Reviewer’s report

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

Version: 1 Date: 20 February 2008

Reviewer: Daniel Closa

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The paper entitled “Influence of acute pancreatitis on the responsiveness of rat mesenteric and pulmonary arteries” from Camargo EA et al. reports on the effect of two different models of experimental acute pancreatitis on the relaxing and contractile responses of mesenteric or pulmonary artery rings. Authors observed that, the potency of acetylcholine was decreased in mesenteric but not in pulmonary rings. No changes were observed in response to SNP and the potency for PHE was decreased in both mesenteric and pulmonary rings. It was also observed marked increases in NOx- levels after induction of pancreatitis. Authors concluded that the changes in response to Ach were associated with high plasma NOx- levels and that the subsensitivity of contractile response to PHE might be involved in the complications of acute pancreatitis.

Major revisions

1. The main problem is the conclusion that links the NOx- levels observed in plasma with the changes observed in response to PHE. Reports from other disorders suggests that this could be an explanation, but there is no a direct demonstration in this work that allows to conclude the link between the two phenomena. The use of an inhibitor of NOS could be an easy way to demonstrate this hypothesis or, alternatively, conclusions can be modified.

Minor revisions

1. Authors used two different models of pancreatitis. Taurocholate-induced pancreatitis is a usual model to induce severe pancreatitis, but administration of PLA2 form Naja mocambique is less common. The rationale for using two models, and in particular the second one must be explained.

2. In background, authors indicate that acute pancreatitis is a disease characterized by activation of pancreatic enzymes, with severe tissue damage, local inflammatory reaction, haemorrhage that is associated with remote organ failure, sepsis and a high prevalence of mortality. This definition only applies to the severe forms of the disease. This fact needs to be pointed out.

3. Despite models of pancreatitis are well established, a marker of severity (lipase, amylase, â”) must be included in the experimental design.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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