Reviewer's report

Title: Myocardial topical negative pressure of -25 mmHg increases myocardial microvascular blood flow

Version: 2 Date: 18 February 2008

Reviewer: Douglas Curran-Everett

Reviewer's report:

General

Although I found this manuscript of interest, I do have some questions about methodology and statistics.

Major Compulsory Revisions

1. Experimental design. How were the pressure changes of -25 mmHg and -50 mmHg applied to normal and ischemic myocardium? If the series of 4 conditions (normal: -25 and -50; ischemic: -25 and -50) were done in the same order in each of the 6 pigs, it is impossible to differentiate a pressure effect from an order effect.

2. Methods, sample size. How was the sample size of 6 chosen? If all 6 responses changed in the same direction, then P = 0.03 (2-tailed binomial test).

3. Methods, blood flow measurements. What blood flow measurements were analyzed? Mean blood flow? Over how long a period of time? What was the sampling frequency of the laser-Doppler unit? How do you account for the increased variability of the flow measurements?

4. Results. Because this is a paired design and because of between-subject differences in laser-Doppler measurements, it makes more sense to express results as differences from baseline.

Minor Essential Revisions

1. P values. Please report precise P values rather than P < 0.05. Precise P values are more informative than simple cutoffs.

Discretionary Revisions

None

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.