Reviewer's report

Title: Influence of acute pancreatitis on the responsiveness of rat mesenteric and pulmonary arteries

Version: 1 Date: 31 January 2008

Reviewer: Susan Wai Sum Leung

Reviewer's report:

Major Compulsory Revisions
1. The present study indicated that acute experimental pancreatitis resulted in impaired relaxation to acetylcholine only in mesenteric artery but not in pulmonary artery. The authors suggested that the latter may be because the endothelial cells from pulmonary arteries were not exposed to the massive production of reactive species of oxygen produced by pancreatitis in its early phase. (2nd paragraph of Discussion). However, the authors also stated that the subsensitivity for phenylephrine in ..., pulmonary from TAU-induced pancreatitis could be due to massive formation of reactive species of oxygen (last paragraph of Discussion). These 2 sentences appear contradictory to each other, as it is unlikely for reactive species of oxygen to be in contact with just the smooth muscle cells but not the endothelial cells.

2. Nitric oxide is considered as an endothelium-derived relaxing factor [please see references below] but the authors suggest that there is a strong relationship between NOx- levels and decrease in endothelium-dependent relaxation response in mesenteric artery. Please comment in more details.

3. The authors have linked the findings of the present study (impaired relaxation to acetylcholine and impaired contraction to phenylephrine) to massive production of reactive species of oxygen. However, the evidence for an increased level of reactive species of oxygen in pancreatitis is lacking in the present study.

References

Minor Essential Revisions
1. There are some grammatical mistakes throughout the manuscript. For
example,
**endothelium dysfunction** (page 5, line 22) should be **endothelial dysfunction**

**A several lines of evidences** (page 5, line 24) should be **several lines of evidence**

**endothelium damage** (page 6, line 7) should be **endothelial damage**

**were not exposure to** (page 6, line 10) should be **were not exposed to**

**the subsensitivity for PHE in ** could be due to overproduction of NO ** (page 6, line 21-22) should be **the subsensitivity for PHE in ** could be due to overproduction of NO

2. Please insert a space inbetween number and unit, for example, 1 minute, 10 mN and 80 mM.

**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:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests