).
7. We conclude that ECLS weaning should be attempted and that surgical therapy options including HTX should be evaluated carefully. Sufficient anticoagulation is mandatory. The ECLS setup consisted of a Stöckert Centrifugal Pump and Centrifugal Pump Console. Inflow and outflow for the ECLS system were instituted by percutaneous placement of a 17 Fr NovaPort cannula in the left femoral artery and a 21 Fr Biomedicus cannula in the left femoral vein.

Reviewers' Comments to Revision

Reviewer 1: anonymous

Nov 24, 2018

Reviewer Recommendation Term:	Accept
Overall Reviewer Manuscript Rating:	80

Custom Review Questions	**Response**
Is the subject area appropriate for you?	4
Does the title clearly reflect the paper's content?	5 - High/Yes
Does the abstract clearly reflect the paper's content?	4
Do the keywords clearly reflect the paper's content?	4
Does the introduction present the problem clearly?	4
Are the results/conclusions justified?	5 - High/Yes
How comprehensive and up-to-date is the subject matter presented?	3
How adequate is the data presentation?	4
Are units and terminology used correctly?	5 - High/Yes
Is the number of cases adequate?	N/A
Are the experimental methods/clinical studies adequate?	4
Is the length appropriate in relation to the content?	5 - High/Yes
Does the reader get new insights from the article?	2
Please rate the practical significance.	2
Please rate the accuracy of methods.	5 - High/Yes
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	4
Please rate the appropriateness of the references.	4

Please evaluate the writing style and use of language.	4
Please judge the overall scientific quality of the manuscript.	3
Are you willing to review the revision of this manuscript?	Yes

Comments to Authors:

No further comments.

Reviewer 2: anonymous

Nov 21, 2018

Reviewer Recommendation Term:	Accept
Overall Reviewer Manuscript Rating:	45

Custom Review Questions	**Response**
Is the subject area appropriate for you?	5 - High/Yes
Does the title clearly reflect the paper's content?	5 - High/Yes
Does the abstract clearly reflect the paper's content?	5 - High/Yes
Do the keywords clearly reflect the paper's content?	5 - High/Yes
Does the introduction present the problem clearly?	5 - High/Yes
Are the results/conclusions justified?	5 - High/Yes
How comprehensive and up-to-date is the subject matter presented?	5 - High/Yes
How adequate is the data presentation?	5 - High/Yes
Are units and terminology used correctly?	5 - High/Yes
Is the number of cases adequate?	N/A
Are the experimental methods/clinical studies adequate?	N/A
Is the length appropriate in relation to the content?	5 - High/Yes
Does the reader get new insights from the article?	3
Please rate the practical significance.	4
Please rate the accuracy of methods.	5 - High/Yes
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	5 - High/Yes
Please rate the appropriateness of the references.	4
Please evaluate the writing style and use of language.	5 - High/Yes
Please judge the overall scientific quality of the manuscript.	3
Are you willing to review the revision of this manuscript?	Yes

Comments to Authors:

No further comments.