Author's response to reviews

Title: Protective effects of heme oxygenase-1 against severe acute pancreatitis via inhibition of tumor necrosis factor-α and augmentation of interleukin-10

Authors:

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Author’s response to reviews:

Editor Comments:

Point: I also suggest English language editing for the manuscript.

Response: Thanks for your comment. The language has been modified in the original.

Abstract section, line 19, page 1 : “......SAP group (n=10), SAP model was induced by......”

Abstract section, line 20-21, page 1 : “......HO-1 stimulation group (n=10), SD rats were injected 75 ug/kg hemin intraperitoneally......”

Abstract section, line 22, page 1 : “......inhibition group (n=10), SD rats were injected 20 ug/kg Zinc porphyrin (Zn-PP)......”

Abstract section, line 23, page 1 : “experiments”

Abstract section, line 24, page 1 : “tissues”

Abstract section, line 25, page 1 : “cytokines”

Abstract section, line 27, page 1 : “......induced by SAP......”
Abstract section, line 29, page 1: “tissues”

Abstract section, line 30, page 1: “......by Hemin treatment.”

Abstract section, line 31, page 1: “......by Hemin treatment.”

Background section, line 11, page 2: “......100,000 people [1].”

Background section, line 21, page 2: “......belong to a family of proteins which......”

Background section, line 26, page 2: “......play important roles ......”

Background section, line 28-30, page 2: “......which catalyzes the degradation of heme, a pro-oxidant, into carbon monoxide (CO), biliverdin, and iron [7], is an inducible isoform of heme oxygenase.”

Background section, line 1-2, page 3: “......have anti-oxidization,...... anti-inflammatory effects. Therefore, HO-1......”

Background section, line 3, page 3: “......in human body.”

Background section, line 6, page 3: “......that overexpression HO-1,......”

Background section, line 8, page 3: “......through......”

Background section, line 10, page 3: “mediated”

Background section, line 14, page 3: “The aim of this study was......”

Background section, line 16-17, page 3: “......be useful to improve organs function ......in SAP.”

Methods section, line 22, page 3: “All rats were......”

Methods section, line 30-31, page 3: “Rats were then retrogradely injected 3% sodium taurocholate (0.1mL/100g; Sigma Chemical, St. Louis, MO) through......”

Methods section, line 9-10, page 4: “......sacrificed 24 hours after SAP establishment.”

Methods section, line 11, page 4: “......the serum were stored......”

Methods section, line 14, page 4: “......divided for total RNA extraction.”

Methods section, line 27, page 4: “......IL-10, and β-actin was used as internal control.”
Methods section, line 8, page 5: “Paraffin-embedded pancreas and liver were……”

Methods section, line 15, page 5: “……as mean ± SEM, and……”

Results section, line 21-22, page 5: “Compared with the control rats, the HO-1, IL-10 and TNF-α levels in serum and also the mRNA levels in pancreas and liver were significantly increased by SAP after……”

Results section, line 1-2, page 6: “While hemin administration significantly increased HO-1 and IL-10 levels both in serum and in pancreas and liver……”

Results section, line 4, page 6: “……serum and its mRNA expressions in pancreas and liver……”

Results section, line 6-7, page 6: “……both in serum and in pancreas and liver……”

Results section, line 13-14, page 6: “……were significantly induced by SAP……”

Results section, line 16, page 6: “……, it significantly decreased these markers induced by SAP……”

Results section, line 17, page 6: “On the other hand,……”

Results section, line 20, page 6: “……of control rats……”

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Results section, line 24-25, page 6: “…; while Zn-PP treatment caused more severe pathological pancreas damages including……”

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Results section, line 1-7, page 7: “……sinusoid in SAP rats. There were less Kupffer cells in sinusoid and the morphology of the hepatic cells was normal after heme administration. In addition, the hepatocytes ……after Zn-PP treatment (Figure 3f,g,h,i). HO-1 stimulation significantly reduced the pathological scores induced by SAP, while HO-1 inhibition by Zn-PP significantly enhanced the pathological scores. (p<0.05) (Figure 3j).”
Discussion section, line 11, page 7: “……in early SAP.”

Discussion section, line 11-12, page 7: “The protective effect of HO-1 ….. decreased TNF-α.”

Discussion section, line 12-13, page 7: “…..HO-1 was indicated by……”

Discussion section, line 16-18, page 7: “…..effects of HO-1 ….. in early SAP, indicating ….. under oxidative stress……”

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Discussion section, line 26, page 8: “….. administration aggravated the tissues injury by SAP.”

Conclusions section, line 29, page 8: “….. in SAP.”

Line 3, page 16: “….. after 24h of SAP surgery.”

Line 7, page 16: “….. after 24h of SAP surgery.”

Line 11, page 16: “Histopathological evaluation of pancreas and livers after 24h of SAP surgery (HE×400).”

Line 15, page 16: “Pathological scores are……”

Reviewer reports:
Reviewer 1:

Point: All points raised by both reviewers have been addressed by the authors.

Response: Special thanks to you for your good comments.

Reviewer 2:

Point: This is a nice study by Zhang et al., testing the effect of heme oxygenase-1 (HO-1) on severe acute pancreatitis (SAP). The revision is much improved. My only comment is that there is still room for improvement of the grammar.

Response: Thanks for your comment. The language has been modified in the original.

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