Reviewer’s report

Title: A Dual Therapy of Off-Pump Temporary Left Ventricular Extracorporeal Device and Amniotic Stem Cell for Cardiogenic Shock

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Reviewer: Parminder Chagger

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The authors provide details of a novel surgical technique for temporary VAD implantation which they feel limits myocardial inflammation, thereby promoting grafting of intra-myocardial stem cell transplant and subsequent myocardial recovery.

However, the manuscript lacks sufficient evidence to back-up these premises. There is no presentation of inflammatory parameters in the peri-surgical phase and no report of myocardial biopsies to assess inflammatory infiltrates. Furthermore, the reported improvement in ejection fraction from 10 to 30% over a two week period is commonly seen in patients who suffer acute myocardial infarction due to initial "stunning" of the ventricle. Therefore, the LV improvement in conjunction with stem cells is completely circumstantial and there is a complete lack of evidence of a cause and effect relationship. Indeed, I suspect the ventricle would have improved without the stem cells.

Finally, the successfulness of the novel surgical approach is unclear. The patient suffered significant neurological deficits due to strokes and was discharged to a rehab facility. The authors provide no information regarding the long-term outcome of the patient or the degree of (if any) neurological recovery.

Level of interest
Please indicate how interesting you found the manuscript:

An article of limited interest

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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